

STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Ms. Susan Studlien, Deputy Director  
Office of Ecosystem Protection  
U.S. EPA, EPA New England  
One Congress Street, Suite 1100  
Mail Code CAA  
Boston MA 02114-2023

Re: Revision of Connecticut's State Implementation Plan for Air Quality for Trading Agreements and Orders Nos. 8221, 8222, 1626, 1494A, 8080, 8188, 8220, 8213, 8214, 8215, 8182, 8227, 8216, 8217, 8183, 8218, 8181, 8219, 8184, 8120, 8124, 8115A, and 8201; and Modifications of Trading Agreements and Orders Nos. 8107 M2, 8114 M2, 8177 M1, 8176 M1, 8180 M1, 8154 M3 and 8115 M1.

Dear Ms. Studlien:

By this correspondence, pursuant to 40 CFR 51.102, Connecticut formally requests United States Environmental Protection Agency ("EPA") revise Connecticut's State Implementation Plant ("SIP") for Air Quality as explained in this letter and enclosed supporting materials. This revision will incorporate the above-referenced new and modified Trading Agreements and Orders, into Connecticut's SIP and make the terms and conditions of these new and modified Trading Agreements and Orders federally enforceable. These new and modified Trading Agreements and Orders allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such Orders and Section 22a-74-22 of the Regulations of Connecticut State Agencies for the Abatement of Air Pollution.

The new and modified Trading Agreements and Orders were adopted pursuant to public hearing procedures to satisfy the requirements of 40 CFR 51.102. Evidence of the public hearing is enclosed as follows:

- Exhibit 1, public notice of hearing and certifications of publication;
- Exhibit 2, letters to directors of air quality in affected states, public libraries, EPA, and regulated sources;
- Exhibit 3, delegation of hearing officer, hearing certification and hearing report; and
- Exhibit 4, new and modified Trading Agreements and Orders and SIP narratives.

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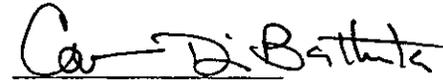
**Celebrating a Century of Forest Conservation Leadership**

1901  2001

Please do not hesitate to contact Elizabeth McAuliffe, Environmental Analyst, at (860) 424-3702 should you or your staff have any questions or comments regarding this matter.

Sincerely yours,

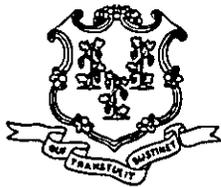
12/12/02  
Date



Carmine DiBattista  
Chief  
Bureau of Air Management

Enclosures

cc: Mr. Steve Rapp, Manager  
Air Permits, Toxics and Indoor Air Section  
Office of Ecosystem Protection  
U.S. EPA, EPA New England



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Exhibit 1



**Notice of Intent to Revise the State Implementation Plan for Air Quality**

The Commissioner of Environmental Protection hereby gives notice of a public hearing as part of a State Implementation Plan revision proceeding. These revisions will be submitted to the U.S. Environmental Protection Agency (EPA) for their review and approval as a revision to the State Implementation Plan (SIP) for air quality as required by the Clean Air Act Amendments of 1990 (CAA). The public hearing will address State Orders for the following:

- 1) Dominion Nuclear Connecticut, Inc., Waterford – Orders 8221 and 8222
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- 3) Connecticut Resources Recovery Authority, Hartford – Order 1494A
- 4) Cytec Industries Inc., Wallingford – Order 8114, Modification No. 2
- 5) Borough of Naugatuck, Naugatuck – Order 1626
- 6) Wisvest-Connecticut, LLC, Bridgeport – Order 8177, Modification No. 1
- 7) Wisvest-Connecticut, LLC, New Haven – Order 8176, Modification No. 1
- 8) Connecticut Jet Power, Branford, Cos Cob, Torrington – Orders 8180 and 8180, Modification No. 1
- 9) Allegheny Ludlum Corporation, Wallingford – Order 8188
- 10) Bristol Meyers Squibb, Wallingford – Order 8220
- 11) Combustion Engineering, Windsor – Order 8154, Modification No. 3
- 12) Middletown Power LLC, Middletown – Orders 8213, 8214, 8215, 8182 and 8227
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- 14) Devon Power LLC, Milford – Orders 8218 and 8181
- 15) Norwalk Power LLC, Norwalk – Orders 8219 and 8184
- 16) Sikorsky Aircraft Corporation, Stratford – Order 8120
- 17) Stone Container Corporation, Montville – Order 8124
- 18) University of Connecticut, Mansfield – Orders 8115, Modification No. 1 and 8115A
- 19) US Naval Submarine Base, Groton – Order 8201

This proposed SIP amendment includes Consent Orders and Trading Agreements and Orders that allow the owners or operators to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders.

All interested persons are invited to comment on the proposed SIP revision. Comments should be submitted to the Department of Environmental Protection, Bureau of Air Management, Compliance and Field Operations Division, 79 Elm Street, Hartford, Connecticut 06106-5127. All comments should be directed to the attention of Sara Ganzer and must be received by 5:00 P.M., October 31, 2002.

In addition to accepting written comments, the Department will also hold a public hearing as described below. Persons appearing at this public hearing are requested to submit a written copy of their statement. However, oral comments will also be made a part of the hearing record and are welcome.

### PUBLIC HEARING

October 17<sup>th</sup>, 2002  
1:00 P.M.

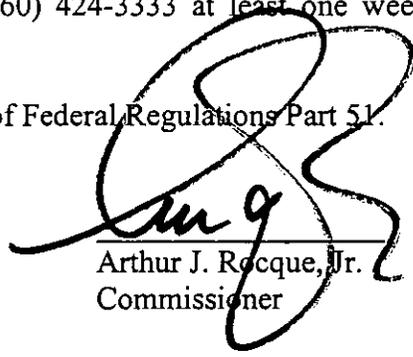
Holcombe Room  
Department of Environmental Protection  
79 Elm Street, 5th Floor  
Hartford, Connecticut

Copies of the proposed orders described above are available for public inspection during normal business hours and may be obtained from Sara Ganzer of the Bureau of Air Management, Compliance and Field Operations Division, 5<sup>th</sup> Floor, 79 Elm Street, Hartford, CT. An additional copy is also available for review at the Government Information Service Desk (Balcony level) at the Connecticut State Library, Hartford, Torrington Public Library, Bridgeport Public Library and New London Public Library. For further information, contact Elizabeth McAuliffe of the Bureau of Air Management at (860) 424-3702.

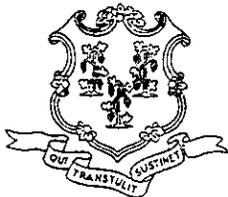
The Department of Environmental Protection supports the goals of the Americans with Disabilities Act of 1990. Any individual who needs auxiliary aids for effective communication during this public hearing or in submitting public comments should contact Betty Lirot, ADA Coordinator at (860) 424-3035 or TDD (860) 424-3333 at least one week before the public hearing.

This notice is required pursuant to 40 Code of Federal Regulations Part 51.

8/12/02  
Date



Arthur J. Rocque, Jr.  
Commissioner



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



VIA FACSIMILE  
FAX Page 1 of 3  
To Fax # 860 489-6790

The Register Citizen  
190 Water Street  
Torrington, CT 06790

ATTN: Legal Advertising Department

To whom it may concern:

Please make a one-time insertion of the enclosed Notice under Legal Notices in your paper on Monday, September 16, 2002.

Please note that the Department will not remit payment for publication of the attached public notice until a copy of the public notice and certification of publication is forwarded to the Department. Please address such certification as follows:

Attn: Dennise Goulbourne  
Department of Environmental Protection  
Bureau of Air Management  
79 Elm Street  
Hartford, CT 06106

In your billing statement, please reference DP No. 566-3320. Please contact Mary Lakonski, Fiscal Administrative Officer, Bureau of Air Management, at (860) 424-3026 for further information regarding billing. If you have any questions regarding this notice, please call me at (860) 424-3458. Thank you for your assistance in this matter.

Sincerely yours,

8/21/02  
Date

*Elizabeth McAuliffe*  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

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# Certification of Publication

I, Aretha Garrison in TORRINGTON, CONNECTICUT, do depose

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\_\_\_\_\_ were published in

THE REGISTER CITIZEN on September 16<sup>th</sup>, 2002.

Aretha Garrison

**Legal Notices**



**LEGAL NOTICE**

STATE OF CONNECTICUT  
DEPARTMENT OF  
ENVIRONMENTAL PROTECTION

Notice of Intent to Revise  
the State Implementation Plan  
for Air Quality

The Commissioner of Environmental Protection hereby gives notice of a public hearing as part of a State Implementation Plan revision proceeding. These revisions will be submitted to the U.S. Environmental Protection Agency (EPA) for their review and approval as a revision to the State Implementation Plan (SIP) for air quality as required by the Clean Air Act Amendments of 1990 (CAA). The public hearing will address State Orders for the following:

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- 4) Cytac Industries Inc., Wallingford - Order 8114, Modification No. 2
- 5) Borough of Naugatuck, Naugatuck - Order 1826
- 6) Wicwag-Connecticut, LLC, Bridgeport - Order 8177, Modification No. 1
- 7) Wicwag-Connecticut, LLC, New Haven - Order 8178, Modification No. 1
- 8) Connecticut Jet Power, Branford, Cos Cob, Torrington - Orders 8180 and 8180, Modification No. 1
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- 19) US Naval Submarine Base, Groton - Order 8201

This proposed SIP amendment includes Consent Orders and Trading Agreements and Orders that allow the owners or operators to generate and/or use nitrogen oxide emissions reductions in accordance with the requirements of the CAA.

All interested persons are invited to comment on the proposed SIP revision. Comments should be submitted to the Department of Environmental Protection, Bureau of Air Management, Compliance and Field Operations Division, 79 Elm Street, Hartford, Connecticut 06106-5117. All comments should be directed to the attention of Sara Gardner and must be received by 5:00 P.M. October 31, 2002.

In addition to accepting written comments, the Department will also hold a public hearing as described below. Persons appearing at this public hearing are requested to submit a written copy of their statement. However, oral comments will also be made a part of the hearing record and are welcome.

Department of  
Environmental Protection  
79 Elm Street, 5th Floor  
Hartford, Connecticut

Copies of the proposed orders described above are available for public inspection during normal business hours and may be obtained from Sara Gardner of the Bureau of Air Management, Compliance and Field Operations Division, 5th Floor, 79 Elm Street, Hartford, CT. An additional copy is also available for review at the Government Information Service Desk (Balcony level) at the Connecticut State Library, Hartford, Torrington Public Library, Bridgeport Public Library and New London Public Library. For further information, contact Elizabeth McAuliffe of the Bureau of Air Management at (860)424-3702.

The Department of Environmental Protection supports the goals of the Americans with Disabilities Act of 1990. Any individual who needs auxiliary aids for effective communication during this public hearing or in submitting public comments should contact Berry Lint, ADA Coordinator at (860)424-3035 or TDD (860)424-2333 at least one week before the public hearing.

This notice is required pursuant to 40 Code of Federal Regulations Part 51.

Date: 8/12/02  
Arthur J. Rocque, Jr.  
Commissioner

**LEGAL NOTICE**

**Reopening Monday September 16th.** Bidding will begin on the following streets and will continue until completed: **Porch - Rock Trail, East Waterford Blvd, Shore Drive, Rockwell St., (from Bristol to Charles) Union Ave, Charles St, Strand Terrace.**

During this period we ask that residents remove their vehicles from the streets.

9/11/02

**LEGAL NOTICE**

The Danbury/Torrington Workforce Investment Board is transferring 20% of its Workforce Investment Act allocated funding to its Workforce investment Act dislocated worker funding. This represents \$35,582 and is precipitated by the need for services for dislocated workers in the Northwestern Connecticut Workforce Investment Area. The effective date of this transfer is October 3, 2002.

Any questions or comments can be submitted in writing to: Danbury/Torrington Workforce Investment Board, Administrative Office, Coa Place, Fuessech Park Field House, Torrington, CT 06790 or fax your request to (860)482-8397.

**LEGAL NOTICE**

Town of Colebrook  
Board of Assessment Appeals

The Board of Assessment Appeals will meet on September 28, 2002 in open session for the purpose of hearing motor vehicle assessment appeals only. The session will be conducted from 8:00 AM to 9:00 AM at the Colebrook Town Hall. Those with appeals shall present them at this time.

Mark Lett  
Chairperson Board of Assessment Appeals  
Town of Colebrook

**Rentals**



**210 Rooms For Rent**

NORFOLK-Village Center Home, your own TV/VCR, fridge, mi-

**230 Apartments Unfurnished**

**BURRVILLE:** At edge of state Park, 1st floor, 4 room, \$675 including heat and electric. (203)232-2133.

**FALLS VILLAGE:** 1 bedroom apartment. On main level, Off street parking, Country setting, \$595/month. Landmark R.E. Co. 491-2000.

**HARWINTON:** Extra large country apartment 2 bedroom, washer/dryer hookups, 6 rooms with garage, 1 year lease, \$1050. Available September. (860)485-9556.

**LITCHFIELD HEIGHTS:** 1 bedroom, first floor, inc. heat/hot water. Upgraded, carpet and kitchen, fresh paint, new windows. Call Bill at (860)379-7881.

**PUBLISHER'S NOTICE**

All real estate advertised in The Register Citizen or Foothills Trader is subject to the Federal Fair Housing Act of 1968 revised March 12, 1989, which makes it illegal to advertise "any preference, limitation or discrimination based on race, color, religion, national origin, gender, handicap, or marital status, or intention to make any such preference, limitation or discrimination." It is also subject to Connecticut Public Act No. 80-449 and the New Haven Ordinance to stop discrimination against families with children. All residential property advertised in this newspaper is subject to the State of Connecticut General Statutes Sections 46a-64c which prohibits the making, printing or publishing, or cause to be made, printed or published any notice, statement, or advertisement, with respect to the sale or rental of a dwelling that indicates any preference, limitation or discrimination based on race, creed, color, national origin, gender, marital status, age, lawful source of income, familial status, physical or mental disability, or sexual orientation, or an intention to make any such preference, limitation or discrimination. We will not knowingly accept any advertisement for real estate or for the sale or rental of residential property which is in violation of these laws. If you feel you have been discriminated against or have any inquiries, please call the Commission on Equal Opportunity, Fair Housing Program, 946-8163 or 946-8160.

**TORRINGTON:** 2 bedroom, quiet location, hardwood floors, Bay windows, \$850. References (860)927-1091

**TORRINGTON:** Eastside, 1 bedroom, appliances, \$510/month includes heat & hot water, Excellent condition. (860)485-1628.

**TORRINGTON:** Fantastic! 2BR townhouse, 1 1/2 baths, den, garage, \$875. Call (860)765-7534 x102, www.tbwpm.com.

**TORRINGTON:** Oak Avenue, 1st floor 2 bedroom, Appliances W/D hookup, Off street parking, \$550, 482-8378.

**WINSTED:** 1, 2 2 bedroom units at The Glen, New construction, off street parking, laundry facilities and more. 1 bedroom \$550-\$575, 2 bedroom \$749, including heat/hot water, 55+ only. Call Tony at 860-379-7036.

**WINSTED:** 2nd FL efficiency \$350 + utilities, 1 month security deposit, Non-smoker. 379-2175

**240 Condominiums For Rent**

**TORRINGTON:** Country setting, 1 level, 2 bedroom, Available ASAP, \$725+ sec. 482-0875.

**TORRINGTON:** Eastside, 1 and 2 bedrooms. All appliances. No pets. (860)625-7187.

**245 Houses For Rent**

**WINSTED:** 1 bedroom, Single house, with yard, At Highland Lake. Completely renovated w/new appl. No pets. \$800/month. Call (860)379-3596.

**WINSTED:** 3 bedroom cape, Lake-front, \$950. First, last and security. No pets, non smoking. References. (860)379-4093.

**255 Garages, Storage Space**

**INSIDE BOAT AND CAR STORAGE:** Dry and secure, \$300. Now until June 1, 2003, 587-9878.

**260 Rents Wanted**

**LANDLORDS RENT YOUR** apartments, houses, condos. Clients waiting. Trojan Realty 482-1157.

**Real Estate**



**316 Condominiums For Sale**

**TORRINGTON:** Eastside, 1 and 2 bedrooms. Call (860)486-1607.

**325 Houses For Sale**

**First Time Homebuyers** 50 To-Low Down! OK Credit HUD, VA, FHA. Call for listings, 800-338-0020 x7056.

**GOVT. FORECLOSED HOMES:** Low or 20 down! Gov't \$ Bank Repaid! No credit OK. For listings, 800-338-0020 x840.

**Torrington:** Affordable quality new construction on East Side, 3 BR, 1 1/2 BA Raised Ranch, super floor plan! \$139,900. Bright Affordable Ranch on quiet Street. Everything New! \$119,900. Call Catherine Robbins, 800-555-1146 x45.

**WINSTED:** Reduced! \$93,900. 7 room colonial, fireplace, 4 bedrooms. Marilyn's Realty Way, 489-0637.

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Call the Connecticut Department of Banking before investing in a business opportunity or franchise. See if the seller of the investment is registered with the Securities and Business Investments Division at 860-240-8230 or visit our Web site at [www.state.ct.us/dsb](http://www.state.ct.us/dsb)

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**618**

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**TO OWNERS**

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**620**

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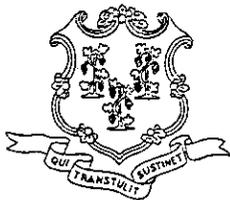


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STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



VIA FACSIMILE and ELECTRONIC MAIL

FAX Page 1 of 3

To Fax # 860- 442-5443

legal@theday.com

The Day Legal Advertising Dept.

P.O. Box 1231

47 Eugene O'Neil Drive

New London, CT 06320

ATTN: Legal Advertising Department/Judy

To whom it may concern:

Please make a one time insertion of the enclosed Notice under Legal Notices in your paper on Monday, September 16, 2002.

Please note that the Department will not remit payment for publication of the attached public notice until a copy of the public notice and certification of publication is forwarded to the Department. Please address such certification as follows:

Attn: Dennise Goulbourne  
Department of Environmental Protection  
Bureau of Air Management  
79 Elm Street  
Hartford, CT 06106

In your billing statement, please reference DP No. 566-3320. Please contact Mary Lakonski, Fiscal Administrative Officer, Bureau of Air Management, at (860) 424-3026 for further information regarding billing. If you have any questions regarding this notice, please call me at (860) 424-3458. Thank you for your assistance in this matter.

Sincerely yours,

8/27/02  
Date

*Elizabeth McAuliffe*  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

(Printed on Recycled Paper)

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PUBLISHER'S CERTIFICATE

State of Connecticut )  
County of New London, ) ss. New London

On this 16th day of September, 2002,  
personally appeared before the undersigned, a  
Notary Public within and for said County and  
State, T. FRANKLIN, CLASSIFIED LEGAL CLERK  
of THE DAY, a daily newspaper published  
at New London, County of New London, State of  
Connecticut, who being duly sworn, states on  
oath, that the Order of Notice in the case of  
LEGAL 248 PLAN FOR AIR QUALITY,  
a true copy of which is hereunto annexed, was  
published in said newspaper in its issue(s)

09/16/2002

*Tacey Franklin*  
-----  
Subscribed and sworn to before me

this 16th day of September, 2002.

*Lorraine Matusan*  
-----  
Notary Public

My commission expires 9-30-2003

LEGAL

State of Connecticut  
Department of Environmental Protection  
Notice of Intent to Revise the State Implementation Plan for Air Quality

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PUBLIC HEARING

Thursday, October 17th, 2002  
1:00 P.M.

Halcombe Room  
Department of Environmental Protection  
79 Elm Street, 5th Floor  
Hartford, Connecticut

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This notice is required pursuant to 40 Code of Federal Regulations Part 51.

Arthur J. Rocque,  
Commissioner  
Bureau of Air Management

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SEP 19 2002

DEPT. OF ENVIRONMENTAL PROTECTION  
BUREAU OF AIR MANAGEMENT  
Office of the Bureau Chief



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



**VIA FACSIMILE**

FAX Page 1 of 3

To Fax # 203 384-1158

Connecticut Post  
410 State Street  
Bridgeport, CT 06604

**ATTN: Legal Advertising Department/ Linda Sherwood**

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79 Elm Street  
Hartford, CT 06106

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Sincerely yours,

8/21/02  
Date

*Elizabeth McAuliffe*  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

(Printed on Recycled Paper)

79 Elm Street • Hartford, CT 06106-5127

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# CONNECTICUT POST

## Certificate of Publication

### Legal Advertising Department

410 State Street Bridgeport, CT 06604  
203-330-6213, 800-423-8058, ext. 6213  
Fax 203-384-1158

This is to certify that the legal notice of State of CT

was published in the Connecticut Post newspaper on 9/16/02  
(Month, Day, Year)

Signed CR  
(Legal Advertising Representative)

Ad Number 488498 Account/Telephone Number RC 3987

Purchase Order Number PP5663320

**RECEIVED**

SEP 24 2002

DEPT. OF ENVIRONMENTAL PROTECTION  
BUREAU OF AIR MANAGEMENT  
Office of the Bureau Chief

Subscribed and sworn to before me

this 16<sup>th</sup> day of September, 2002

[Signature]  
Notary Public

Date Commission Expires 12/31/2004

## STATE OF CONNECTICUT

### DEPARTMENT OF ENVIRONMENTAL PROTECTION

#### Notice of Intent to Revise the State Implementation Plan for Air Quality

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- 2) Northeast Nuclear Energy Company, Waterford - Order 8107, Modification No. 2
- 3) Connecticut Resources Recovery Authority, Hartford - Order 1494A
- 4) Cytec Industries Inc., Wallingford - Order 8114, Modification No. 2
- 5) Borough of Naugatuck, Naugatuck - Order 1626
- 6) Wisvest-Connecticut, LLC, Bridgeport - Order 8177, Modification No. 1
- 7) Wisvest-Connecticut, LLC, New Haven - Order 8176, Modification No. 1
- 8) Connecticut Jet Power, Branford, Cos Cob, Torrington - Orders 8180 and 8180, Modification No. 1
- 9) Allegheny Ludlum Corporation, Wallingford - Order 8188
- 10) Bristol Meyers Squibb, Wallingford - Order 8220
- 11) Combustion Engineering, Windsor - Order 8154, Modification No. 3
- 12) Middletown Power LLC, Middletown - Orders 8213, 8214, 8215, 8182 and 8227
- 13) Montville Power LLC, Montville - Orders 8216, 8217, and 8183
- 14) Devon Power LLC, Milford - Orders 8218 and 8181
- 15) Norwalk Power LLC, Norwalk - Orders 8219 and 8184
- 16) Sikorsky Aircraft Corporation, Stratford - Order 8120
- 17) Stone Container Corporation, Montville - Order 8124
- 18) University of Connecticut, Mansfield - Orders 8115, Modification No. 1 and 8115A
- 19) US Naval Submarine Base, Groton - Order 8201

This proposed SIP amendment includes Consent Orders and Trading Agreements and Orders that allow the owners or operators to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders.

All interested persons are invited to comment on the proposed SIP revision. Comments should be submitted to the Department of Environmental Protection, Bureau of Air Management, Compliance and Field Operations Division, 79 Elm Street, Hartford, Connecticut 06106-5127. All comments should be directed to the attention of Sara Ganzer and must be received by 5:00 P.M., October 31, 2002.

In addition to accepting written comments, the Department will also hold a public hearing as described below. Persons appearing at this public hearing are requested to submit a written copy of their statement. However, oral comments will also be made a part of the hearing record and are welcome.

#### PUBLIC HEARING

October 17th, 2002  
1:00 P.M.

Holcombe Room  
Department of Environmental Protection  
79 Elm Street, 5th Floor  
Hartford, Connecticut

Copies of the proposed orders described above are available for public inspection during normal business hours and may be obtained from Sara Ganzer of the Bureau of Air Management, Compliance and Field Operations Division, 5th Floor, 79 Elm Street, Hartford, CT. An additional copy is also available for review at the Government Information Service Desk (Balcony level) at the Connecticut State Library, Hartford, Torrington Public Library, Bridgeport Public Library and New London Public Library. For further information, contact Elizabeth McAuliffe of the Bureau of Air Management at (860) 424-3702.

The Department of Environmental Protection supports the goals of the Americans with Disabilities Act of 1990. Any individual who needs auxiliary aids for effective communication during this public hearing or in submitting public comments should contact Betty Lirot, ADA Coordinator at (860) 424-3035 or TDD (860) 424-3333 at least one week before the public hearing.

This notice is required pursuant to 40 Code of Federal Regulations Part 51.

Date  
8/12/02

Arthur J. Rocque, Jr.  
Commissioner

## STATE OF CONNECTICUT

### DEPARTMENT OF ENVIRONMENTAL PROTECTION

#### Notice of Intent to Revise the State Implementation Plan for Air Quality

The Commissioner of Environmental Protection hereby gives notice of a public hearing as part of a State Implementation Plan revision proceeding. These revisions will be submitted to the U.S. Environmental Protection Agency (EPA) for their review and approval as a revision to the State Implementation Plan (SIP) for air quality as required by the Clean Air Act Amendments of 1990 (CAA). The public hearing will address State Orders for the following:

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- 10) Bristol Meyers Squibb, Wallingford - Order 8220
- 11) Combustion Engineering, Windsor - Order 8154, Modification No. 3
- 12) Middletown Power LLC, Middletown - Orders 8213, 8214, 8215, 8182 and 8227
- 13) Montville Power LLC, Montville - Orders 8216, 8217, and 8183
- 14) Devon Power LLC, Milford - Orders 8218 and 8181
- 15) Norwalk Power LLC, Norwalk - Orders 8219 and 8184
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- 17) Stone Container Corporation, Montville - Order 8124
- 18) University of Connecticut, Mansfield - Orders 8115, Modification No. 1 and 8115A
- 19) US Naval Submarine Base, Groton - Order 8201

This proposed SIP amendment includes Consent Orders and Trading Agreements and Orders that allow the owners or operators to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders.

All interested persons are invited to comment on the proposed SIP revision. Comments should be submitted to the Department of Environmental Protection, Bureau of Air Management, Compliance and Field Operations Division, 79 Elm Street, Hartford, Connecticut 06106-5127. All comments should be directed to the attention of Sara Ganzer and must be received by 5:00 P.M., October 31, 2002.

In addition to accepting written comments, the Department will also hold a public hearing as described below. Persons appearing at this public hearing are requested to submit a written copy of their statement. However, oral comments will also be made a part of the hearing record and are welcome.

#### PUBLIC HEARING

October 17th, 2002  
1:00 P.M.

Holcombe Room  
Department of Environmental Protection  
79 Elm Street, 5th Floor  
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The Department of Environmental Protection supports the goals of the Americans with Disabilities Act of 1990. Any individual who needs auxiliary aids for effective communication during this public hearing or in submitting public comments should contact Betty Lirot, ADA Coordinator at (860) 424-3035 or TDD (860) 424-3333 at least one week before the public hearing.

This notice is required pursuant to 40 Code of Federal Regulations Part 51.

Date  
8/12/02

Arthur J. Rocque, Jr.  
Commissioner

**Ad Number: 488498 Advertiser: DEPT.ENVIROMENTAL PROTECTION**

Phone: 8604243026 Sys No: 22017 Caller: DEPT.ENVIROMENTAL PROTECTION

**Invoicing Customer:**

Phone: 8604243026 Sys No: 22017 AcctNo: RC3987 P.O. No: DP5663320

Name: DEPT.ENVIROMENTAL PROTECTION Subscriber:

Address: BUREAU OF AIR MANAGEMENT  
HARTFORD CT 06106

**Order:**

Printed By: R209 Date: 09/04/2002 Assigned Sales: R209 AdType: LINER Order Type: NORMAL

Manual Delay: Box No: Call Back: Y

**Production**

Text Size: 2 x 111.00 ProdType: ENTERPRISE ColorNo: 0 Colors:

Tearsheets: 0 Proofs: 0 Affidavits: 0 Alt Addr: N

**NOTES:**

Change Reason:

Start: 09/16/2002 End: 09/16/2002 Times: 2

Sort: STATE OF CONNECTICUTDEPARTMENT OFENVIRON

**Insertion**

FIRST INSERT: Product: PI Paper: PO Class: 11031; LEGALS - 2 COLUMN

Insertion Dates: 09/16/2002 09/16/2002

**Pricing**

Price: 485.94 Payment Method: BI Amount Paid: 0 Amount Owed: 485.94

PriceMethod: 0 (0=Normal, 1=User Net, 2=System Gross) Rate Code: LE

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For fields listed below 0 = NO 1 = YES

Till Forbid: 0 Mult. Content: 0

Proof of Publication  
CONNECTICUT POST  
By: CR



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



VIA FACSIMILE  
FAX Page 1 of 3  
To Fax # 241-3866

Hartford Courant  
285 Broad Street  
Hartford, CT 06116

**ATTN: Legal Advertising Department**

To whom it may concern:

Please make a one-time insertion of the enclosed Notice under Legal Notices in your paper on Monday, September 16, 2002.

Please note that the Department will not remit payment for publication of the attached public notice until a copy of the public notice and certification of publication is forwarded to the Department. Please address such certification as follows:

Attn: Dennise Goulbourne  
Department of Environmental Protection  
Bureau of Air Management  
79 Elm Street  
Hartford, CT 06106

In your billing statement, please reference DP No. 566-3320. Please contact Mary Lakonski, Fiscal Administrative Officer, Bureau of Air Management, at (860) 424-3026 for further information regarding billing. If you have any questions regarding this notice, please call me at (860) 424-3458. Thank you for your assistance in this matter.

Sincerely yours,

8/27/02  
Date

*Elizabeth McAuliffe*  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management



The Hartford Courant.

A TRIBUNE PUBLISHING COMPANY

# Affidavit of Publication

State of Connecticut

Monday, September 16, 2002

County of Hartford

I, Diane Luka, do solemnly swear that I am Senior Credit Representative of the Hartford Courant, printed and published daily, in the state of Connecticut and that from my own personal knowledge and reference to the files of said publication the advertisement of Legal Notice was inserted in the regular edition.

On dates as follows: 09/16/2002

In the amount of \$637.20  
ST OF CT DEP AIR COMPLIANCE 566-3320  
700167  
Full Run

Sr. Credit Representative  
Diane Luka

Subscribed and sworn to before me on September 16, 2002

Notary Public

LISA PEREZ  
Notary Public  
My Commission Expires  
June 30, 2006

RECEIVED

SEP 19 2002

DEPT. OF ENVIRONMENTAL PROTECTION  
BUREAU OF AIR MANAGEMENT  
Office of the Bureau Chief

STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Notice of Intent to Revise the State Implementation  
Plan for Air Quality

The Commissioner of Environmental Protection hereby gives notice of a public hearing as part of a State Implementation Plan revision proceeding. These revisions will be submitted to the U.S. Environmental Protection Agency (EPA) for their view and approval as a revision to the State Implementation Plan (SIP) for air quality as required by the Clean Air Act Amendments of 1990 (CAA). The public hearing will address State Orders for the following:

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This proposed SIP amendment includes Consent Orders and Trading Agreements and Orders that allow the owners or operators to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders.

All interested persons are invited to comment on the proposed SIP revision. Comments should be submitted to the Department of Environmental Protection, Bureau of Air Management, Compliance and Field Operations Division, 79 Elm Street, Hartford, Connecticut 06106-5127. All comments should be directed to the attention of Sara Ganzer and must be received by 10 P.M., October 31, 2002.

In addition to accepting written comments, the Department will also hold a public hearing as described below. Persons appearing at this public hearing are requested to submit a written copy of their statement. However, oral comments will not be made a part of the hearing record and are welcome.

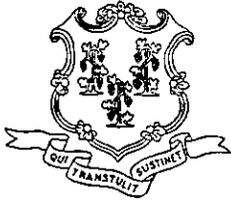
**PUBLIC HEARING**  
Thursday, October 17th, 2002  
1:00 P.M.  
Holcombe Room  
Department of Environmental Protection  
79 Elm Street, 5th Floor  
Hartford, Connecticut

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The Department of Environmental Protection supports the rights of the Americans with Disabilities Act of 1990. Any individual who needs auxiliary aids for effective communication during this public hearing or in submitting public comments should contact Betty Lirot, ADA Coordinator at (860) 424-3035 DD (860) 424-3333 at least one week before the public hearing.

This notice is required pursuant to 40 Code of Federal Regulations Part 51.

5/2002  
Arthur J. Rocque, Jr.  
Commissioner



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Exhibit 2



Ms. Barbara Kwetz  
Director  
Massachusetts Department of Environmental Protection  
Division of Air Quality  
One Winter St., 8th Floor  
Boston, Massachusetts 02108

Dear Ms. Barbara Kwetz:

In accordance with the provisions of Title 40 Code of Federal Regulations Part 51.102, enclosed for your information, is a notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosures that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders and Section 22a-74-22 of the Regulations of Connecticut State Agencies for the Abatement of Air Pollution.

Copies of the State Orders are available upon request. Please feel free to contact me at (860) 424-3702.

Sincerely yours,

8/27/02  
Date

Elizabeth McAuliffe  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosures:  
Notice of Intent to Revise SIP/Hearing Notice



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Mr. John Elston  
Administrator  
New Jersey Division of Environmental Quality  
CN 027  
Trenton, New Jersey 08625

Dear Mr. John Elston:

In accordance with the provisions of Title 40 Code of Federal Regulations Part 51.102, enclosed for your information, is a notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosures that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders and Section 22a-74-22 of the Regulations of Connecticut State Agencies for the Abatement of Air Pollution.

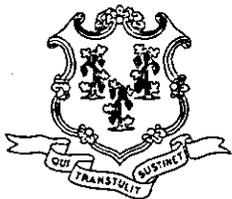
Copies of the State Orders are available upon request. Please feel free to contact me at (860) 424-3702.

Sincerely yours,

8/27/02  
Date

Elizabeth McAuliffe  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosures:  
Notice of Intent to Revise SIP/Hearing Notice



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Mr. Robert K. Warland  
Director  
New York Department of Environmental Conservation  
50 Wolf Road  
Albany, New York 12233

Dear Mr. Robert K. Warland:

In accordance with the provisions of Title 40 Code of Federal Regulations Part 51.102, enclosed for your information, is a notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosures that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders and Section 22a-74-22 of the Regulations of Connecticut State Agencies for the Abatement of Air Pollution.

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Sincerely yours,

Date 8/27/02

Elizabeth McAuliffe  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosures:  
Notice of Intent to Revise SIP/Hearing Notice



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Mr. Steven Masjkut  
Chief  
Rhode Island Department of Environmental Management  
291 Promenade St.  
Providence, Rhode Island 02908-5767

Dear Mr. Steven Masjkut:

In accordance with the provisions of Title 40 Code of Federal Regulations Part 51.102, enclosed for your information, is a notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosures that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders and Section 22a-74-22 of the Regulations of Connecticut State Agencies for the Abatement of Air Pollution.

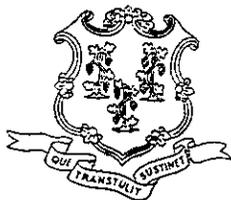
Copies of the State Orders are available upon request. Please feel free to contact me at (860) 424-3702.

Sincerely yours,

Date 8/27/02

*Elizabeth McAuliffe*  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosures:  
Notice of Intent to Revise SIP/Hearing Notice



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Ms. Karen Worrall  
Torrington Public Library  
12 Daycoetan Place  
Torrington, CT 06790

Re: Proposed State Implementation Plan Revision for public inspection

Dear Ms. Worrall:

I am writing to request your assistance in making the enclosed notice for a proposed State Implementation Plan revision available for public review from Monday, September 16, 2002 through Thursday, October 17, 2002.

The Department of Environmental Protection is considering the adoption into the State Implementation Plan (SIP) a number of State Orders identified in the enclosures that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders and Section 22a-74-22 of the Regulations of Connecticut State Agencies for the Abatement of Air Pollution. Title 40 Code of Federal Regulations, Part 51.102 requires that the public hearing be conducted and that the proposed State Order and supporting information be available for public inspection.

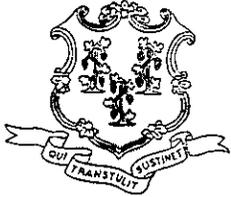
Please recycle the material after 4:30 p.m. on Thursday, October 17, 2002. Please contact me at (860) 424-3702 if you have any questions. Thank you for your assistance.

Sincerely yours,

8/27/02  
Date

*Elizabeth McAuliffe*  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

encl.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Ms. Marcia Stuart  
New London Public Library  
63 Huntington Street  
New London, CT 06320

Re: Proposed State Implementation Plan Revision for public inspection

Dear Ms. Stuart:

I am writing to request your assistance in making the enclosed notice for a proposed State Implementation Plan revision available for public review from Monday, September 16, 2002 through Thursday, October 17, 2002.

The Department of Environmental Protection is considering the adoption into the State Implementation Plan (SIP) a number of State Orders identified in the enclosures that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders and Section 22a-74-22 of the Regulations of Connecticut State Agencies for the Abatement of Air Pollution. Title 40 Code of Federal Regulations, Part 51.102 requires that the public hearing be conducted and that the proposed State Order and supporting information be available for public inspection.

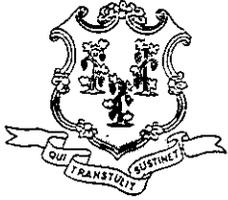
Please recycle the material after 4:30 p.m. on Thursday, October 17, 2002. Please contact me at (860) 424-3702 if you have any questions. Thank you for your assistance.

Sincerely yours,

8/27/02  
Date

*Elizabeth McAuliffe*  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

encl.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Ms. Sylvia Boyd  
Reference Librarian  
Bridgeport Public Library  
925 Broad Street  
Bridgeport, CT 06604

Re: Proposed State Implementation Plan Revision for public inspection

Dear Ms. Boyd:

I am writing to request your assistance in making the enclosed notice for a proposed State Implementation Plan revision available for public review from Monday, September 16, 2002 through Thursday, October 17, 2002.

The Department of Environmental Protection is considering the adoption into the State Implementation Plan (SIP) a number of State Orders identified in the enclosures that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders and Section 22a-74-22 of the Regulations of Connecticut State Agencies for the Abatement of Air Pollution. Title 40 Code of Federal Regulations, Part 51.102 requires that the public hearing be conducted and that the proposed State Order and supporting information be available for public inspection.

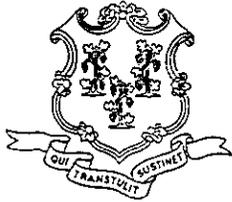
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Sincerely yours,

8/27/02  
Date

Elizabeth McAuliffe  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

encl.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Cheryl Schutt  
Law & Legislative Reference  
Connecticut State Library  
231 Capitol Avenue  
Hartford, CT 06106

Re: Proposed State Implementation Plan Revision for public inspection

Dear Ms. Schutt:

I am writing to request your assistance in making the enclosed notice for a proposed State Implementation Plan revision available for public review from Monday, September 16, 2002 through Thursday, October 17, 2002.

The Department of Environmental Protection is considering the adoption into the State Implementation Plan (SIP) a number of State Orders identified in the enclosures that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders and Section 22a-74-22 of the Regulations of Connecticut State Agencies for the Abatement of Air Pollution. Title 40 Code of Federal Regulations, Part 51.102 requires that the public hearing be conducted and that the proposed State Order and supporting information be available for public inspection.

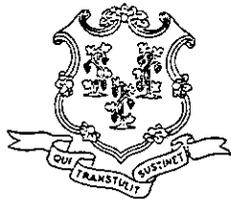
Please recycle the material after 4:30 p.m. on Thursday, October 17, 2002. Please contact me at (860) 424-3702 if you have any questions. Thank you for your assistance.

Sincerely yours,

8/27/02  
Date

*Elizabeth McAuliffe*  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Encl.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Mr. David Conroy  
Unit Manager  
Air Quality Planning and Standards  
Office of Ecosystem Protection  
U.S. EPA, EPA New England  
One Congress Street, Suite 1100  
Boston MA 02114-2023

Re: Proposed State Implementation Plan for Revision

Dear Mr. Conroy:

Enclosed please find proposed revision concerning the adoption into Connecticut's SIP a number of State Orders identified in the enclosures that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders and Section 22a-74-22 of the Regulations of Connecticut State Agencies for the Abatement of Air Pollution.

The public hearing to consider these State Orders will be held on Thursday, October 17, 2002 as announced in the enclosed public hearing notice. The State Orders will be submitted as a revision to Connecticut's State Implementation Plan after the hearing record has closed and the hearing officer has rendered the final decision.

Please do not hesitate to contact me at (860) 424-3702 should you have any questions or comments concerning these State Orders.

Sincerely yours,

Date 8/27/02

*Elizabeth McAuliffe*  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosures

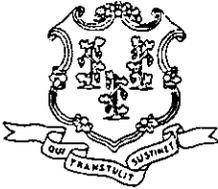
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1901 2001



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bristol Meyers-Squibb  
Attn: Carl Noonan  
PO Box 5100  
Wallingford, CT 06492-7660

Dear Mr. Noonan,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.

Please do not hesitate to contact me at (860) 424-3702 should you have any questions.

Sincerely yours,

8/27/02  
Date

*Elizabeth McAuliffe*  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing





STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Allegheny Ludlum Corporation  
Attn: Kevin Grant  
Box 249  
Wallingford, CT 06492

Dear Mr. Grant,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.

Please do not hesitate to contact me at (860) 424-3702 should you have any questions.

Sincerely yours,

8/27/02  
Date

Elizabeth McAuliffe  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Connecticut Jet Power, LLC  
Attn: Thomas Walker, VP  
PO Box 1001  
Middletown, CT 06457

Dear Mr. Walker,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.

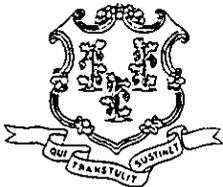
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Sincerely yours,

8/27/02  
Date

*Elizabeth McAuliffe*  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Wisvest-Connecticut LLC  
Attn: Sally Kruse  
12 Progress Drive, 2nd floor  
Bridgeport, CT 06604

Dear Ms. Kruse,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.

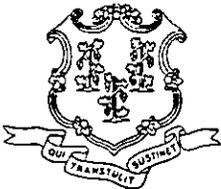
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Date

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Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Wisvest-Connecticut, LLC  
Attn: Robert Silvestri  
1 Atlantic Avenue  
Bridgeport, CT 06604

Dear Mr. Silvestri,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.

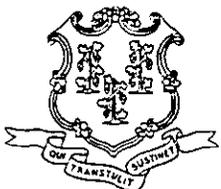
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Sincerely yours,

8/27/02  
Date

Elizabeth McAuliffe  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Borough of Naugatuck  
Attn: The Honorable Mayor Joan B. Taf  
229 Church Street  
Naugatuck, CT 06770

Dear Mayor Taf,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.

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Sincerely yours,

8/27/02  
Date

*Elizabeth McAuliffe*  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Cytec Industries, Inc.  
Attn: Charles Cappannari  
PO Box 425  
Wallingford, CT 06492

Dear Mr. Cappannari,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.

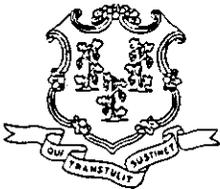
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Date

*Elizabeth McAuliffe*  
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Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Dominion Nuclear Connecticut, Inc.  
Attn: Paul M. Jacobson, Manager of Environmental Services  
Millstone Power Station, Rope Ferry Road  
Waterford, CT 6385

Dear Mr. Jacobson,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.

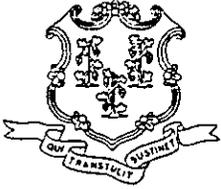
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Sincerely yours,

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Date

*Elizabeth McAuliffe*  
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Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



US Naval Submarine Base/PWRP  
Attn: Mike Brown  
Rte 12 Crystal Lake Rd., Environment Dept, Box 39  
Groton, CT 06349-5039

Dear Mr. Brown,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.

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Date

Elizabeth McAuliffe  
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Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



University of Connecticut/Storrs  
Attn: George Kraus (Michael Pacholski, Fac. Engr/Com)  
Box U38, 624 Gilbert Road Ext.  
Storrs, CT 06269-3038

Dear Mr. Kraus,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.

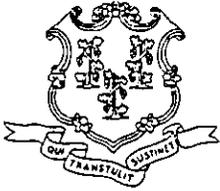
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Date

Elizabeth McAuliffe  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Stone Container Corporation  
Attn: Lewis Armstrong  
PO Box 1500  
Uncasville, CT 06382

Dear Mr. Armstrong,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.

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Sincerely yours,

8/27/02  
Date | |

*Elizabeth McAuliffe*  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Sikorsky Aircraft Corporation  
Attn: Mark Halvorsen  
6900 Main Street  
Stratford, CT 06497-9129

Dear Mr. Halvorsen,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. ~~The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.~~

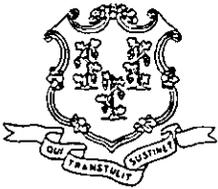
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Sincerely yours,

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*Elizabeth McAuliffe*  
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Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Norwalk Power LLC  
Attn: Peter Acimovic  
Manresa Island Avenue  
South Norwalk, CT 06854

Dear Mr. Acimovic,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. ~~The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.~~

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Sincerely yours,

8/27/02  
Date

Elizabeth McAuliffe  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Devon Power LLC  
Attn: Alan Rice  
PO Box 2218  
Milford, CT 06460

Dear Mr. Rice,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.

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8/27/02  
Date

*Elizabeth McAuliffe*  
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Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Montville Power LLC  
Attn: Lee McFalls  
74 Lathrop Road  
Uncasville, CT 06460

Dear Lee McFalls,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

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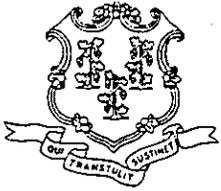
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Sincerely yours,

8/27/02  
Date

*Elizabeth McAuliffe*  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Middletown Power LLC  
Attn: Dan Bergeron  
1866 River Road  
Middletown, CT 06457

Dear Mr. Bergeron,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.

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8/27/02  
Date

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Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Combustion Engineering, Inc. (ABB Alstom Power Inc.)  
Attn: Keith Knauerhase, Environmental Coordinator  
PO Box 500  
Windsor, CT 06095-0500

Dear Mr. Knauerhase,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.

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Sincerely yours,

8/27/02  
Date

Elizabeth McAuliffe  
Elizabeth McAuliffe  
Environmental Analyst III  
Compliance and Field Operations  
Bureau of Air Management

Enclosure:  
Notice of Public Hearing



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Connecticut Resources Recovery Authority  
Attn: Peter Egan  
100 Constitution Plaza, 17th floor  
Hartford, CT 06103-1722

Dear Mr. Egan,

I have enclosed for your information a copy of notice of hearing regarding a revision to Connecticut's State Implementation Plan (SIP) for air quality.

The proposed revision concerns the adoption into Connecticut's SIP a number of State Orders identified in the enclosure that allow the owners or operators of facilities to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders. The public hearing is scheduled for Thursday, October 17, 2002 at 1:00 P.M. in the Holcombe Room at the Department of Environmental Protection Building, 79 Elm Street in Hartford, Connecticut.

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Bureau of Air Management

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Notice of Public Hearing



**STATE OF CONNECTICUT**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**



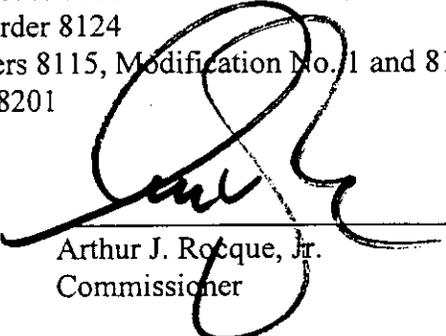
DELEGATION OF HEARING OFFICER

In accordance with the provisions of Section 22a-2 of the Connecticut General Statutes, Elizabeth McAuliffe of the Bureau of Air Management, is hereby appointed as Hearing Officer. Said Officer is responsible for conducting a hearing on October 17, 2002 and developing a proposed recommendation regarding proposed revisions and orders authorizing use and/or generation of emission reduction credits (ERCs) of oxides of nitrogen (NOx) in accordance with the requirements in such orders. These amendments will be submitted to the U.S. Environmental Protection Agency (EPA) for their review and approval as a revision to the State Implementation Plan (SIP) for air quality as required by the Clean Air Act Amendments of 1990. This hearing concerns the following Trading Agreement and Orders:

- 1) Dominion Nuclear Connecticut, Inc., Waterford – Orders 8221 and 8222
- 2) Northeast Nuclear Energy Company, Waterford – Order 8107, Modification No. 2
- 3) Connecticut Resources Recovery Authority, Hartford – Order 1494A
- 4) Cytec Industries Inc., Wallingford – Order 8114, Modification No. 2
- 5) Borough of Naugatuck, Naugatuck – Order 1626
- 6) Wisvest-Connecticut, LLC, Bridgeport – Order 8177, Modification No. 1
- 7) Wisvest-Connecticut, LLC, New Haven – Order 8176, Modification No. 1
- 8) Connecticut Jet Power, Branford, Cos Cob, Torrington – Orders 8180 and 8180, Modification No. 1
- 9) Allegheny Ludlum Corporation, Wallingford – Order 8188
- 10) Bristol Meyers Squibb, Wallingford – Order 8220
- 11) Combustion Engineering, Windsor – Order 8154, Modification No. 3
- 12) Middletown Power LLC, Middletown – Orders 8213, 8214, 8215, 8182 and 8227
- 13) Montville Power LLC, Montville – Orders 8216, 8217, and 8183
- 14) Devon Power LLC, Milford – Orders 8218 and 8181
- 15) Norwalk Power LLC, Norwalk – Orders 8219 and 8184
- 16) Sikorsky Aircraft Corporation, Stratford – Order 8120
- 17) Stone Container Corporation, Montville – Order 8124
- 18) University of Connecticut, Mansfield – Orders 8115, Modification No. 1 and 8115A
- 19) US Naval Submarine Base, Groton – Order 8201

8/12/02

Date

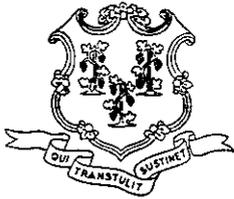
  
 \_\_\_\_\_  
 Arthur J. Rocque, Jr.  
 Commissioner

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**STATE OF CONNECTICUT**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**



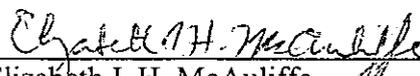
**HEARING CERTIFICATION**

This is to certify that in accordance with the provisions of Title 40 Code of Federal Regulations Part 51.102, the following actions occurred:

1. On September 16, 2002 the Department of Environmental Protection (Department) caused to be published a notice of intent to revise the State Implementation Plan for Air Quality (SIP). This proposed SIP revision includes Consent Orders and Trading Agreements and Orders that allow the owners or operators to generate and/or use nitrogen oxides emissions reduction credits in accordance with the requirements in such orders.
2. In accordance with such notice, materials related to the public hearing were available for inspection and review in each Air Quality Control Region in the State of Connecticut;
3. In accordance with such notice, the Department held a public hearing on October 17, 2002 at the offices of the Department at 79 Elm Street, Hartford CT;
4. Copies of the proposed SIP revision were mailed on August 28, 2002 to the Directors of the air pollution control agencies in New York, New Jersey, Massachusetts and Rhode Island;
5. Copies of the proposed SIP revision was mailed on September 4, 2002 to Donald Dahl and Manager Steve Rapp, Office of Ecosystem Protection, EPA New England.
6. The public notice was published as follows:

<u>Newspaper</u>	<u>AQCR</u>	<u>Date</u>
Connecticut Post	43	9/16/02
New London Day	41	9/16/02
The Register Citizen	44	9/16/02
Hartford Courant	42	9/16/02

October 23, 2002

  
 \_\_\_\_\_  
 Elizabeth I. H. McAuliffe  
 Environmental Analyst III  
 Bureau of Air Management



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Hearing Report

Hearing Date: October 17, 2002  
Hearing Officer: Elizabeth McAuliffe

Revision to:

The Connecticut State Implementation Plan for Air Quality concerning the following proposed Trading Agreements and Orders, Consent Orders, and Modifications.

- 1) Dominion Nuclear Connecticut, Inc., Waterford – Orders 8221 and 8222
- 2) Northeast Nuclear Energy Company, Waterford – Order 8107, Modification No. 2
- 3) Connecticut Resources Recovery Authority, Hartford – Order 1494A
- 4) Cytec Industries Inc., Wallingford – Order 8114, Modification No. 2
- 5) Borough of Naugatuck, Naugatuck – Order 1626
- 6) Wisvest-Connecticut, LLC, Bridgeport – Order 8177, Modification No. 1
- 7) Wisvest-Connecticut, LLC, New Haven – Order 8176, Modification No. 1
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- 17) Stone Container Corporation, Montville – Order 8124
- 18) University of Connecticut, Mansfield – Orders 8115, Modification No. 1 and 8115A
- 19) US Naval Submarine Base, Groton – Order 8201

I. Summary

On September 16, 2002, the Connecticut Department of Environmental Protection (Department) published a notice of intent to revise the State Implementation Plan (SIP) for air quality through 23 Orders and 7 Modifications concerning the Connecticut emissions reduction credit trading program, an economic incentive program, allowing the generation and use of discrete emission reduction credits (DERCs) for nitrogen oxides (NOx) Reasonably Available Control Technology (RACT) as a compliance alternative. This economic incentive program, effective May 31, 1995, is specified in Section 22a-174-22 of the Regulations of Connecticut State Agencies (Regulations) and meets the requirements of the Clean Air Act Amendments (CAAA) of 1990 and 40 CFR Part 51, Subpart U. This economic incentive program is approved by the U.S. Environmental Protection Agency (EPA) as a compliance alternative to emission controls for complying with NOx standards.

The proposed SIP revision was the subject of a public hearing held on Thursday, October 17, 2002, in the Holcombe Room at 79 Elm Street, Hartford, Connecticut. The Department delegated hearing officer was Elizabeth McAuliffe. In attendance at the hearing were Elizabeth McAuliffe of the Department; Robert Silvestri, Wisvest Connecticut; Carl Noonan, Bristol-Myers Squibb; Lewis G. Armstrong, Smurfit-Stone Container Corp.; Steven G. Horn, Dominion-Millstone; Steven Yates, Connecticut Resources Recovery Authority; Robert Spooner, NRG Middletown Operations; Michael Pacholsky and Gene Roberts, University of Connecticut; Mark S. Halvorsen, Sikorsky Aircraft; and Mark Bobman, Bristol Resource Recovery Facility Operating Committee (BRRFOC). Written comments were accepted until 5:00 PM, October 31, 2002.

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This hearing report includes a summary of oral and written comments on the proposed SIP revision, the Department's response to the comments and any recommended changes to the proposed SIP revision. A transcription of the hearing and copies of the written comments received are available from the Department upon request.

II. Written Comment

III.

A single written comment was received by the Department on the proposed SIP revision. That comment and Department's response are, as follows:

Trading Agreement and Order No. 8115A University of Connecticut – Roland Severance, P.E. Air Pollution Control Engineer III for the Emissions Trading Unit, Compliance and Field Operations Division, in the Department's Bureau of Air Management indicated that the heat input of 111.1 MMBtu/hr listed in Table 1 of Trading Agreement and Order No. 8115A for boiler number 2 is incorrect. He indicated that the heat input should be corrected to 86.25 MMBtu/hr.

*Response: Based upon the most recent stack test for boiler number 2, it is clear that a heat input of 111.1 MMBtu/hr is incorrect. Therefore, it is recommended that the Department modify Table 1 of Trading Agreement and Order No. 8115A to reflect the correct heat input for boiler number 2 of 86.25 MMBtu/hr.*

IV. Oral Comment

A single oral comment was received by the Department on the proposed SIP revision. That comment and Department's response are, as follows:

Steven G. Horn, Dominion-Millstone. Trading Agreement and Order 8107, Modification No. 2 was superseded by Trading Agreement and Order No. 8222. Does this point need to be made?

*Response: This is an important point. However, it does not require any revision to this proposed SIP package. Due to the timing of this SIP hearing, some of these Trading Agreements and Orders are no longer the compliance method being utilized by the owners and operators of the sources generating DERCs or using DERCs to comply with Section 22a-174-22 of the Regulations. However, the current compliance methods, which are approved by the Department and are stated in new Trading Agreements and Orders and modifications to existing Trading Agreements and Orders will have to be proposed in SIP hearings in the future in order to reflect the updated ownership and operational information for the subject sources.*

IV. Conclusion

Based upon the comments submitted to the Department and the responses addressed in this hearing report, I recommend the proposed SIP revision be submitted by the Commissioner of Environmental Protection to the Administrator of the U.S. Environmental Protection Agency as a revision to the Connecticut State Implementation Plan for Air Quality.

12/2/02  
Date

*Elizabeth I. H. McAuliffe*  
Elizabeth I. H. McAuliffe  
Hearing Officer

**REVISION TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Section 22a-174-22 Regulations of Connecticut State Agencies  
THROUGH USE OF DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

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**Dominion Nuclear Connecticut, Inc  
Trading Agreement and Order No. 8221**

May 2002

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### PART 2. DESCRIPTION OF DERC CREATION AND/OR USE

#### Trading Agreement and Order No. 8221

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### EXHIBITS

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency's (EPA) State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in EIP guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from nitrogen oxides (NOx) control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program includes approval of creation and use of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of NOx. Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for more timely rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better

environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized

by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of DERCs will not jeopardize RFP since the state's NOx rule emission limits for the sources creating and/or using DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources the baseline will be the lower of actual or allowable emissions.

### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This

reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the SIP for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the Trading Agreement and Order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable.

Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION AND/OR USE  
By Trading Agreement and Order 8221**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection  
Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected :**

----NOx, Section 22a-174-22 of the Regulations of Connecticut State Agencies

**C. Source :**

5 emergency generators for the three nuclear reactors  
(There are 11 generators, but only 5 generators are in the Trading program)  
Dominion Nuclear Connecticut, Inc  
Rope Ferry Road  
Waterford, CT

**D. Designated Representative:**

Contact: Gary Johnson  
Title: Supervisor of Environmental Services  
Phone: 860-477-1791 (0757)

**E. Nonattainment Area Classification: Serious**

**F. Summary of Compliance**

**Time Period:** On and after the issuance of the Consent Order to May 1, 2003

**Purpose:** NOx Emission compliance

**Estimate of Annual DERCS needed:** 4.13 ozone DERCS and 1.45 non-ozone DERCS in 2001.

**Recordkeeping and Reporting**

DNC is required to make and keep records of the amounts of all fuel and approved DERCS used by each generator each month; shall maintain and provide such records.

DNC, no later than March 1, 2002, 2003 and 2004, is required to include with its annual emissions report to the Commissioner, DERCs used, by ozone and non-ozone seasons, for the previous calendar year and the monthly rate of fuel consumption for the generators and DERCs used by the generators.

DNC is required to keep records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records are created.

DNC is required to keep documentation to demonstrate that DERCs used during the ozone season were generated during the ozone season. The ozone season is from May 1 through September 30 in any calendar year. Generator certification of this fact shall be sufficient.

DNC is required to submit the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.

#### **G. Description of Compliance**

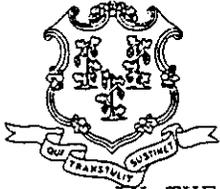
Dominion Nuclear Connecticut, Inc. owns and operates Millstone Nuclear Power Station at Rope Ferry Road, Waterford, Connecticut (facility). This facility was previously regulated under Trading Agreement and Order 8152 and DNC acquired the facility from Northeast Nuclear Energy Company. At the facility, DNC operates eleven (11) emergency generators for the three (3) nuclear reactors to provide electricity to the reactors operating equipment when normal electricity is unavailable. Due to the Nuclear Regulatory Commission (NRC) requirements for emergency generator readiness DNC may be required in the future to perform scheduled testing of the emergency generators on days for which the Commissioner has forecast that ozone levels will be moderate to unhealthful, unhealthful or very unhealthful. Due to the above mentioned testing requirement, pursuant to Subdivision (5) of Subsection (b) of Section 22a-174-22 of the Regulations of Connecticut State Agencies (Regulations) five (5) of the emergency generators are subject to Subsections (d) through (k) of Section 22a-174-22 of the Regulations pertaining to the control of NOx emissions. Pursuant to the Department's policy statement entitled; Credit Trading for Sources With Irregular NOx Emissions, revised on February 27, 2001, the five (5) emergency generators listed in the Trading Agreement and Order 8221 DNC - FLERs and NOx Emission Rates Table have peak daily NOx emissions greater than three times the average daily emissions during the ozone season and are therefore considered sources with irregular NOx emissions. Pursuant to Subsection (j) of Section 22a-174-22 of the Regulations, DNC will acquire approved DERCs to offset excess NOx emissions from the 5 generators. DNC intends to continue acquiring approved DERCs as needed to comply with the Trading Agreement and Order 8221. DNC shall document and record the amounts of all fuel used by the 5 generators, which are peaking units, each day and the number of DERCs used for the ozone season (from May 1 through September 30 of each year) and non-

ozone season (the remainder of the year).

**H. Source of DERCs:**

On and after the date of issuance of the Trading Agreement and Order, and prior to May 1, 2003 or until DNC achieves compliance with the emission standards in Section 22a-174-22(e) of the Regulations, whichever occurs earlier, DNC shall have in its possession required, approved DERCs. Before the first day of each month, the source shall calculate projected DERCs required for the next calendar month for the 5 generators as required by the Trading Agreement and Order 8221. No later than the tenth day of each month, the source shall calculate DERCs used in the preceding calendar month for the 5 generators as required by the Trading Agreement and Order 8221.

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STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



IN THE MATTER OF

STATE OF CONNECTICUT )  
AND )  
DOMINION NUCLEAR )  
CONNECTICUT, INC. )

TRADING AGREEMENT  
AND ORDER NO. 8221

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Dominion Nuclear Connecticut, Inc. ("DNC") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of discrete emission reduction credit ("DERC") trading to reduce nitrogen oxide ("NOx") emissions will achieve this result in a timely and cost-effective manner:

A. At the request and with the agreement of DNC, the Commissioner finds the following:

1. On or about March 30, 2001, DNC will acquire from Northeast Nuclear Energy Company ("NNECO") and then own and operate the Millstone Nuclear Power Station at Rope Ferry Road, Waterford, Connecticut ("facility").
2. At the facility, DNC will operate eleven (11) emergency generators for the three (3) nuclear reactors to provide electricity to the reactors' operating equipment when normal electricity is unavailable. These emergency generators are identified in Exhibit 1 attached hereto and incorporated by reference into this Trading Agreement and Order.
3. Due to the stringent Nuclear Regulatory Commission ("NRC") requirements for emergency generator readiness, NNECO has in the past, and DNC may be required in the future, to perform scheduled testing of the emergency generators on days for which the Commissioner has forecast that ozone levels will be "moderate to unhealthy", "unhealthy" or "very unhealthy".
4. Due to the above mentioned testing requirement, pursuant to Subdivision (5) of Subsection (b) of Section 22a-174-22 of the Regulations of Connecticut State Agencies ("Regulations") eight of the emergency generators are subject to Subsections (d) through (k) of Section 22a-174-22 of the Regulations pertaining to the control of NOx emissions.
5. Three of the emergency generators, the MP Unit 1 Fire Diesel, the Emergency Engine "EOF" (Cummins) and the Meteorological Tower generator, have maximum rated capacities below three (3) MMBtu/hr and potential emissions of NOx of less than 274 lbs/day. Because of this and because the facility is not located in a severe nonattainment area for ozone, these three engines are not subject to the requirements of Section 22a-174-22 of the Regulations.
6. NNECO completed NOx emissions testing of the remaining eight (8) emergency generators in accordance with the approved test protocol and Section 22a-174-22 of the Regulations. The results of such testing have been accepted by the Department of Environmental Protection ("Department"). The MP Unit 1 Emergency Turbine GE LM1500, the MP Unit 3 Emergency Diesel Colt PC2 Diesels (A) and (B) had emissions below the Reasonably Available Control Technology ("RACT") levels established in Subsection (e) of Section 22a-174-22 of the Regulations and do not require emissions trading to comply with Section 22a-174-22 of the Regulations.

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7. Pursuant to the Department's policy statement entitled; "Credit Trading for Sources With Irregular NOx Emissions", revised on February 27, 2001, attached hereto and incorporated by reference into this Trading Agreement and Order as Exhibit 2, the five (5) emergency generators listed in Table 1 of this Trading Agreement and Order have peak daily NOx emissions greater than three times the average daily emissions during the ozone season and are therefore considered sources with irregular NOx emissions.
  8. Pursuant to Subsection (j) of Section 22a-174-22 of the Regulations, on and after the date that DNC acquires the emergency generators, DNC will acquire approved DERCs to offset excess NOx emissions from the emergency generators. DNC intends to continue purchasing approved DERCs as needed.
  9. Approved DERCs are defined for purposes of this order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations.
- B. The Commissioner, in accordance with the provisions of this trading agreement and order, and pursuant to Subsection (j) of Section 22a-174-22 of the Regulations hereby allows DNC to comply with Section 22a-174-22 of the Regulations through use of DERC trading referenced in Section A, herein, to achieve the NOx emission reduction required by Subdivision (1) of Subsection (d) of Section 22a-174-22 of the Regulations.
- C. With the agreement of DNC, the Commissioner, acting under Connecticut General Statutes Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177, orders DNC as follows:
1. The terms and conditions established by this Trading Agreement and Order shall become effective on the date DNC acquires the emergency generators, and when this Trading Agreement and Order has been issued.
  2. Based on the completion of approved NOx emissions testing and the approval of such NOx emissions testing results, the Full Load Emission Rates ("FLERs") listed in Table 1 of this Trading Agreement and Order have been established for the identified pieces of equipment. Upon issuance of this Trading Agreement and Order, and continuing until May 1, 2003, DNC shall comply during operation of each generator with the FLERs listed in Table 1 of this Trading Agreement and Order:

Table 1  
DNC - FLERS and NOx RACT Emission Rates

GENERATOR	FUEL TYPE	Stack Test Result (g/BHp-Hr)	Stack Test Date	FLER (g/BHp-Hr)	NOx RACT Rate (g/BHp-Hr)
MP Unit 1 Emergency Diesel Colt F-M 38TDB-1/8 Diesel	Diesel	8	12/8/98	9.0	8
MP Unit 2 Emergency Diesel Colt F-M 38TDB-1/8 Diesel (12U)	Diesel	10	12/9/98	10.96	8
MP Unit 2 Emergency Diesel Colt F-M 38TDB-1/8 Diesel (13U)	Diesel	9	12/23/98	10.0	8
Station Blackout Diesel Electro-Motive 2MW Generator	Diesel	13.0	1/20/99	14.3	8
Station Security Diesel Cummins VT 1710GS/GC	Diesel	10.46	12/10/98	11.6	8

3. On and after the date that DNC acquires the emergency generators, DNC shall document and record the amounts and types of all fuel used and DERCs used by each generator each day, and shall maintain and provide such records in accordance with the following and Section 22a-174-4 of the Regulations, and until May 1, 2003, shall:

a. Have in its possession sufficient approved DERCs for the current day, based on the following calculations (described also in Exhibit 2);

**At all times (mass calculation):**

DERCs (in tons) = [actual hours operated x Hp rating x (FLER (g/Bhp-hr) - (0.95 x NOx RACT rate (g/Bhp-hr))) x (1pound/454g)] ÷ 2000 pounds/ton

**During the ozone season only (peak day calculation):**

the maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthy," "unhealthy," or "very unhealthy," divided by 3 and then divided by 13 (with the result in tons):

DERCs (in tons) = [(Maximum excess NOx in lbs) ÷ 3] ÷ [13 lbs/day/ton]

b. No later than October 30 of 2001, 2002 and 2003, calculate the DERCs used in the preceding ozone season as the greater of:

i. the actual total excess emissions for the ozone season in tons, as follows:

DERCs (in tons) = [actual hours operated x Hp rating x (FLER (g/BHp-hr) - (0.95 x NOx RACT rate (g/BHp-hr))) x (1 pound/454g)] ÷ 2000 pounds/ton

OR

ii. the maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthy", "unhealthy", or "very

unhealthful", divided by 3 and then divided by 13  
(with the result in tons):

$$\text{DERCs (in tons)} = [(\text{Maximum excess NOx in lbs}) \div 3] \div [13 \text{ lbs/day/ton}]$$

As described in Exhibit 2 of this Trading Agreement and Order, to the extent that DERCs used to offset on peak day basis (method ii) exceed the total mass excess emissions (method I), remaining DERCs may be used in the non-ozone season in the same or subsequent years until May 1, 2003;

- c. No later than January 31, 2002, 2003 and 2004, calculate DERCs used for non-ozone season months in the previous calendar year, as follows:
- $$\text{DERCs (in tons)} = [\text{actual hours operated} \times \text{Hp rating} \times (\text{FLER (g/BHp-hr)} - (0.95 \times \text{NOx RACT rate (g/BHp-hr)}))] \times (1 \text{ pound}/454\text{g})] \div 2000 \text{ pounds/ton}$$
- d. Adjust upwards by 100% the DERCs required if DERCs are not in DNC's possession prior to use. However, based on the gravity of the noncompliance, the Commissioner may require additional upward adjustment;
- e. Document and record daily fuel use and fuel type, excess NOx emissions and, during the ozone season, the daily ozone classification as forecasted by the Commissioner on the previous day;
- f. DNC shall notify the Commissioner in writing, within thirty (30) days from the date of discovery of any deficit in DERCs, and shall submit copies of supporting calculations for review and approval by the Commissioner;
- g. No later than March 1, 2002, 2003 and 2004, include with its annual emissions report to the Commissioner, DERCs used (calculated as described in sections C.3.b. and C.3.c. of this Trading Agreement and Order), by ozone and non-ozone seasons, for the previous calendar year;
- h. Retain records and supporting documentation as described in this paragraph for a minimum of five years, commencing on the date such records are created;
- i. Maintain documentation to attest to the fact that DERCs used during the ozone season were generated during the ozone season. Generator certification of this fact shall be sufficient; and
- j. Provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
4. No later than May 1, 2003, DNC shall comply with the requirements of Subdivision (1) of Subsection (d) of Section 22a-174-22 of the Regulations. However, after full program review of this and other Trading Agreements and Orders and, if determined to be appropriate, the Commissioner may grant a written extension of this Trading Agreement and Order.
5. The FLER may be adjusted upon satisfactory demonstration to the Department and written approval by the Commissioner.
6. Exceedance of an established FLER shall subject DNC to make restitution by matching the quantity of emissions ("true up") caused by the exceedance plus a 100% premium penalty. The true up in tons of DERCs shall be equal to the FLER exceedance in Lbs/MMBtu, multiplied by the total heat input during the period

of non-compliance divided by 2000 lbs/ton. If the period of non-compliance is not known, the time period from the completion of the last/previous Department witnessed stack test through the date compliance is achieved as approved by the Commissioner shall be used. However, based on the gravity of the noncompliance, the Commissioner may require additional upward adjustment.

7. Pursuant to Subsection (k) of Section 22a-174-22 of the Regulations, DNC shall conduct NOx emission tests of the emergency generators to which Section 22a-174-22 of the Regulations applies at least once every five years. Such testing shall take place no later than five years from the date of the last test for the five (5) emergency generators identified in Table 1 of this Trading Agreement and Order. For the three (3) emergency generators not identified in Table 1 of this Trading Agreement and Order but identified in paragraph A.6. of this Trading Agreement and Order, such testing shall take place no later than five years from the date of the last test. In no event shall such testing for the emergency generators to which Section 22a-174-22 of the Regulations applies be later than five years from the date that the previous test was required to be conducted by.
8. Approvals. DNC shall use best efforts to submit to the Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form. If the Commissioner notifies DNC that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and DNC shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.
9. Definitions. As used in this Trading Agreement and Order, "Commissioner" means the Commissioner or a representative of the Commissioner; "Ozone season" means the period from May 1 through September 30 in any given calendar year. The date of "issuance" of this Trading Agreement and Order is the date the Trading Agreement and Order is deposited in the U.S. mail or personally delivered, whichever is earlier.
10. Dates. The date of submission to the Commissioner of any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Trading Agreement and Order, the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.
11. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by DNC or, if DNC is not an individual, by DNC's chief executive officer or a duly authorized representative of such officer, as those terms are defined in §22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such document,

and DNC or DNC's chief executive officer and each such individual shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law."

12. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject DNC to an injunction and penalties.
13. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.
14. Notice of transfer; liability of DNC. Until DNC has fully complied with this Trading Agreement and Order, DNC shall notify the Commissioner in writing no later than 15 days after transferring all or any portion of the facility, the operations, the site or the business which is the subject of this Trading Agreement and Order or after obtaining a new mailing or location address. DNC's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
15. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by DNC pursuant to this Trading Agreement and Order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require DNC to undertake further investigation or further action to prevent or abate violations or pollution.
16. DNC's obligations under law. Nothing in this Trading Agreement and Order shall relieve DNC of other obligations under applicable federal, state and local law.
17. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by DNC pursuant to this Trading Agreement and Order will result in compliance or prevent or abate pollution.
18. Access to facility. Any representative of the Department of Environmental Protection may enter the facility without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
19. No effect on rights of other persons. This Trading Agreement and Order neither creates nor affects any rights of persons or municipalities that are not parties to this Trading Agreement and Order.
20. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these DERCs.

21. Notice to Commissioner of changes. Within 15 days of the date DNC becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, DNC shall submit the correct or omitted information to the Commissioner.
22. Notification of noncompliance. In the event that DNC becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, DNC shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice, DNC shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and DNC shall comply with any dates which may be approved in writing by the Commissioner. Notification by DNC shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.
23. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in this Trading Agreement and Order or in writing by the Commissioner, be directed to:

Wendy Jacobs  
Department of Environmental Protection  
Bureau of Air Management  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106-5127

Dominion Nuclear  
Connecticut, Inc.

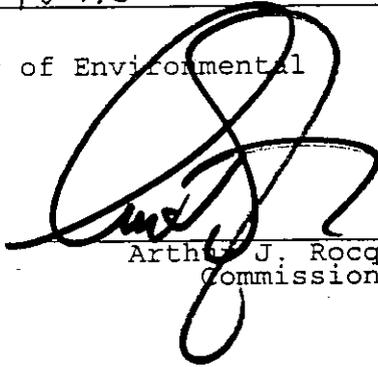
TRADING AGREEMENT AND  
ORDER NO. 8221

DNC consents to the issuance of this Trading Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Order and to legally bind DNC to the terms and conditions of the Trading Order.

Dominion Nuclear Connecticut, Inc.

Signature: Pamela F. Faggert  
Type Name: Pamela F. Faggert  
Type Title: Vice-President and Chief Environmental Officer  
Date: 3/27/01

Issued as a final order of the Commissioner of Environmental  
Protection on March 29, 2001.

  
Arthur J. Rocque, Jr.  
Commissioner

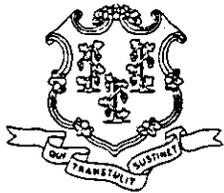
MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document

EXHIBIT 1. MILLSTONE GENERATORS

Name / Unit	Rating (MMBtu/hr)	Fuel
MP Unit 1 Emergency Diesel Colt F-M 38 TD8	28	Diesel
MP Unit 1 Emergency Turbine GE LM1500 Turbine	82	Kerosene
MP Unit 2 Emergency Diesel Colt F-M 38-TDB-1/8 Diesel (12 U)	27.58	Diesel
MP Unit 2 Emergency Diesel Colt F-M 38-TDB-1/8 Diesel (13 U)	27.58	Diesel
MP Unit 3 Emergency Diesel Colt PC2 Diesel (A)	50.4	Diesel
MP Unit 3 Emergency Diesel Colt PC2 Diesel (B)	50.4	Diesel
Station Blackout Diesel Electro-Motive 2MW Generator	25.76	Diesel
Station Security Diesel Cummins VT 1710 GS/GC	3.5	Diesel
MP Unit 1 Fire Diesel (Atlantic Detroit Diesel)	2.1	Diesel
Meteorological Tower Generator	0.68	Propane
Emergency Engine "EOF" (Cummins)	2.1	Diesel

Exhibit 2



# STATE OF CONNECTICUT

## DEPARTMENT OF ENVIRONMENTAL PROTECTION



*Updated February 27, 2001*

### **Credit Trading for Sources with Irregular NOx Emissions**

The following outlines the Department's concerns and methodology for dealing with peaking units ("peakers") that have maximum peak daily emissions that are substantially higher than their average daily emissions and that choose to achieve NOx compliance via credit trading pursuant to §22a-174-22(j) of the Regulations of Connecticut State Agencies ("Regulations"). For purposes of this protocol, peakers are defined as sources with maximum peak daily NOx emissions greater than three times their average daily emissions<sup>1</sup> during the ozone season.

The basic concept of the trading program is that sources with excess NOx emissions (a rate that exceeds the rate limits in the Regulations) may obtain NOx discrete emission reduction credits ("DERCs") from sources that have "over-controlled" their NOx emissions. Although typical sources can obtain credits on a mass basis (one ton of DERCs to offset one ton of excess emissions) with an acceptable environmental outcome, sources with large variations in emissions from day to day pose an additional problem for ozone attainment planning.

The most common peakers are electricity generating units that run during times of high electricity consumption. Electricity demand is often the highest during hot, humid days of the summer when the potential for ozone formation is also high. Peakers frequently have high emission rates. To the extent that these units produce emissions at exactly the time when emissions need to be reduced to limit ozone formation, allowing peakers to continue to comply with new rate limits through the use of DERCs on a ton-for-ton basis will exacerbate this effect. On the other hand, if it can be demonstrated that the DERCs being used by peakers were generated on a comparable basis (i.e., during days of high ozone potential), then ton-for-ton use by peakers would be appropriate.

The full impact of the NOx emissions from these types of facilities during summer operation must consider temporal variability as well as mass of excess emissions. Any DERC trade must consider equivalency to the NOx reductions that control equipment would produce on an ozone day on both a temporal and a mass basis. The protocol below places appropriate requirements on peaking units to reflect the greater impact of NOx emitted under this type of usage pattern. Attachment 1 provides a detailed example of how this policy would be applied to a peaker. Attachment 2 provides an explanation of the calculations underlying this policy.

#### ***NOx Emissions Reduction Credit Use Computation For Peakers***

- Peakers are only considered to be a temporal issue for the ozone season months.
- All excess NOx emissions during the winter (non-ozone season) need only be offset by DERCs on a mass basis.
- Prior to each ozone season there will be a prospective estimation to determine how many tons of DERCs must be "on hand" during the ozone season. A retrospective calculation will determine how many DERCs were actually "used" during the ozone season.

<sup>1</sup> - For purposes of this analysis, average daily emissions are determined by dividing a source's total ozone season NOx emissions (pounds) by 153 days to calculate an average pound/day value.

For ERC use during the ozone season:

1. **Prospective estimation** (pre-ozone season) will determine the number of DERCs that must be provided for the ozone season. (Beginning in 1996, the DERCs must be in place no later than May 1.)

DERCs required for the ozone season shall be calculated on the following bases:

- (a) **Mass basis:** DERCs required will be equal to the total number of tons of estimated excess NOx emissions over the entire ozone season, calculated in the same manner used for other sources using DERCs (i.e., including any discounts).
- (b) **Max-peak basis:** DERCs required (in tons) will be calculated by dividing one-third of the estimated maximum daily excess emissions (in pounds) for any day during the ozone season by 13 pounds/(ton•day)<sup>2</sup>. (see Attachment 2 for an explanation of this calculation):

$$\text{DERCs required (tons)} = [(\text{Estimated Maximum Excess NOx in lbs/day}) \div 3] \div [13 \text{ lbs}/(\text{ton}\cdot\text{day})]$$

Sources will be required to hold credits equal to the **greater** of the amount calculated on a mass or max-peak basis. The timing of actual credit possession will be governed by the terms of the specific trading order issued for that source.

2. **Retrospective calculation** (post-ozone season) will determine the actual credit use and the DERC surplus, if any. At the end of the ozone season, the calculations required in step 1 above will be repeated using:  
for (a), the **actual** (rather than estimated) total excess emissions for the ozone season, and  
for (b), the **actual** (rather than estimated) maximum daily excess NOx emissions on any of the days projected by the Commissioner to be "moderate to unhealthful", "unhealthful", or "very unhealthful".

The number of DERCs required pursuant to this policy will be the **greater** of the number of DERCs calculated on the mass basis or the max-peak day basis.

Of the total DERCs needed for the ozone season, a number of DERCs equal to the unit's actual total excess emissions (on a mass basis) will be used to cover such actual excess emissions. The number of DERCs equal to the difference between the total number needed pursuant to this policy and total actual excess emissions shall be converted from ozone season DERCs to non-ozone season DERCs. Any surplus DERCs (those purchased pursuant to the pre-ozone season estimation and not used to cover actual emissions nor converted to non-ozone season emissions) may be carried forward for use as ozone season DERCs through April 30, 2003 except as may be limited by the trading agreement and order, or by regulation.

---

2 - For the pre-ozone season estimation, the maximum daily excess NOx emissions (in lbs/day) is the difference between the maximum expected NOx emission rate and 95% of the allowable NOx emission rate under Section 22a-174-22(e) of the Regulations (lb/MMBtu) multiplied by the unit's maximum rated capacity (MMBtu/hr) and by the estimated maximum hours of operation per day (hrs/day).

*Attachment 1*  
*Example of this policy being applied to a peaking unit*

Before the ozone season, a peaker has estimated its total excess emissions to be 15 tons for the ozone season. It is also estimated that the maximum excess emission on a day projected to be "moderate to unhealthful" or worse will be 5000 pounds. Actual ozone season excess emissions are listed in the table below. The analysis of how this policy would be applied to this peaker follows after the table.

Date	NOx Excess Emissions (pounds)	NOx DERCs needed (mass basis) (tons)	"Mod to Unhealthful" (or worse) forecast?	Peak Day NOx DERCs needed (tons)
5/1	1,000	0.50	no	25.64
5/15	2,000	1.00	yes	51.28
6/1	3,000	1.50	no	76.92
6/15	4,000	2.00	yes	102.56
7/1	1,000	0.50	yes	25.64
7/15	5,000	2.50	no	128.21
8/1	1,000	0.50	yes	25.64
8/15	3,000	1.50	no	76.92
9/1	3,000	1.50	yes	76.92
9/15	4,000	2.00	no	102.56

13.00  
**SUM (mass basis)**

~~102.56~~  
**max-peak basis**

**ANALYSIS:**

**PRE-OZONE SEASON ESTIMATION**

**128.21** Estimated Ozone Season Tons Needed (max-peak basis using 5000 pounds as estimated maximum daily excess emissions)

**15.00** Estimated Ozone Season Excess Emissions (mass basis)

<b>128.21</b> Number of ozone season DERCs that need to be held no later than May 1
---

**POST-OZONE SEASON CALCULATION**

**102.56** Ozone Season Tons Needed (max-peak basis using 4000 pounds as actual maximum daily excess emissions)

**-13.00** Actual Ozone Season Excess Emissions (mass basis)

**89.56** Number of Ozone Season DERCs converted to Non-Ozone Season DERCs

**SUMMARY**

Of the 128.21 tons of ozone season DERCs that were reserved by May 1,  
**13.00** tons were used to cover actual ozone season emissions on a mass basis  
**89.56** tons were converted to non-ozone season DERCs  
**25.64** tons were carried forward as surplus ozone season DERCs

*Attachment 2*  
*Explanation of Max-Peak Basis Calculation*

Unless it can be demonstrated otherwise, DERCs are assumed to be created by relatively small daily reductions in NOx emissions over the course of an entire ozone season (153 days). The average daily NOx emissions reduction represented by each ton of credit is 13 pounds/day calculated as follows:

$$2000 \text{ pounds/ton} \div 153 \text{ days} = 13 \text{ pounds}/(\text{ton}\cdot\text{day})$$

Thus, one DERC (ton) would be equivalent to a reduction in NOx emissions of 13 pounds/day.

For example, if a peaker emits one ton of excess NOx per day when operating, but only operates for five days during the ozone season, the owner/operator of that source would nominally need to obtain five tons of DERCs on a mass basis. However, those DERCs used to offset this peaker's excess emissions are likely to have been created by relatively small daily reductions in NOx emissions from another source over the course of an entire ozone season (153 days). In this example, assuming a purchase of five tons of DERCs, that calculates out to a daily NOx reduction of approximately 65 pounds.

$$(5 \text{ tons} \times 2000 \text{ pounds/ton}) \div 153 \text{ days} = 65 \text{ pounds/day}$$

Clearly, on any day that the peaker operates, there will be many more tons of excess NOx emitted than NOx credits created (on the same day) to offset those excess emissions (on the order of 1,935 pounds in this example).

$$(1 \text{ ton} \times 2000 \text{ pounds/ton}) - (65 \text{ pounds credit}) = 1,935 \text{ pounds excess NOx emissions}$$

While the total amount of NOx emitted by a peaker would be offset on a seasonal average basis, on the "peaking" day there would be a potentially significant increase in NOx emitted, and thus an increase in potential ozone creation. In order to achieve a commensurate reduction in ozone creation potential for peakers, an adjustment in the calculation of required DERCs is needed. One approach would be to require DERCs in a quantity that would ensure that the daily average reduction represented by those DERCs would equal the maximum daily excess NOx emissions from the peaking source on any day that it ran. On this basis, a peaking source with a maximum 24-hour excess NOx emission of one ton would be required to purchase 153 tons of DERCs.

$$1 \text{ ton/day} \times 153 \text{ days/season} = 153 \text{ tons/season}$$

This 153 tons of DERCs would be adequate to offset excess emissions of one ton per day for as many days as the source operated during a particular ozone season. This has been deemed to be unduly stringent, given the diversity in operation of some of the peakers. In light of the foregoing, this requirement has been adjusted downward by two-thirds.

**REVISION TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Section 22a-174-22 Regulations of Connecticut State Agencies  
THROUGH USE OF DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

**Dominion Nuclear Connecticut, Inc  
Trading Agreement and Order No. 8222**

**May 2002**

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order 8222
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency=s (EPA) State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut=s program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCs in EIP guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCs from nitrogen oxides (NOx) control and the use of DERCs to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCs for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA=s EIP guidance.

The present scope of this program includes approval of creation and use of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCs for use or trading until May 1, 2003 by sources for compliance with Section 22a-174-22 of the Regulations of Connecticut State Agencies (Regulations), regarding control of NOx. Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCs as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving emission reductions as DERCs is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as

envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for more timely rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of DERCs will not jeopardize RFP since the state's NOx rule emission limits for the sources creating and/or using DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at

higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources the baseline will be the lower of actual or allowable emissions.

### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with Section 22a-174-22 of the Regulations through April 30, 2003.

## **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the SIP for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

## **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the Trading Agreement and Order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

## **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

## **PART 2. DESCRIPTION OF DERC CREATION AND/OR USE**

### **By Trading Agreement and Order 8222**

#### **A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection  
Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected :**

NOx, Section 22a-174-22 of the Regulations of Connecticut State Agencies

**C. Source :**

Five oil-fired heating boilers

CB1, CB2, CB3, B&W1 and B&W2.

Dominion Nuclear Connecticut, Inc (DNC)

Rope Ferry Road

Waterford, CT

**D. Designated Representative:**

Contact: Gary Johnson

Title: Supervisor of Environmental Services

Phone: 860-477-1791 (0757)

**E. Nonattainment Area Classification: Serious**

**F. Summary of Compliance**

**Time Period:** On and after the issuance of the Consent Order to May 1, 2003

**Purpose:** NOx Emission compliance

**Estimate of Annual DERCs needed:** They used .02 ozone and 2.94 non-ozone tons in 2001. They did not purchase any DERCs because they had sufficient DERCs on hand to offset excess emissions.

## **Recordkeeping and Reporting**

DNC is required to make and keep records of the amounts of all fuel and approved DERCs used by each Boiler each month; shall maintain and provide such records.

DNC, no later than March 1, 2002, 2003 and 2004, is required to include with its annual emissions report to the Commissioner, DERCs used, by ozone and non-ozone seasons, for the previous calendar year and the monthly rate of fuel consumption for the Boilers and DERCs used by the Boilers.

DNC is required to keep records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records are created.

DNC is required to keep documentation to demonstrate that DERCs used during the ozone season were generated during the ozone season. The ozone season is from May 1 through September 30 in any calendar year. Generator certification of this fact shall be sufficient.

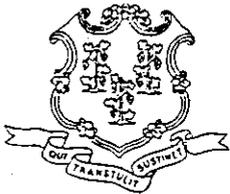
DNC is required to submit the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.

## **G. Description of Compliance**

Millstone Nuclear Power Station at Rope Ferry Road, Waterford, Connecticut (facility). This facility was previously regulated under Trading Agreement and Order 8107 and DNC acquired the facility from Northeast Nuclear Energy Company. At the facility, DNC will operate five (5) oil-fired heating boilers (Boilers), numbered CB1, CB2, CB3, B&W1, and B&W2. The Boilers are subject to Section 22a-174-22 of the Regulations. On and after May 31, 1995, Subsection (e) of Section 22a-174-22 of the Regulations requires that the Boilers emit NO<sub>x</sub> at a rate no greater than 0.25 pounds per million British thermal units (lbs/MMBtu) of heat input. Stack testing conducted in March and April of 1995 showed that boilers numbered CB1, CB2, CB3, and B&W2 exceeded the allowable NO<sub>x</sub> emission rate. Stack testing conducted in March of 2000 showed that all five boilers exceeded the allowable NO<sub>x</sub> emission rate. Pursuant to Subsection (j) of Section 22a-174-22 of the Regulations, on and after the date that DNC acquires the Boilers, DNC will acquire approved DERCs to offset excess NO<sub>x</sub> emissions from the Boilers. DNC intends to continue acquiring approved DERCs as needed to comply with the Trading Agreement and Order 8222.

**Source of DERCs:**

On and after the date of issuance of the Trading Agreement and Order 8222, and prior to May 1, 2003 or until DNC achieves compliance with the emission standards in Section 22a-174-22(e) of the Regulations, whichever occurs earlier, DNC shall have in its possession required, approved DERCs. Before the first day of each month, the source shall calculate projected DERCs required for the next calendar month for the boilers as required by the Trading Agreement and Order 8222. No later than the tenth day of each month, the source shall calculate DERCs used in the preceding calendar month for the boilers as required by the Trading Agreement and Order 8222.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



IN THE MATTER OF )  
STATE OF CONNECTICUT )  
AND )  
DOMINION NUCLEAR )  
CONNECTICUT, INC. )

TRADING AGREEMENT  
AND ORDER NO. 8222

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Dominion Nuclear Connecticut, Inc. ("DNC") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of discrete emission reduction credit ("DERC") trading to reduce nitrogen oxide ("NOx") emissions will achieve this result in a timely and cost-effective manner:

- A. At the request and with the agreement of DNC, the Commissioner finds the following:
- On or about March 30, 2001, DNC will acquire from Northeast Nuclear Energy Company and then own and operate the Millstone Nuclear Power Station at Rope Ferry Road, Waterford, Connecticut ("facility").
  - At the facility, DNC will operate five (5) oil-fired heating boilers ("Boilers"), numbered CB1, CB2, CB3, B&W1, and B&W2.
  - The Boilers are subject to Section 22a-174-22 of the Regulations of Connecticut State Agencies ("Regulations"). On and after May 31, 1995, Subsection (e) of Section 22a-174-22 of the Regulations requires that the Boilers emit NOx at a rate no greater than 0.25 pounds per million British thermal units ("lbs/MMBtu") of heat input.
  - Stack testing conducted in March and April of 1995 showed that boilers numbered CB1, CB2, CB3, and B&W2 exceeded the allowable NOx emission rate. Stack testing conducted in March of 2000 showed that all five boilers exceeded the allowable NOx emission rate.
  - Pursuant to Subsection (j) of Section 22a-174-22 of the Regulations, on and after the date that DNC acquires the Boilers, DNC will acquire approved DERCs to offset excess NOx emissions from the Boilers. DNC intends to continue acquiring approved DERCs as needed.
  - Approved DERCs are defined for purposes of this order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations.
- B. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, and pursuant to Subsection (j) of Section 22a-174-22 of the Regulations hereby allows DNC to comply with Section 22a-174-22 of the Regulations through use of DERC trading referenced in Section A, herein, to achieve the NOx emission reduction required by Subdivision (1) of Subsection (d) of Section 22a-174-22 of the Regulations.
- C. With the agreement of DNC, the Commissioner, acting under Connecticut General Statutes Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177, orders DNC as follows:
- The terms and conditions established by this Trading Agreement and Order shall become effective on the date DNC acquires the Boilers, and when this Trading Agreement and Order has been issued.

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Date: 3/27/01

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2. On and after the date that DNC acquires the Boilers, DNC shall have in its possession approved DERCs for the Boilers; shall document and record the amounts of all fuel and approved DERCs used by each Boiler each month; shall maintain and provide such records in accordance with the following and Section 22a-174-4 of the Regulations, until May 1, 2003; and:

- a. Before the first day of each month, calculate projected DERCs required for the Boilers for the next calendar month as follows:

$$\text{DERCs (tons)} = (\text{Estimated Fuel Use in MMBTU} \times (\text{FLER (lb/MMBTU)} - [.95 \times .25 \text{ lb/MMBTU}])) \div 2000 \text{ pounds}$$

Where FLER means full load emission rate referenced in paragraph C.3. of this Trading Agreement and Order;

- b. DNC shall have in its possession sufficient approved DERCs no later than the first of each calendar month to assure compliance for, at a minimum, that month. Excess DERCs from previous months can be applied to subsequent months. Approved DERCs shall be acquired on and after the date that DNC acquires the Boilers, and until DNC achieves permanent compliance with the emission standard in Subsection (e) of Section 22a-174-22 of the Regulations;
- c. No later than the tenth day of each month, calculate approved DERCs used in the preceding calendar month;
- d. Document and record monthly fuel used by each Boiler and the approved DERCs used;
- e. Notwithstanding paragraph C.2.a. of this Trading Agreement and Order; DERCs required shall be adjusted upwards by at least 100% if DERCs are not in DNC's possession prior to use. However, based on the gravity of the noncompliance, the Commissioner may require additional upward adjustment;
- f. DNC shall notify the Commissioner in writing, within thirty (30) days from the date of discovery of any deficit in DERCs, and shall submit copies of supporting calculations for review and approval by the Commissioner;
- g. No later than March 1, 2002, 2003 and 2004, include with its annual emissions report to the Commissioner, the fuel consumed and approved DERCs used monthly for the previous calendar year;
- h. Keep records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records are created;
- i. Keep documentation to demonstrate that DERCs used during the ozone season were generated during the ozone season. The ozone season is from May 1 through September 30 in

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any calendar year. Generator certification of this fact shall be sufficient; and

- j. Submit the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
- 3. Upon issuance of this Trading Agreement and Order, and until May 1, 2003, DNC, during operation of each Boiler, shall not exceed the FLERs shown in Table 1 of this Trading Agreement and Order.

TABLE 1  
DNC - FLERs and NOx Emission Rates

BOILER	FUEL TYPE	Stack Test Result (lb/MMBtu)	Stack Test Date	FLER (lb/MMBtu)	NOx RACT Rate (lb/MMBtu)
Boiler CB1	No. 4 oil	0.38	3/8/00	0.42	0.25
Boiler CB2	No. 4 oil	0.35	3/8/00	0.39	0.25
Boiler CB3	No. 4 oil	0.32	3/8/00	0.35	0.25
Boiler B&W1	No. 4 oil	0.26	4/12/00	0.29	0.25
Boiler B&W2	No. 4 oil	0.32	4/12/00	0.35	0.25

- 4. No later than May 1, 2003, DNC shall comply with the requirements of Subdivision (1) of Subsection (d) of Section 22a-174-22 of the Regulations. However, after full program review of this and other Trading Agreements and Orders and, if determined to be appropriate, the Commissioner may grant a written extension of this Trading Agreement and Order.
- 5. The FLER may be adjusted upon satisfactory demonstration to the Department and written approval by the Commissioner.
- 6. Exceedance of an established FLER shall subject DNC to make restitution by matching the quantity of emissions ("true up") caused by the exceedance plus a 100% premium penalty. The true up in tons of DERCS shall be equal to the FLER exceedance in Lbs/MMBtu, multiplied by the total heat input during the period of non-compliance divided by 2000 lbs/ton. If the period of non-compliance is not known, the time period from the completion of the last/previous Department witnessed stack test through the date compliance is achieved as approved by the Commissioner shall be used. However, based on the gravity of the noncompliance, the Commissioner may require additional upward adjustment.
- 7. Pursuant to Subsection (k) of Section 22a-174-22 of the Regulations, DNC shall conduct NOx emission tests of the Boilers at least once every five years. Such testing shall take place no later than five years from the date of the last test for the Boilers identified in Table 1 of this Trading Agreement and Order. In no event shall such testing be later than five years from the date that the previous test was required to be conducted by.
- 8. Approvals. DNC shall use best efforts to submit to the

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Date: 3/27/01

Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form. If the Commissioner notifies DNC that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and DNC shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.

9. Definitions. As used in this Trading Agreement and Order, "Commissioner" means the Commissioner or a representative of the Commissioner; "Ozone season" means the period from May 1 through September 30 in any given calendar year. The date of "issuance" of this Trading Agreement and Order is the date the Trading Agreement and Order is deposited in the U.S. mail or personally delivered, whichever is earlier.
10. Dates. The date of submission to the Commissioner of any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Trading Agreement and Order, the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.
11. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by DNC or, if DNC is not an individual, by DNC's chief executive officer or a duly authorized representative of such officer, as those terms are defined in §22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such document, and DNC or DNC's chief executive officer and each such individual shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law."
12. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject DNC to an injunction and penalties.
13. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.

Initials: \_\_\_\_\_

*RJA*

Date: \_\_\_\_\_

3/27/01

14. Notice of transfer; liability of DNC. Until DNC has fully complied with this Trading Agreement and Order, DNC shall notify the Commissioner in writing no later than 15 days after transferring all or any portion of the facility, the operations, the site or the business which is the subject of this Trading Agreement and Order or after obtaining a new mailing or location address. DNC's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
15. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by DNC pursuant to this Trading Agreement and Order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require DNC to undertake further investigation or further action to prevent or abate violations or pollution.
16. DNC's obligations under law. Nothing in this Trading Agreement and Order shall relieve DNC of other obligations under applicable federal, state and local law.
17. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by DNC pursuant to this Trading Agreement and Order will result in compliance or prevent or abate pollution.
18. Access to facility. Any representative of the Department of Environmental Protection may enter the facility without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
19. No effect on rights of other persons. This Trading Agreement and Order neither creates nor affects any rights of persons or municipalities that are not parties to this Trading Agreement and Order.
20. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these DERCs.
21. Notice to Commissioner of changes. Within 15 days of the date DNC becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, DNC shall submit the correct or omitted information to the Commissioner.
22. Notification of noncompliance. In the event that DNC becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, DNC shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice, DNC shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and DNC shall comply with any dates which may be approved in writing by the Commissioner. Notification by DNC shall not excuse noncompliance or delay.

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Date: 3/27/01

Dominion Nuclear  
Connecticut, Inc.

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TRADING AGREEMENT AND  
ORDER NO. 8222

and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.

23. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in this Trading Agreement and Order or in writing by the Commissioner, be directed to:

Wendy Jacobs  
Department of Environmental Protection  
Bureau of Air Management  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106-5127

Initials: RLA

Date: 3/27/01

Dominion Nuclear  
Connecticut, Inc.

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TRADING AGREEMENT AND  
ORDER NO. 8222

DNC consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind DNC to the terms and conditions of the Trading Agreement and Order.

Dominion Nuclear Connecticut, Inc.

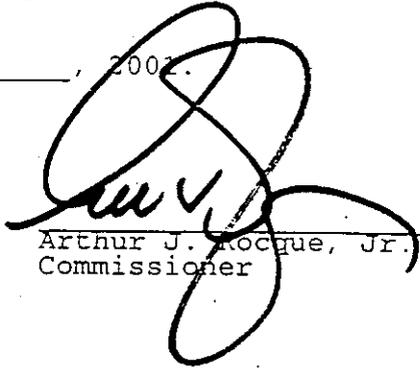
Signature: Pamela F. Faggert  
Type Name: Pamela F. Faggert  
Type Title: Vice-President and Chief Environmental Officer  
Date: 3/27/01

Issued as a final order of the Commissioner of

Environmental Protection on

March 29

, 2001.

  
Arthur J. Rocque, Jr.  
Commissioner

MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document

**REVISION TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Section 22a-174-22 Regulations of Connecticut State Agencies  
THROUGH USE OF DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

**Northeast Nuclear Energy Company  
Trading Agreement and Order No. 8107  
Modification No. 2**

**April 2002**

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### PART 2. DESCRIPTION OF DERC CREATION AND/OR USE

#### By Trading Agreement and Order No. 8107, Modification No. 2

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### EXHIBITS

Exhibit 1 Notice of Hearing and Hearing Certification

Exhibit 2 Designation of Hearing Officer

Exhibit 3 Trading Agreement and Order 8107 Modification No. 2

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## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency's (EPA) State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in EIP guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from nitrogen oxides (NOx) control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program includes approval of creation and use of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with Section 22a-174-22 of the Regulations of Connecticut State Agencies (Regulations), regarding control of NOx. Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for more timely rule compliance because more options are available to the regulated source. DERC trading is intended

to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of DERCs will not jeopardize RFP since the state's NOx rule emission limits for the sources creating and/or using DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources the baseline will be the lower of actual or allowable emissions.

### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with Section 22a-174-22 of the Regulations through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the SIP for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the Trading Agreement and Order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERs by using the reporting procedures required herein. A summary of the creation and use of DERs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERs to determine if additional restrictions are needed to assure that the use of DERs does not jeopardize RFP. Tracking and monitoring of DER use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DER CREATION AND/OR USE  
By Trading Agreement and Order 8107 Modification No. 2**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection  
Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected :**

NOx, Section 22a-174-22 of the Regulations of Connecticut State Agencies

**C. Source :**

Five oil-fired heating boilers  
CB1, CB2, CB3, B&W1 and B&W2.

Northeast Nuclear Energy Company (NNECO)  
Millstone Nuclear Power Station  
Rope Ferry Road  
Waterford, CT  
(Is now Dominion Nuclear Connecticut (DNC))

**D. Designated Representative:**

No longer applicable for NNECO

**E. Nonattainment Area Classification: Serious**

**F. Summary of Compliance**

**Time Period:** Northeast Nuclear became DNC on March 31, 2001. Order 8222 replaced 8107.

**Purpose:** NOx Emission compliance

**DERCS needed:** . The facility used .02 ozone and 2.94 non-ozone tons in 2001.

**Maximum Emission Rate:** see the Table provided in Trading Agreement and Order 8107 Modification No. 2.

### **G. Description of Compliance**

NNECO is a Connecticut corporation that previously owned and operated the Millstone Nuclear Power Station at Rope Ferry Road, Waterford, Connecticut (Facility). At the Facility, NNECO operated five (5) oil-fired heating boilers (boilers), numbers CB1, CB2, CB3, B&W1 and B&W2 which are projected to use DERCS. Under Trading Agreement and Order No. 8107 pursuant to Section 22a-174-22(j) of the Regulations, for all of the boilers except for B&W1, NNECO used approved DERCS. Stack testing conducted in March 2000 showed that three of the boilers exceeded the full load emission rate (FLER) established in Trading Agreement and Order 8107, and one of the boilers that previously met the emission limit in Section 22a-174-22 of the Regulation now exceeds the applicable emission limit. Trading Agreement and Order No. 8107 Modification No. 2 does the following:

Includes boiler B&W1 (boiler that previously met the emission limit);

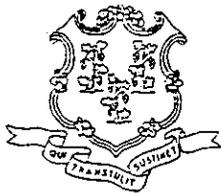
Upwardly adjusts the FLERS for boilers CB1, CB2, CB3 and B&W2;

Requires that NNECO will offset excess emission with DERCS;

Retires 6.4 tons of DERCS to offset DERCS not on hand at the time of use; and

Requires that NNECO shall document and record the amounts of all fuel and approved DERCS used by each boiler each month and shall calculate projected DERCS as provided in the Modification No. 2.

An enforcement penalty in the form of additional DERC retirement was assessed and recovered in Consent Order 1638 to address the FLER and emission exceedances.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



STATE OF CONNECTICUT

AND

NORTHEAST NUCLEAR  
ENERGY COMPANY

TRADING AGREEMENT AND  
ORDER NO. 8107  
MODIFICATION NO. 2

TRADING AGREEMENT AND ORDER MODIFICATION

In the matter of a Trading Agreement and Order between the Commissioner of Environmental Protection ("Commissioner") and Northeast Nuclear Energy Company ("NNECO").

WHEREAS, the Commissioner and NNECO, having agreed to the terms and conditions set forth in Trading Agreement and Order No. 8107 issued on October 13, 1995, and Trading Agreement and Order No. 8107 Modification issued on April 29, 1999, do now, by mutual agreement, modify said Trading Agreements and Orders as follows:

- 1. Delete paragraph A.2. and substitute the following therefor:

At the facility, NNECO operates five (5) oil-fired heating boilers ("boilers"), numbered CB1, CB2, CB3, B&W1, and B&W2.

- 2. Delete paragraph A.3. and substitute the following therefor:

The boilers are subject to Section 22a-174-22 of the Regulations of Connecticut State Agencies ("Regulations"). On and after May 31, 1995, Section 22a-174-22(e) of the Regulations requires that the boilers emit nitrogen oxides ("NOx") at a rate no greater than 0.25 pounds per million British thermal units ("lbs/MMBtu") of heat input.

- 3. Add paragraph A.4. as follows:

Stack testing conducted in March and April of 1995 showed that boilers numbered CB1, CB2, CB3, and B&W2 exceeded the allowable NOx emission rate. Stack testing conducted in March of 2000 showed that all five boilers exceeded the allowable NOx emission rate.

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*[Handwritten initials]*

Date: \_\_\_\_\_

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4. Add paragraph A.5. as follows:

Pursuant to Section 22a-174-22(j) of the Regulations, NNECO will acquire approved emission reduction credits ("ERCs") to offset excess NOx emissions from the boilers. Approved ERCs are defined for purposes of this order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations.

5. Add paragraph A.6. as follows:

From January through April, 1997, NNECO did not have sufficient ERCs on hand to cover excess NOx emissions from boilers numbered CB1, CB2, CB3, and B&W2. Excess NOx emissions during said time period were 3.2 tons.

6. Add paragraph A.7. as follows:

NNECO has adjusted the 3.2 tons of ERCs required in paragraph A.6. upwards by 100% and retired the required ERCs (6.4 tons) on April 23, 1997.

7. Delete paragraph C.1. and substitute the following therefor:

On and after May 31, 1995 for boilers numbered CB1, CB2, CB3, and B&W2, and on and after April 12, 2000 for boiler numbered B&W1, NNECO shall have in its possession approved ERCs for the boilers; shall document and record the amounts of all fuel and approved ERCs used by each boiler each month; shall maintain and provide such records in accordance with the following and Section 22a-174-4 of the Regulations, until May 1, 2003; and:

- a. Before the first day of each month, calculate projected ERCs required for the boilers for the next calendar month as follows:

$$\text{ERCs (tons)} = (\text{Estimated Fuel Use in MMBTU} \times (\text{FLER (lb/MMBTU)} - [.95 \times .25 \text{ lb/MMBTU}])) / 2000 \text{ pounds}$$

Where FLER means full load emission rate referenced in paragraph C.2.;

- b. Except as otherwise specified in subparagraphs C.3. and C.4., NNECO shall have in their possession sufficient approved ERCs no later than the first of each calendar month to assure compliance for, at a minimum, that

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month. Excess credits from previous months can be applied to subsequent months. Approved ERCs shall be acquired for the period beginning May 31, 1995 for boilers numbered CB1, CB2, CB3 and B&W2, and April 12, 2000 for boiler numbered B&W1, and until NNECO achieves permanent compliance with the emission standard in Section 22a-174-22(e) of the Regulations;

- c. No later than the tenth day of each month, calculate approved ERCs used in the preceding calendar month;
- d. Document and record monthly fuel used by each boiler and the approved ERCs used;
- e. No later than March 1, 1999 and on March 1, thereafter until 2004, include with its annual emissions report to the Commissioner, the fuel consumed and approved ERCs used monthly for the previous calendar year;
- f. Retain records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records were created;
- g. Maintain documentation to attest to the fact that approved ERCs used during the ozone season were generated during the ozone season. The ozone season is May 1 to September 30 in any calendar year. Generator certification of this fact shall be sufficient;
- h. Provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner;
- i. Notwithstanding paragraph C.1.a.; ERCs required shall be adjusted upwards by at least 100% if ERCs are not in NNECO's possession prior to use;
- j. NNECO shall notify the Commissioner in writing, within thirty (30) days from the date of discovery of any deficit in ERCs, and shall submit copies of supporting calculations for review and approval by the Commissioner; and
- k. Nothing in this Trading Agreement and Order shall prohibit the Commissioner from imposing additional premiums or taking additional enforcement action that the Commissioner deems appropriate.

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8. Delete paragraph C.2. and substitute the following therefor:

From May 31, 1995 to May 1, 2003, for boilers numbered CB1, CB2, CB3 and B&W2, and from April 12, 2000 to May 1, 2003 for boiler numbered B&W1, NNECO, during operation of each boiler, shall not exceed the FLERs shown in Table 1 below.

Table 1  
FLERs and NOx Emission Rates

UNIT	FUEL	FLER rate (lb/MMBtu) prior to 2000 stack test	FLER rate (lb/MMBtu) On and after 2000 stack test	2000 Stack test rate (lb/MMBtu)	RACT rate limits (lb/MMBtu)
Boiler CB1	No. 4 oil	0.33	0.42	0.38	0.25
Boiler CB2	No. 4 oil	0.33	0.39	0.35	0.25
Boiler CB3	No. 4 oil	0.33	0.35	0.32	0.25
Boiler B&W1	No. 4 oil	N/A	0.29	0.26	0.25
Boiler B&W2	No. 4 oil	0.26	0.35	0.32	0.25

All other terms and conditions of Trading Agreement and Order no. 8107 issued by the Commissioner acting under Chapter 446c, Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes shall remain in effect.

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*DER*

Date: \_\_\_\_\_

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NORTHEAST NUCLEAR  
ENERGY COMPANY

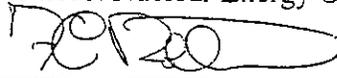
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TRADING AGREEMENT AND ORDER  
MODIFICATION NO. 2

Northeast Nuclear Energy Company hereby consents to the entry of this modification to the Trading Agreement and Order without further notice.

Northeast Nuclear Energy Company

Signature: \_\_\_\_\_



Type Name: \_\_\_\_\_

Frank C. Rothen

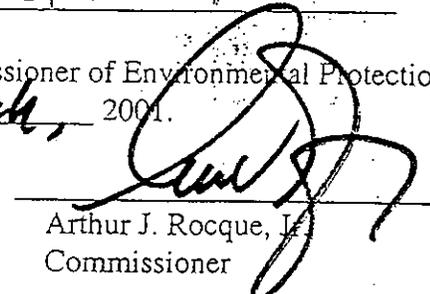
Type Title: \_\_\_\_\_

VP--Nuclear Work Services

Date: \_\_\_\_\_

3/26/01

Entered as a modification of an Order of the Commissioner of Environmental Protection numbered 8107 this 29<sup>th</sup> day of March, 2001.



\_\_\_\_\_  
Arthur J. Rocque, Jr.  
Commissioner

TOWN OF WATERFORD  
LAND RECORDS

MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document No.

**REVISION TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Section 22a-174-22 of the Regulations of Connecticut State Agencies  
THROUGH USE OF DISCRETE EMISSION REDUCTION CREDITS  
(DERCs)**

**The Connecticut Resources Recovery Authority  
Trading Agreement and Order No. 1494A**

**April 2002**

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### PART 2. DESCRIPTION OF DERC CREATION AND/OR USE By Trading Agreement and Order 1494A

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### EXHIBITS

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency's (EPA) State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in EIP guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from nitrogen oxides (NOx) control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERCS creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program includes approval of creation and use of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with Section 22a-174-22 of the Regulations of Connecticut State Agencies (Regulations), regarding control of NOx. Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERCS creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for more timely rule compliance because more options are available to the regulated source. DERCS trading is intended

to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of DERCs will not jeopardize RFP since the state's NOx rule emission limits for the sources creating and/or using DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources the baseline will be the lower of actual or allowable emissions.

### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with Section 22a-174-22 of the Regulations through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the SIP for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the Trading Agreement and Order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCS by using the reporting procedures required herein. A summary of the creation and use of DERCS will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCS to determine if additional restrictions are needed to assure that the use of DERCS does not jeopardize RFP. Tracking and monitoring of DERCS use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERCS CREATION AND/OR USE**  
**By Trading Agreement and Order 1494A**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection  
Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected :**

NOx, Section 22a-174-22 of the Regulations of Connecticut State Agencies

**C. Source :**

Peaking units 11A, 11B, 12A, 12B, 13A, 13B, 14A, 14B  
Auxiliary Boiler No. 9  
The Connecticut Resources Recovery Authority  
Reserve and Maxim Roads  
Hartford, CT

**D. Designated Representative:**

Name Steven Yates,  
Tel: 860-757-7700

**E. Nonattainment Area Classification:** Serious

**F. Summary of Compliance**

**Time Period:** . On and after the date which CRRA acquires each of the peaking units and the boiler 9 prior to May 1, 2003

**Purpose:** NOx Emission compliance for eight combustion turbines (peaking units) and one auxiliary boiler.

**Estimated Annual DERCS needed:** 250-300 tons ozone DERCS/year, and 10 tons non-ozone DERCS.

**Maximum Emission Rate:** As provided in the Table in the Trading Agreement and Order.

### **Recordkeeping and Reporting**

CRRA is required to make and keep records of daily fuel use, excess NOx emissions and, for the peaking units during the ozone season, the ozone classification as forecasted by the Commissioner on the previous day.

CRRA, no later than March 1, 2002, 2003 and 2004, is required to include with its annual emissions report to the Commissioner, DERCS used (calculated as described in paragraphs C.5.a. and C.5.b. of this Trading Agreement and Order), by ozone and non-ozone seasons, for the previous calendar year.

CRRA is required to keep records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records are created.

CRRA is required to keep documentation to demonstrate that DERCS used during the ozone season were generated during the ozone season. The ozone season is from May 1 through September 30 in any calendar year. Generator certification of this fact shall be sufficient.

CRRA is required to submit the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.

### **G. Description of Compliance**

CRRA is a public instrumentality and political subdivision of the State of Connecticut established to provide solid waste management services to Connecticut's municipalities. On April 30, 2001 CRRA acquired from the Connecticut Light and Power Company nine pieces of fuel burning equipment, eight combustion turbines (peaking units) and one auxiliary boiler. On and after the date which CRRA acquires each of the peaking units and the boiler identified in the Table in the Trading Agreement and Order 1494A CRRA shall document and record the amounts of all fuel used by each peaking unit and boiler each day and the number of DERCS used for the ozone season (from May 1 through September 30 of each year) and non-ozone season (the remainder of the year).

Approved DERCS shall be acquired on and after the date which CRRA acquires each of the peaking units and the boiler, until all of the peaking units and boiler emissions achieve permanent compliance with the emission standards in Subsection (e) of Section 22a-174-22 of the Regulations or until May 1, 2003, whichever occurs first. CRRA shall acquire approved DERCS, and document and record the amounts of NOx emissions and DERCS used by each peaking

unit and the boiler each month in accordance with the appropriate emission rates and limits provided in the Table in the Trading Agreement and Order 1494A.

Prior to CRRA's purchase of the facility Connecticut Light and Power Company, pursuant to Order 1494, was utilizing DERCS to offset excess emissions from the peaking units.

**H. Source of DERCS:**

CRRA shall have in its possession sufficient approved DERCS for the current day, based on the calculations in the Trading Agreement and Order. CRRA shall acquire sufficient approved DERCS no later than the first of each month to assure compliance for, at a minimum, that calendar month. Excess DERCS from previous calendar months can be applied to subsequent months. No later than the twentieth day of each month, calculate the actual DERCS used in the preceding calendar month, as provided in the Trading Agreement and Order. Adjust upwards by 100% the DERCS required if DERCS are not in CRRA's possession prior to use. However, nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to require additional upward adjustment, based on the gravity of any alleged noncompliance or violation of law. It is anticipated that the source will be using the 392 DERCS which were transferred from Connecticut Light and Power Company to CRRA with the sale on 4/30/01.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of )  
The State of Connecticut )  
and )  
the Connecticut Resources )  
Recovery Authority )

Trading Agreement  
and Order No. 1494A

Whereas, the Commissioner of Environmental Protection ("Commissioner") and the Connecticut Resources Recovery Authority ("CRRA") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of discrete emission reduction credit ("DERC") trading to reduce nitrogen oxide ("NOx") emissions will achieve this result in a timely and cost-effective manner:

- A. At the request and with the agreement of CRRA, the Commissioner finds the following:
1. CRRA is a public instrumentality and political subdivision of the State of Connecticut established to provide solid waste management services to Connecticut's municipalities. On April 30, 2001 CRRA, will acquire from The Connecticut Light and Power Company, and then own and operate the nine (9) pieces of fuel-burning equipment identified in Table 1 of this Trading Agreement and Order. Eight (8) pieces of the fuel burning equipment are combustion turbines ("peaking units") and one (1) piece of the fuel burning equipment is an auxiliary boiler ("boiler"). The peaking units and the boiler are located at Reserve-Maxim Roads, Hartford, Connecticut ("facility").
  2. Pursuant to Subsection (b) of Section 22a-174-22 of the Regulations of Connecticut State Agencies ("Regulations"), each of the peaking units and the boiler identified in Table 1 of this Trading Agreement and Order are subject to Subsections (d) through (k) of Section 22a-174-22 of the Regulations, pertaining to the control of NOx emissions.
  3. Results of the official U.S. Environmental Protection Agency ("EPA") Reference Method 7E stack testing performed for the eight peaking units and one boiler are provided in Table 1 of this Trading Agreement and Order:

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Date 4/27/01

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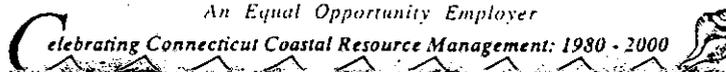


Table 1 CRRA - NOx EMISSION RATES AND RACT LIMITS (lbs/MMBtu)						
Fuel Burning Equipment/Registration No.	FUEL	FLER (lbs/MMBtu)	NOx RACT Rate (lbs/MMBtu)	Stack Test Rate (ppmvd)	Stack Test Rate (lbs/MMBtu)	Date of Stack Test
South Meadow 11A R260	Other oil	0.81	0.289	185.3	0.71	10/04/96
South Meadow 11B R261	Other Oil	0.81	0.289	187.2	0.71	10/04/96
South Meadow 12A R262	Other oil	0.81	0.289	175.7	0.67	10/02/96
South Meadow 12B R263	Other Oil	0.81	0.289	159.1	0.61	10/02/96
South Meadow 13A R264	Other Oil	0.81	0.289	201.9	0.79	05/15/96
South Meadow 13B R265	Other Oil	0.81	0.289	193.5	0.76	05/15/96
South Meadow 14A R266	Other Oil	0.81	0.289	180.1	0.69	10/11/96
South Meadow 14B R267	Other Oil	0.81	0.289	179.5	0.69	10/11/96
Auxiliary Boiler No. 9 R275	Residual Oil	0.40	0.25	NA	0.285	12/7/99

- The emission rates for each of the peaking units and the boiler identified in Table 1 of this Trading Agreement and Order are in excess of Section 22a-174-22, Table 22-1, of the Regulations, NOx Reasonably Available Control Technology ("RACT") emission rate limits.
- Pursuant to the Department of Environmental Protection ("Department")'s "Credit Trading for Sources with Irregular NOx Emissions" policy, revised on February 27, 2001, attached hereto and incorporated by reference into this Trading Agreement and Order as Exhibit 1, each peaking unit has peak daily NOx emissions greater than three times the average daily emissions during the ozone season and is therefore considered a source with irregular NOx emissions.

Initials REW

Date 4/27/01

6. Based on Department approved stack test data, it has been determined that each of the peaking units' and the boiler's emissions will not meet the applicable requirements of RACT contained in Section 22a-174-22 of the Regulations. CRRA proposes to use Full Load Emission Rates ("FLERs") identified in Table 1 of this Trading Agreement and Order for the purposes of calculating DERCs required.
  7. On and after the date that CRRA acquires each peaking unit and the boiler identified in Table 1 of this Trading Agreement and Order, pursuant to Subsection (j) of Section 22a-174-22 of the Regulations, CRRA will acquire sufficient approved ozone and non-ozone season DERCs in order to meet applicable RACT requirements and the requirements of this Trading Agreement and Order for the following month's operation. CRRA intends to continue acquiring approved DERCs as needed.
  8. Approved DERCs are defined for the purpose of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations.
- B. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Subdivision (3) of Subsection (d) of Section 22a-174-22 of the Regulations, hereby allows CRRA to comply with Section 22a-174-22 of the Regulations through use of DERC trading referenced in Section A, herein, to achieve the nitrogen oxide emission reduction required by Subdivision (1) of Subsection (d) of Section 22a-174-22 of the Regulations.
- C. With the agreement of CRRA, the Commissioner, acting under Connecticut General Statutes Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177, orders CRRA as follows:
1. The terms and conditions established by this Trading Agreement and Order shall become effective on the date CRRA purchases each of the peaking units and the boiler identified in Table 1 of this Trading Agreement and Order, and when this Trading Agreement and Order has been issued.
  2. On and after the date which CRRA acquires each of the peaking units and the boiler identified in Table 1 of this Trading Agreement and Order, CRRA shall comply during operation of each peaking unit and boiler with the FLERs shown in Table 1 of this Trading Agreement and Order.
  3. On and after the date which CRRA acquires each of the peaking units and the boiler identified in Table 1 of this Trading Agreement and Order, CRRA shall have in its possession sufficient approved DERCs to meet applicable RACT requirements and the requirements of this Trading Agreement and Order.
  4. On and after the date which CRRA acquires each of the peaking units and the boiler identified in Table 1 of this Trading Agreement and Order CRRA shall document and record the amounts of all fuel used by each peaking unit and boiler each day and the number of DERCs used for the ozone season (from May 1 through September 30 of each year) and non-ozone season (the remainder of the year).
  5. Approved DERCs shall be acquired on and after the date which CRRA acquires each of the peaking units and the boiler, until all of the peaking units and boiler emissions achieve permanent compliance with the emission standards in Subsection (e) of Section 22a-174-22 of the Regulations or until May 1, 2003,

whichever occurs first. CRRA shall acquire approved DERCs, and document and record the amounts of NOx emissions and DERCs used by each peaking unit and the boiler each month in accordance with the appropriate emission rates and limits in Table 1 of this Trading Agreement and Order, and shall maintain and submit such records to the Commissioner in accordance with the following and Section 22a-174-4 of the Regulations:

a. DERCs required

(1) For the peaking units - Have in its possession sufficient approved DERCs for the current day, based on the following calculations (described also in Exhibit 1);

**At all times (mass calculation):**

DERCs (in tons) =  $[(\text{FLER in lbs/MMBtu}) - (0.95 \times \text{NOx RACT in lbs/MMBtu})] \times (\text{actual fuel use in lbs/MMBtu}) \div 2000 \text{ pounds/ton}$

**During the ozone season only (peak day calculation):**

the maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthful," "unhealthful," or "very unhealthful," divided by 3 and then divided by 13 (with the result in tons):

DERCs (in tons) =  $[(\text{Maximum excess NOx in lbs}) \div 3] \div [13 \text{ lbs/day/ton}]$

As described in Exhibit 1 of this Trading Agreement and Order, to the extent that DERCs used to offset on a peak day basis during the ozone season exceed the total mass excess emissions, remaining DERCs may be used in the non-ozone season in the same or subsequent years until May 1, 2003;

(2) For the boiler

(i) Before the first day of each month, calculate the projected (estimated) worst case DERCs required for the same calendar month as follows:

DERCs (tons) estimated =  $\{[(\text{FLER in lbs/MMBtu for the boiler}) - (0.95) \times (\text{NOx RACT limit in lbs/MMBtu})] \times (\text{estimated fuel use in MMBtu}) \div 2000 \text{ pounds.}$

CRRA shall acquire sufficient approved DERCs no later than the first of each month to assure compliance for, at a minimum, that calendar month. Excess DERCs from previous calendar months can be applied to subsequent months.

(ii) No later than the twentieth day of each month, calculate the actual DERCs used in the preceding calendar month, as follows:

DERCs (tons) actual =  $\{[(\text{FLER in lbs/MMBtu for the boiler}) - (0.95) \times (\text{NOx RACT limit in lbs/MMBtu})] \times (\text{actual fuel use in MMBtu}) \div 2000 \text{ pounds.}$

b. Adjust upwards by 100% the DERCs required if DERCs are not in CRRA's possession prior to use. However, nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to require additional upward adjustment, based on the gravity of any alleged noncompliance or violation of law;

- c. Make and keep records of daily fuel use, excess NOx emissions and, for the peaking units during the ozone season, the ozone classification as forecasted by the Commissioner on the previous day;
  - d. No later than March 1, 2002, 2003 and 2004, include with its annual emissions report to the Commissioner, DERCs used (calculated as described in paragraphs C.5.a. and C.5.b. of this Trading Agreement and Order), by ozone and non-ozone seasons, for the previous calendar year;
  - e. Keep records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records are created;
  - f. Keep documentation to demonstrate that DERCs used during the ozone season were generated during the ozone season. The ozone season is from May 1 through September 30 in any calendar year. Generator certification of this fact shall be sufficient; and
  - g. Submit the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
6. Pursuant to Subdivision (3) of Subsection (d) of Section 22a-174-22 of the Regulations, CRRA may use NOx allowances, pursuant to Subsection (j) of Section 22a-174-22 of the Regulations to achieve all or a portion of the reductions for the peaking units required by Section 22a-174-22 of the Regulations. Any allowance used for compliance with Subsection (e) of Section 22a-174-22 of the Regulations for the peaking units shall be subject to all restrictions and/or requirements applicable to DERCs contained in this Trading Agreement and Order.
  7. No later than May 1, 2003, CRRA shall comply with the requirements of Subdivision (1) of Subsection (d) of Section 22a-174-22 of the Regulations. However, after full program review of this and other Trading Agreements and Orders and, if determined to be appropriate, the Commissioner may grant a written extension of this Trading Agreement and Order.
  8. The FLERs may be adjusted upon satisfactory demonstration to the Department and written approval by the Commissioner.
  9. Noncompliance with an established FLER shall subject CRRA to make restitution by matching the quantity of emissions ("true up") caused by the exceedance plus a 100% premium. The true up in tons of DERCs shall be equal to the FLER exceedance in Lbs/MMBtu, multiplied by the total heat input during the period of noncompliance divided by 2000 lbs/ton. If the period of noncompliance is not known, the time period from the completion of the last/previous Department witnessed stack test through the date the FLER compliance is achieved as approved by the Commissioner shall be used. However, nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to require additional upward adjustment, based on the gravity of any alleged noncompliance or violation of law.
  10. Pursuant to Subsection (k) of Section 22a-174-22 of the Regulations, CRRA shall conduct NOx emission tests of the peaking units and boiler at least once every five years commencing from the date identified in Table 1 of this Trading Agreement and Order.

Initials REW

Date 4/27/01

11. Each allowance used for compliance with Section 22a-174-22 of the Regulations for the peaking units shall be equivalent to one DERC and shall be deducted from CRRA's NOx Budget Program compliance account upon such use. Allowances shall be considered used for compliance with Section 22a-174-22 of the Regulations for the peaking units when they are transferred from the facility's compliance account or overdraft account to a State of Connecticut NOx allowance retirement account.
12. Approvals. CRRA shall use best efforts to submit to the Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form. If the Commissioner notifies CRRA that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and CRRA shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.
13. Definitions. As used in this Trading Agreement and Order, "Commissioner" means the Commissioner or a representative of the Commissioner; "Other oil" means a fuel that is liquid at standard conditions and is not residual oil; "Residual oil" means any fuel oil of No. 4, No. 5, or No. 6 grades, as defined by Commercial Standard C.S. 12-48; "Ozone season" means the period from May 1 through September 30 in any given calendar year. The date of "issuance" of this Trading Agreement and Order is the date the Trading Agreement and Order is deposited in the U.S. mail or personally delivered, whichever is earlier.
14. Dates. The date of submission to the Commissioner of any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Trading Agreement and Order, the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.
15. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by CRRA or, if CRRA is not an individual, by CRRA's chief executive officer or a duly authorized representative of such officer, as those terms are defined in §22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such document, and CRRA or CRRA's chief executive officer and each such individual shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General

Statutes and any other applicable law."

16. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject CRRA to an injunction and penalties.
17. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.
18. Notice of transfer; liability of CRRA. Until CRRA has fully complied with this Trading Agreement and Order, CRRA shall notify the Commissioner in writing no later than 15 days after transferring all or any portion of the facility, the operations, the site or the business which is the subject of this Trading Agreement and Order or after obtaining a new mailing or location address. CRRA's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
19. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by CRRA pursuant to this Trading Agreement and Order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require CRRA to undertake further investigation or further action to prevent or abate violations or pollution.
20. CRRA's obligations under law. Nothing in this Trading Agreement and Order shall relieve CRRA of other obligations under applicable federal, state and local law.
21. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by CRRA pursuant to this Trading Agreement and Order will result in compliance or prevent or abate pollution.
22. Access to facility. Any representative of the Department of Environmental Protection may enter the facility without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
23. No effect on rights of other persons. This Trading Agreement and Order neither creates nor affects any rights of persons or municipalities that are not parties to this Trading Agreement and Order.
24. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these DERCs.
25. Notice to Commissioner of changes. Within 15 days of the date CRRA becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, CRRA shall submit the correct or omitted information to the Commissioner.
26. Notification of noncompliance. In the event that CRRA becomes aware that it did not or may not comply, or did not or may not

comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, CRRA shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice, CRRA shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and CRRA shall comply with any dates which may be approved in writing by the Commissioner. Notification by CRRA shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.

27. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in this Trading Agreement and Order or in writing by the Commissioner, be directed to:

Wendy Jacobs  
Department of Environmental Protection  
Bureau of Air Management  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106-5127

Connecticut Resources  
Recovery Authority

Trading Agreement  
and Order No. 1494A

CRRA consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind CRRA to the terms and conditions of the Trading Agreement and Order.

Connecticut Resources Recovery Authority

Signature: RE Wright

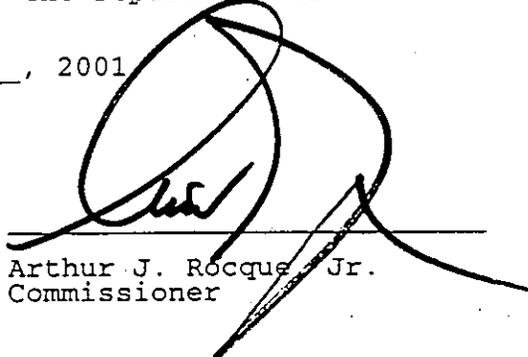
Type Name: Robert E. Wright

Type Title: President

Date: April 27, 2001

Issued as a final order of the Commissioner of the Department of

Environmental Protection on May 4, 2001

  
Arthur J. Rocque, Jr.  
Commissioner

MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document

EXHIBIT 1

TRADING AGREEMENT AND ORDER NO. 1494A



# STATE OF CONNECTICUT

## DEPARTMENT OF ENVIRONMENTAL PROTECTION



*Updated February 27, 2001*

### **Credit Trading for Sources with Irregular NOx Emissions**

The following outlines the Department's concerns and methodology for dealing with peaking units ("peakers") that have maximum peak daily emissions that are substantially higher than their average daily emissions and that choose to achieve NOx compliance via credit trading pursuant to §22a-174-22(j) of the Regulations of Connecticut State Agencies ("Regulations"). For purposes of this protocol, peakers are defined as sources with maximum peak daily NOx emissions greater than three times their average daily emissions<sup>1</sup> during the ozone season.

The basic concept of the trading program is that sources with excess NOx emissions (a rate that exceeds the rate limits in the Regulations) may obtain NOx discrete emission reduction credits ("DERCs") from sources that have "over-controlled" their NOx emissions. Although typical sources can obtain credits on a mass basis (one ton of DERCs to offset one ton of excess emissions) with an acceptable environmental outcome, sources with large variations in emissions from day to day pose an additional problem for ozone attainment planning.

The most common peakers are electricity generating units that run during times of high electricity consumption. Electricity demand is often the highest during hot, humid days of the summer when the potential for ozone formation is also high. Peakers frequently have high emission rates. To the extent that these units produce emissions at exactly the time when emissions need to be reduced to limit ozone formation, allowing peakers to continue to comply with new rate limits through the use of DERCs on a ton-for-ton basis will exacerbate this effect. On the other hand, if it can be demonstrated that the DERCs being used by peakers were generated on a comparable basis (i.e., during days of high ozone potential), then ton-for-ton use by peakers would be appropriate.

The full impact of the NOx emissions from these types of facilities during summer operation must consider temporal variability as well as mass of excess emissions. Any DERC trade must consider equivalency to the NOx reductions that control equipment would produce on an ozone day on both a temporal and a mass basis. The protocol below places appropriate requirements on peaking units to reflect the greater impact of NOx emitted under this type of usage pattern. Attachment 1 provides a detailed example of how this policy would be applied to a peaker. Attachment 2 provides an explanation of the calculations underlying this policy.

#### ***NOx Emissions Reduction Credit Use Computation For Peakers***

- Peakers are only considered to be a temporal issue for the ozone season months.
- All excess NOx emissions during the winter (non-ozone season) need only be offset by DERCs on a mass basis.
- Prior to each ozone season there will be a prospective estimation to determine how many tons of DERCs must be "on hand" during the ozone season. A retrospective calculation will determine how many DERCs were actually "used" during the ozone season.

<sup>1</sup> - For purposes of this analysis, average daily emissions are determined by dividing a source's total ozone season NOx emissions (pounds) by 153 days to calculate an average pound/day value.

For ERC use during the ozone season:

1. **Prospective estimation** (pre-ozone season) will determine the number of DERCs that must be provided for the ozone season. (Beginning in 1996, the DERCs must be in place no later than May 1.)

DERCs required for the ozone season shall be calculated on the following bases:

- (a) **Mass basis:** DERCs required will be equal to the total number of tons of estimated excess NOx emissions over the entire ozone season, calculated in the same manner used for other sources using DERCs (i.e., including any discounts).
- (b) **Max-peak basis:** DERCs required (in tons) will be calculated by dividing one-third of the estimated maximum daily excess emissions (in pounds) for any day during the ozone season by 13 pounds/(ton•day)<sup>2</sup>. (see Attachment 2 for an explanation of this calculation):

$$\text{DERCs required (tons)} = [(\text{Estimated Maximum Excess NOx in lbs/day}) \div 3] \div [13 \text{ lbs}/(\text{ton}\cdot\text{day})]$$

Sources will be required to hold credits equal to the **greater** of the amount calculated on a mass or max-peak basis. The timing of actual credit possession will be governed by the terms of the specific trading order issued for that source.

2. **Retrospective calculation** (post-ozone season) will determine the actual credit use and the DERC surplus, if any. At the end of the ozone season, the calculations required in step 1 above will be repeated using:  
for (a), the **actual** (rather than estimated) total excess emissions for the ozone season, and  
for (b), the **actual** (rather than estimated) maximum daily excess NOx emissions on any of the days projected by the Commissioner to be "moderate to unhealthful", "unhealthful", or "very unhealthful".

The number of DERCs required pursuant to this policy will be the **greater** of the number of DERCs calculated on the mass basis or the max-peak day basis.

Of the total DERCs needed for the ozone season, a number of DERCs equal to the unit's actual total excess emissions (on a mass basis) will be used to cover such actual excess emissions. The number of DERCs equal to the difference between the total number needed pursuant to this policy and total actual excess emissions shall be converted from ozone season DERCs to non-ozone season DERCs. Any surplus DERCs (those purchased pursuant to the pre-ozone season estimation and not used to cover actual emissions nor converted to non-ozone season emissions) may be carried forward for use as ozone season DERCs through April 30, 2003 except as may be limited by the trading agreement and order, or by regulation.

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2 - For the pre-ozone season estimation, the maximum daily excess NOx emissions (in lbs/day) is the difference between the maximum expected NOx emission rate and 95% of the allowable NOx emission rate under Section 22a-174-22(e) of the Regulations (lb/MMBtu) multiplied by the unit's maximum rated capacity (MMBtu/hr) and by the estimated maximum hours of operation per day (hrs/day).

*Attachment 1*  
*Example of this policy being applied to a peaking unit*

Before the ozone season, a peaker has estimated its total excess emissions to be 15 tons for the ozone season. It is also estimated that the maximum excess emission on a day projected to be "moderate to unhealthy" or worse will be 5000 pounds. Actual ozone season excess emissions are listed in the table below. The analysis of how this policy would be applied to this peaker follows after the table.

Date	NOx Excess Emissions (pounds)	NOx DERCs needed (mass basis) (tons)	"Mod to Unhealthy" (or worse) forecast?	Peak Day NOx DERCs needed (tons)
5/1	1,000	0.50	no	25.64
5/15	2,000	1.00	yes	<del>51.28</del>
6/1	3,000	1.50	no	76.92
6/15	4,000	2.00	yes	<del>102.56</del>
7/1	1,000	0.50	yes	<del>25.64</del>
7/15	5,000	2.50	no	128.21
8/1	1,000	0.50	yes	<del>25.64</del>
8/15	3,000	1.50	no	76.92
9/1	3,000	1.50	yes	<del>76.92</del>
9/15	4,000	2.00	no	102.56

13.00  
SUM (mass basis)

~~102.56~~  
max-peak basis

**ANALYSIS:**

**PRE-OZONE SEASON ESTIMATION**

**128.21** Estimated Ozone Season Tons Needed (max-peak basis using 5000 pounds as estimated maximum daily excess emissions)

**15.00** Estimated Ozone Season Excess Emissions (mass basis)

**128.21** Number of ozone season DERCs that need to be held no later than May 1

**POST-OZONE SEASON CALCULATION**

**102.56** Ozone Season Tons Needed (max-peak basis using 4000 pounds as actual maximum daily excess emissions)

**-13.00** Actual Ozone Season Excess Emissions (mass basis)

**89.56** Number of Ozone Season DERCs converted to Non-Ozone Season DERCs

**SUMMARY**

Of the 128.21 tons of ozone season DERCs that were reserved by May 1,  
 13.00 tons were used to cover actual ozone season emissions on a mass basis  
 89.56 tons were converted to non-ozone season DERCs  
 25.64 tons were carried forward as surplus ozone season DERCs

*Attachment 2*  
*Explanation of Max-Peak Basis Calculation*

Unless it can be demonstrated otherwise, DERCs are assumed to be created by relatively small daily reductions in NOx emissions over the course of an entire ozone season (153 days). The average daily NOx emissions reduction represented by each ton of credit is 13 pounds/day calculated as follows:

$$2000 \text{ pounds/ton} \div 153 \text{ days} = 13 \text{ pounds}/(\text{ton}\cdot\text{day})$$

Thus, one DERC (ton) would be equivalent to a reduction in NOx emissions of 13 pounds/day.

For example, if a peaker emits one ton of excess NOx per day when operating, but only operates for five days during the ozone season, the owner/operator of that source would nominally need to obtain five tons of DERCs on a mass basis. However, those DERCs used to offset this peaker's excess emissions are likely to have been created by relatively small daily reductions in NOx emissions from another source over the course of an entire ozone season (153 days). In this example, assuming a purchase of five tons of DERCs, that calculates out to a daily NOx reduction of approximately 65 pounds.

$$(5 \text{ tons} \times 2000 \text{ pounds/ton}) \div 153 \text{ days} = 65 \text{ pounds/day}$$

Clearly, on any day that the peaker operates, there will be many more tons of excess NOx emitted than NOx credits created (on the same day) to offset those excess emissions (on the order of 1,935 pounds in this example).

$$(1 \text{ ton} \times 2000 \text{ pounds/ton}) - (65 \text{ pounds credit}) = 1,935 \text{ pounds excess NOx emissions}$$

While the total amount of NOx emitted by a peaker would be offset on a seasonal average basis, on the "peaking" day there would be a potentially significant increase in NOx emitted, and thus an increase in potential ozone creation. In order to achieve a commensurate reduction in ozone creation potential for peakers, an adjustment in the calculation of required DERCs is needed. One approach would be to require DERCs in a quantity that would ensure that the daily average reduction represented by those DERCs would equal the maximum daily excess NOx emissions from the peaking source on any day that it ran. On this basis, a peaking source with a maximum 24-hour excess NOx emission of one ton would be required to purchase 153 tons of DERCs.

$$1 \text{ ton/day} \times 153 \text{ days/season} = 153 \text{ tons/season}$$

This 153 tons of DERCs would be adequate to offset excess emissions of one ton per day for as many days as the source operated during a particular ozone season. This has been deemed to be unduly stringent, given the diversity in operation of some of the peakers. In light of the foregoing, this requirement has been adjusted downward by two-thirds.

**REVISION TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Section 22a-174-22 Regulations of Connecticut State Agencies  
THROUGH USE OF DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

**CYTEC Industries Inc.  
Trading Agreement and Order No. 8114  
Modification No. 2**

**April 2002**

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### PART 2. DESCRIPTION OF DERC CREATION AND/OR USE

#### By Trading Agreement and Order Modification No. 2

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### EXHIBITS

Exhibit 1 Notice of Hearing and Hearing Certification

Exhibit 2 Designation of Hearing Officer

Exhibit 3 Trading Agreement and Order Modification No. 2

Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency=s (EPA) State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut=s program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCs in EIP guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCs from nitrogen oxides (NOx) control and the use of DERCs to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCs for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA=s EIP guidance.

The present scope of this program includes approval of creation and use of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCs for use or trading until May 1, 2003 by sources for compliance with Section 22a-174-22 of the Regulations of Connecticut State Agencies (Regulations), regarding control of NOx. Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCs as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving emission reductions as DERCs is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for more timely rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better

environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized

by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of DERCs will not jeopardize RFP since the state's NOx rule emission limits for the sources creating and/or using DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources the baseline will be the lower of actual or allowable emissions.

### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This

reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with Section 22a-174-22 of the Regulations through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the SIP for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the Trading Agreement and Order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has

been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC AVERAGING AND ERC USE**

By Trading Agreement and Order No. 8114 Modification No. 2

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx, Section 22a-174-22 of the Regulations

**C. Source and Identifier:** Client # 6565 Premise # 27 Town # 189 Sequence 1

CYTEC Industries, Inc.  
P.O. Box 425  
South Cherry Street  
Wallingford, CT 06492

**D. Designated Representative:** Mr. Richard J. Krakowski, Plant Manager Tel: (203) 284-4384

**E. CT Non-attainment Area Classification:** Serious

**F. Summary of Compliance:**

**Time Period:** From May 31, 1995 through May 1, 2003.

**Purpose:** NOx Emission reduction compliance for units shown in Table 2A below:

**Max. Emission Rate:** Revised full load emission rates (FLER) as shown in Table 2A below:

**Annual ERCs needed:** Estimated 11 ton.

Table 2A Effective on and after 2/28/00 CYTEC- stack test rate(lbs/MMBtu), FLERs, and NOx RACT Emission Rates					
UNIT	FUEL	Obsolete FLER	Stack Test Rate Jan/Feb 2000	New FLER	NOx RACT Rate Limits
Boiler #1	No. 6 oil Nat. Gas	0.390 0.093	0.28 0.07	0.390 0.093	0.25 0.20
Boiler #3	No. 6 oil Nat. Gas	0.30 NA	0.26 0.20	0.30 NA	0.25 0.20
Boiler #4	No. 2 oil Nat. gas	0.101 0.080	0.082 0.102	0.101 0.11	0.20 0.20
Sludge Incinerator	Sludge and No. 2 oil	0.632	0.29	0.52	0.33
Hot Oil Furnace	No. 2 oil Nat. Gas	0.155 0.098	0.12 0.10	0.155 0.11	0.20 0.20
	No. 2 oil	0.173	0.14	0.173/122.6 ppm	

Table 2A  
Effective on and after 2/28/00  
CYTEC- stack test rate(lbs/MMBtu), FLERs, and NOx RACT Emission Rates

UNIT	FUEL	Obsolete FLER	Stack Test Rate Jan/Feb 2000	New FLER	NOx RACT Rate Limits
Spray Dryer	Nat. Gas	0.107	0.12	0.132/128 ppm	0.254/180 ppm 0.186/180 ppm

#### G. DESCRIPTION OF COMPLIANCE

CYTEC is a corporation that owns and operates a plastics and resin research and manufacturing facility in Wallingford, Connecticut. At the facility CYTEC operates three boilers, one hot oil furnace, one spray dryer and one multi-hearth sludge incinerator subject to Section 22a-174-22 of the Regulations pertaining to the control of NOx. Trading Agreement and Order No. 8114 requires CYTEC to demonstrate that the averaging set has achieved compliance with the order each month and annually. The FLERS in the Trading Agreement and Order are being modified in accordance with CYTEC's request to prevent future exceedances.

#### H. SOURCE OF DERCS

CYTEC purchased 20 tons of ozone season DERCS from UI in January 2001.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



STATE OF CONNECTICUT

TRADING AGREEMENT AND

AND

ORDER NO. 8114

Modification No. 2

CYTEC Industries Inc.

TRADING AGREEMENT AND ORDER MODIFICATION

In the matter of a Trading Agreement and Order between the Commissioner of Environmental Protection ("Commissioner") and CYTEC Industries Inc. ("CYTEC"):

WHEREAS, the Commissioner and CYTEC, having agreed to the terms and conditions set forth in Trading Agreement and Order No. 8114 issued on December 20, 1996, and a Modification thereto issued on April 29, 1999, do now, by mutual agreement, modify Trading Agreement and Order No. 8114 as follows:

1. Add paragraph A.9. as follows:

Stack testing performed in January and February 2000 showed the actual emission rates from three of CYTEC's six processes: 1) boiler #4, 2) 608-1 Hot Oil furnace and 3) Spray Dryer Furnace are 0.10, 0.10 and 0.12 lbs/MMBtu respectively which exceed the 0.08, 0.098 and 0.107 lbs/MMBtu FLER limits specified in Trading Agreement and Order No. 8114.

2. Delete Paragraph D.1. and substitute the following:

In addition to the averaging and ERC trading requirements for the averaging set contained in Section C.1. of this Trading agreement and order, on and after February 28, 2000, each unit included in CYTEC's averaging set shall not exceed the FLERs shown in Table 2A (see following page):

Initials: DFS

1

Date: 5/14/01

(Printed on Recycled Paper)

79 Elm Street • Hartford, CT 06106 - 5127

<http://dep.state.ct.us>

An Equal Opportunity Employer

Table 2A Effective on and after 2/28/00 CYTEC - FLERs, stack test rate (Jan/Feb 2000) and NOx RACT Emission Rates					
UNIT	FUEL	Obsolete FLER (lbs/MMBtu)	Stack Test Rate Lbs/MMBtu Jan/Feb 2000	New FLER (lbs/MMBtu)	NOx RACT Rate Limits (lbs/MMBtu) (PPM)
Boiler #1	No. 6 oil Natural Gas	0.390 <sup>(1)</sup> 0.093	0.28 <sup>(1)</sup> 0.07	0.390 <sup>(1)</sup> 0.093	0.25 0.20
Boiler #3	No. 6 oil Natural Gas	0.30 <sup>(1)</sup> N/A <sup>(2)</sup>	0.26 <sup>(1)</sup> 0.20	0.30 <sup>(1)</sup> N/A <sup>(2)</sup>	0.25 0.20
Boiler #4	No. 2 oil Natural gas	0.101 0.080	0.082 0.102	0.101 0.11 <sup>(3)</sup>	0.20 0.20
Sludge Incinerator	Sludge and No. 2 oil	0.632	0.29	0.52 <sup>(4)</sup>	0.33
Hot Oil Furnace	No. 2 oil Natural Gas	0.155 0.098	0.12 0.10	0.155 0.11 <sup>(3)</sup>	0.20 0.20
Spray Dryer	No. 2 oil  Natural Gas	0.173  0.107	0.14  0.12	0.173 (122.6 ppm) 0.132 <sup>(3)</sup> (128 ppm)	0.254 (180 ppm) 0.186 (180 ppm)

- (1) Indicates emission rate is in excess of Section 22a-174-22, Table 22-2 of the Regulations emission rate limits.
- (2) Boiler #3 natural gas will not be used for averaging.
- (3) FLER revised upwardly based on stack test results Jan/Feb. 2000 and input from CYTEC.
- (4) FLER revised downwardly based on stack test results Jan/Feb. 2000 and input from CYTEC.

3. All other terms and conditions of Trading Agreement and Order no. 8114 shall remain in effect.

Initials: OFS

Date: 5/14/01

CYTEC Industries Inc.

3

Trading Agreement and Order No. 8114 Mod. No. 2

CYTEC hereby consents to the entry of this modification to the Trading Agreement and Order No. 8114 without further notice.

CYTEC Industries Inc.

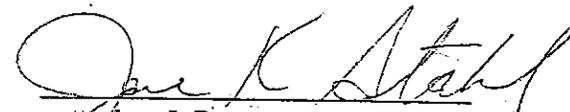
By: Signature: 

Type Name: Daniel F. Sullivan

Type Title: Site Manager

Date: 5/14/01

Entered as a modification of an Order of the Commissioner of the Department of Environmental Protection numbered 8114 this 26 day of May 2001.

  
Arthur J. Rocque, Jr.  
Commissioner

TOWN OF WALLINGFORD LAND RECORDS  
MAILED CERTIFIED MAIL, RETURN RECEIPT REQUESTED  
Certified Document No. 7000 0600 0023 1625 0097

**REVISION TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Section 22a-174-22 Regulations of Connecticut State Agencies  
THROUGH USE OF DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

**Borough of Naugatuck  
Consent Order No. 1626**

**April 2002**

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### PART 2. DESCRIPTION OF DERC CREATION AND/OR USE

By Consent Order No. 1626

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### EXHIBITS

Exhibit 1 Notice of Hearing and Hearing Certification

Exhibit 2 Designation of Hearing Officer

Exhibit 3 Consent Order No. 1626

Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency's (EPA) State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in EIP guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from nitrogen oxides (NOx) control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERCS creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program includes approval of creation and use of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with Section 22a-174-22 of the Regulations of Connecticut State Agencies (Regulations), regarding control of NOx. Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERCS creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for more timely rule compliance because more options are available to the regulated source. DERCS trading is intended

to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of DERCs will not jeopardize RFP since the state's NOx rule emission limits for the sources creating and/or using DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources the baseline will be the lower of actual or allowable emissions.

### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the SIP for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the Trading Agreement and Order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the

relationship of the creation and use of DERCS to determine if additional restrictions are needed to assure that the use of DERCS does not jeopardize RFP. Tracking and monitoring of DERCS use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERCS CREATION AND/OR USE**  
**By Consent Order No. 1626**

Please note that the narrative above refers to a Trading Agreement and Order and for the purposes of this SIP that should be read as Consent Order.

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection  
Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected :**

NOx, Section 22a-174-22 of the Regulations of Connecticut State Agencies

**C. Source :**

Nichols multiple-hearth sewage sludge incinerators, permit nos. 109-0001 (west incinerator) and 109-0002 (east incinerator)

Borough of Naugatuck  
500 Cherry Street  
Naugatuck, CT  
(Is now operated by U.S. Filter Operating Services, Inc.)

**D. Designated Representative:**

Mayor Joan B. Taf  
203-720-7007

**E. Nonattainment Area Classification:** Serious

**F. Summary of Compliance**

**Time Period:** . On and after the issuance of the Consent Order to May 1, 2003

**Purpose:** NOx Emission compliance

**Estimated Annual DERCS needed:** In 2000 Borough of Naugatuck purchased 35 tons non-ozone season, 22 tons ozone season. They used 13.06 tons ozone and 16.62 tons non-ozone DERCS in 2001. They also purchased 13 tons ozone and 10 tons non-ozone DERCS from Cantor Fitzgerald.

**Maximum Emission Rate:** .48 lbs/MMBtu for the east incinerator and .52 lbs/MMBtu for the west incinerator.

### **Recordkeeping and Reporting**

Borough of Naugatuck is required to make and keep records of the amounts of all sewage sludge and number 2 oil and ERCs used by the incinerators each month.

Borough of Naugatuck, no later than March 1, 2002, 2003 and 2004, is required to include with its annual emissions report to the Commissioner, ERCs used, by ozone and non-ozone seasons, for the previous calendar year and the monthly rate of fuel consumption for the incinerators and ERCs used by the incinerators.

Borough of Naugatuck is required to keep records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records are created.

Borough of Naugatuck is required to keep documentation to demonstrate that ERCs used during the ozone season were generated during the ozone season. The ozone season is from May 1 through September 30 in any calendar year. Generator certification of this fact shall be sufficient.

Borough of Naugatuck is required to submit the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.

### **G. Description of Compliance**

Borough of Naugatuck owns two Nichols multiple-hearth sewage sludge incinerators, permit nos. 109-0001 (west incinerator) and 109-0002 (east incinerator) located at 500 Cherry Street, Naugatuck, Connecticut (facility). At the time of the issuance of the Consent Order Borough of Naugatuck had a contract with Naugatuck Treatment Company (NTC) to operate the incinerators at the facility.

The incinerators are subject to Section 22a-174-22 of the Regulations. On and after May 31, 1995, Section 22a-174-22(e) of the Regulations requires that the incinerators emit NO<sub>x</sub> at a rate no greater than 0.33 lbs/MMBtu of heat input.

During emissions testing conducted in November, 1991, the incinerators NO<sub>x</sub> emission rates were less than the limit. During emissions testing conducted in April, 1999, the west incinerator emitted

NOx at an emission rate of 0.47 lbs/MMBtu of heat input and the east incinerator emitted NOx at an emission rate of 0.44 lbs/MMBtu of heat input, both in excess of the allowable NOx emission rate of 0.33 lbs/MMBtu of heat input.

Borough of Naugatuck proposes to use approved ERCs to offset excess NOx emissions at the facility, until Borough of Naugatuck complies with the emission limitation in Section 22a-174-22(e) of the Regulations. . Borough of Naugatuck intends to acquire approved ERCs as needed to comply with the consent order.

#### **H. Source of DERCs:**

On and after the date of issuance of the consent order, and prior to May 1, 2003 or until Borough of Naugatuck achieves compliance with the emission standards in Section 22a-174-22(e) of the Regulations, whichever occurs earlier, Respondent shall have in its possession required, approved ERCs. Before the first day of each month, the source shall calculate projected ERCs required for the next calendar month for the incinerators as required by the consent order. No later than the tenth day of each month, the source shall calculate ERCs used in the preceding calendar month for the incinerators as required by the consent order. Borough of Naugatuck was required to acquire and retire the approved NOx ERCs for the period of time from March 1, 2000 and up to the date of issuance of the consent order.

Prior to May 1, 2003, Borough of Naugatuck shall limit sewage sludge throughput of the east incinerator to 1.18 dry tons/hour. However, if Borough of Naugatuck is unable to limit sewage sludge throughput of the east incinerator to 1.18 dry tons/hour, Borough of Naugatuck shall conduct NOx emissions testing of the east incinerator on or before sixty (60) days after exceedance of the 1.18 dry ton/hour throughput limit.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



The State of Connecticut

vs.

Borough of Naugatuck

)  
)  
)  
)

Consent Order No. 1626

A. With the agreement of Borough of Naugatuck ("Respondent"), the Commissioner of Environmental Protection ("Commissioner") finds the following:

1. Respondent owns two Nichols multiple-hearth sewage sludge incinerators ("incinerators"), permit nos. 109-0001 ("west incinerator") and 109-0002 ("east incinerator") located at 500 Cherry Street, Naugatuck, Connecticut ("facility"). Respondent currently has a contract with Naugatuck Treatment Company ("NTC") to operate the incinerators at the facility.
2. The incinerators are subject to Section 22a-174-22 of the Regulations of Connecticut State Agencies ("Regulations"). On and after May 31, 1995, Section 22a-174-22(e) of the Regulations requires that the incinerators emit nitrogen oxides ("NOx") at a rate no greater than 0.33 pounds per million British thermal units ("lbs/MMBtu") of heat input.
3. During emissions testing conducted in November, 1991, the incinerators' NOx emission rates were less than 0.33 lbs/MMBtu of heat input, the subsequent Section 22a-174-22 of the Regulations regulatory limit.
4. Pursuant to Section 22a-174-22(k) of the Regulations, emission tests are to be conducted at least once every five years after performing the initial emission test to ensure continued compliance with the allowable NOx emission rates set forth in Section 22a-174-22 of the Regulations.
5. Respondent conducted its initial emission tests in November, 1991. Pursuant to Section 22a-174-22(k) of the Regulations, Respondent was required to complete its next subsequent emission tests no later than

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November, 1996. Respondent failed to conduct these tests until April, 1999.

6. By virtue of the above, Respondent violated Section 22a-174-22(k) of the Regulations.
7. Respondent is required to conduct its next subsequent emission tests by November, 2001, and at least once every five years thereafter if Respondent maintains emission sources subject to Section 22a-174-22 of the Regulations.
8. During emissions testing conducted in April, 1999, the west incinerator emitted NOx at an emission rate of 0.47 lbs/MMBtu of heat input and the east incinerator emitted NOx at an emission rate of 0.44 lbs/MMBtu of heat input, both in excess of the allowable NOx emission rate of 0.33 lbs/MMBtu of heat input.
9. By virtue of the above, Respondent violated Section 22a-174-22(e) of the Regulations.
10. During the April, 1999 emissions test, the east incinerator was tested at 87.8% of design capacity. Section 22a-174-22(k) of the Regulations requires that sampling shall be conducted when the source is operating at or above ninety percent (90%) of design capacity.
11. By virtue of the above, Respondent has violated Section 22a-174-22(k) of the Regulations.
12. Respondent proposes to use approved emission reduction credits ("ERCs") to offset excess NOx emissions at the facility, until Respondent complies with the emission limitation in Section 22a-174-22(e) of the Regulations.
13. On March 1, 2000, Respondent purchased thirty-one tons of approved NOx ERCs (eighteen tons non-ozone season, thirteen tons ozone season). On April 27, 2000, Respondent purchased fifty-seven tons of approved NOx ERCs (thirty-five tons non-ozone season, twenty-two tons ozone season). For the period April 1, 1999 through February 29, 2000, Respondent emitted 24 tons of excess NOx emissions from the incinerators.

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14. By agreeing to the issuance of this consent order, Respondent makes no admission of fact or law with respect to the matters addressed herein other than the facts asserted in paragraphs A.1. and A.2.

B. With the agreement of Respondent, the Commissioner, acting under Sections 22a-6, 22a-171, 22a-174, 22a-177, and 22a-178 of the Connecticut General Statutes, orders Respondent as follows:

1. On and after the date of issuance of this consent order, and prior to May 1, 2003 or until Respondent achieves compliance with the emission standards in Section 22a-174-22(e) of the Regulations, whichever occurs earlier, Respondent shall have in its possession required, approved ERCs.
2. On and after the date of issuance of this consent order, and prior to May 1, 2003 or until Respondent achieves compliance with the emission standards in Section 22a-174-22(e) of the Regulations, whichever occurs earlier, Respondent shall document and record the amounts of all sewage sludge and number 2 oil (collectively referred to as "fuel") and ERCs used by the incinerators each month, and provide such records in accordance with the following and Section 22a-174-22 of the Regulations:

- a. Before the first day of each month, calculate projected ERCs required for the next calendar month for the incinerators as follows:

West Incinerator

ERCs (tons) = [Estimated Fuel Use in MMBtu x (0.52 lbs/MMBtu - (0.95 x 0.33 lbs/MMBtu))] + 2000 pounds;

East Incinerator

ERCs (tons) = [Estimated Fuel Use in MMBtu x (0.48 lbs/MMBtu - (0.95 x 0.33 lbs/MMBtu))] + 2000 pounds;

- b. Document that sufficient approved ERCs are available for the incinerators no later than the first of each calendar month to assure compliance for, at a minimum, that calendar month. ERCs required shall be adjusted

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upwards by 100% if approved ERCs are not in Respondent's possession prior to use. However, based on the gravity of the noncompliance, the Commissioner may require additional upward adjustment;

- c. No later than the tenth day of each month, calculate ERCs used in the preceding calendar month for the incinerators as follows:

West Incinerator

ERCs (tons) = [Actual Fuel Use in MMBtu x (.52 lbs/MMBtu - (.95 x .33 lbs/MMBtu))] + 2000 pounds;

East Incinerator

ERCs (tons) = [Actual Fuel Use in MMBtu x (.48 lbs/MMBtu - (.95 x .33 lbs/MMBtu))] + 2000 pounds;

- d. Document and record monthly consumption of fuel and ERCs;
- e. No later than March 1 of each year this Consent Order is in effect, include with its annual emissions report to the Commissioner, the monthly rate of fuel consumption for the incinerators and ERCs used by the incinerators for the previous calendar year;
- f. Retain records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records were created;
- g. Maintain documentation to attest to the fact that ERCs used during the ozone season were generated during the ozone season. The ozone season is from May 1 through September 30 in any calendar year. Generator certification of this fact shall be sufficient; and
- h. Provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
3. a. Respondent shall immediately retire forty-eight (48) tons of NOx emissions to offset excess NOx emissions from

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April 1, 1999 through February 29, 2000 (24 tons for the excess NOx emissions from April 1, 1999 through February 29, 2000 and 24 tons as a 100% "premium" for not having the required NOx ERCs on hand prior to the occurrence of the excess emissions). Twenty-two (22) tons shall be ozone season ERCs and twenty-six (26) tons shall be non-ozone season ERCs.

- b. Respondent shall acquire and retire the approved NOx ERCs calculated in accordance with the following calculations for the period of time from March 1, 2000 and up to the date of issuance of this consent order:

West Incinerator

ERCs (tons) = [Actual Fuel Use in MMBtu x (.47 lbs/MMBtu - (.95 x .33 lbs/MMBtu))] + 2000 pounds;

East Incinerator

ERCs (tons) = [Actual Fuel Use in MMBtu x (.44 lbs/MMBtu - (.95 x .33 lbs/MMBtu))] + 2000 pounds

ERCs required shall be adjusted upwards by 100% if approved ERCs are not in Respondent's possession prior to use. Any ERCs used during the ozone season shall have been generated during the ozone season.

4. Prior to May 1, 2003, Respondent shall limit sewage sludge throughput of the east incinerator to 1.18 dry tons/hour. However, if Respondent is unable to limit sewage sludge throughput of the east incinerator to 1.18 dry tons/hour, Respondent shall conduct NOx emissions testing of the east incinerator on or before sixty (60) days after exceedance of the 1.18 dry ton/hour throughput limit in accordance with the following:

- a. Respondent shall submit to the Commissioner for his review and written approval an Intent-To-Test ("ITT") protocol not less than thirty (30) days prior to the emissions testing required pursuant to paragraph 4 of this consent order. The ITT protocol shall include at least:
1. The Department of Environmental Protection's Bureau of Air Management Test Form No. 1, "Intent to Test";

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2. System operating parameters indicative of proper operation, including, but not limited to, sludge throughput, auxiliary fuel firing rate, NOx emissions rate, and incinerator operating temperature.

The ITT protocol shall provide that Respondent shall perform testing as specified in Sections 22a-174-5 and 22a-174-22 of the Regulations, including operating the incinerator at not less than ninety percent (90%) of its maximum permitted capacity.

- b. Respondent shall perform all testing required by paragraph B.4. in accordance with the approved ITT protocol.
- c. In conducting and performing the testing required by paragraph B.4., and in analyzing the results of such testing, Respondent shall adhere to methods specified in Sections 22a-174-5 and 22a-174-22 of the Regulations and as approved by the United States Environmental Protection Agency ("EPA") and the Commissioner.
- d. Respondent shall schedule all emissions testing so as to allow the Commissioner to be present during such testing and to independently verify facility operations, air pollution control equipment parameters, and testing procedures.
- e. Within 30 days after completing any emissions testing required by this consent order, Respondent shall submit to the Commissioner a written report providing the results of such testing; within 15 days of a notice from the Commissioner indicating any deficiencies in such report, Respondent shall submit a revised report.
- f. If the results of the testing required by paragraph B.4. show that the actual NOx emission rate of the east incinerator is higher than the full load emission rate ("FLER") of the east incinerator specified in paragraph B.2., Respondent shall immediately substitute the higher NOx emission rate for the FLER in the ERC calculations in paragraph B.2., and Respondent shall acquire ERCs in accordance with the revised calculations. Respondent shall adjust any ERCs not in Respondent's possession prior to the occurrence of the excess NOx emissions upwards by 100% from the date of

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the emissions test conducted pursuant to paragraph B.4. until the purchase of said ERCs.

- g. If the results of the testing required by paragraph B.4. show that the actual NOx emission rate of the east incinerator is lower than the FLER of the east incinerator specified in paragraph B.2., Respondent may submit a written request to the Commissioner, for his review and written approval, to substitute the lower NOx emission rate for the FLER in the ERC calculations in paragraph B.2.

5. Pursuant to paragraph A.7., Respondent shall conduct emission tests of both incinerators on or before November 2001. Said emission tests shall be conducted in accordance with the procedure set forth in paragraph B.4.a. through B.4.e; provided that if the east incinerator is tested at 90% of its maximum permitted capacity, the 1.18 dry ton/hour sewage sludge throughput limit specified in paragraph B.4. shall no longer apply. Respondent shall conduct emission tests of any emission sources subject to Section 22a-174-22 of the Regulations at least once every five years after November 2001.

- a. If the results of the testing required by this paragraph show that the actual NOx emission rate(s) of one or both of the incinerators is/are higher than the full load emission rate(s) ("FLER") of the incinerators specified in paragraph B.2., Respondent shall immediately substitute the higher NOx emission rate(s) for the FLER(s) in the ERC calculations in paragraph B.2., and Respondent shall acquire ERCs in accordance with the revised calculations. Respondent shall adjust any ERCs not in Respondent's possession prior to the occurrence of the excess NOx emissions upwards by 100% from the date of the emission tests conducted pursuant to paragraph B.4. until the purchase of said ERCs.
- b. If the results of the testing required by this paragraph show that the actual NOx emission rate(s) of one or both of the incinerators is/are lower than the FLER(s) of the incinerators specified in paragraph B.2., Respondent may submit a written request to the Commissioner, for his review and written approval, to substitute the lower NOx emission rate(s) for the FLER(s) in the ERC calculations in paragraph B.2.

6. On and after the date of issuance of this Consent Order, and

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prior to May 1, 2003, Respondent shall comply during operation on sewage sludge and no. 2 fuel oil with an enforceable maximum FLER of 0.52 lbs of NOx per MMBtu of heat input for the west incinerator, and 0.48 lbs of NOx per MMBtu of heat input for the east incinerator, averaged on a 24-hour basis.

7. No later than May 1, 2003, Respondent shall comply with the requirements of Section 22a-174-22(d)(2) of the Regulations. However, after full program review of the Emissions Trading Program and, if determined to be appropriate, the Commissioner may grant a written extension of this Consent Order.
8. Full compliance. Respondent shall not be considered in full compliance with this consent order until all actions required by this consent order have been completed as approved and to the Commissioner's satisfaction.
9. Approvals. Respondent shall use best efforts to submit to the Commissioner all documents required by this consent order in a complete and approvable form. If the Commissioner notifies Respondent that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and Respondent shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this consent order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this consent order. Nothing in this paragraph shall excuse noncompliance or delay.
10. Definitions. As used in this consent order, "Commissioner" means the Commissioner or a representative of the Commissioner. The date of "issuance" of this consent order is the date the consent order is deposited in the U.S. mail or personally delivered, whichever is earlier. "Approved ERCs" are defined for purposes of this consent order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations.
11. Dates. The date of submission to the Commissioner of any document required by this consent order shall be the date

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such document is received by the Commissioner. The date of any notice by the Commissioner under this consent order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this consent order, the word "day" as used in this consent order means calendar day. Any document or action which is required by this consent order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.

12. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this consent order shall be signed by Respondent or, if Respondent is not an individual, by Respondent's chief executive officer or a duly authorized representative of such officer, as those terms are defined in Section 22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such document, and Respondent or Respondent's chief executive officer and each such individual shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under Section 53a-157b of the Connecticut General Statutes and any other applicable law."

13. Noncompliance. This consent order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this consent order may subject Respondent to an injunction and penalties.
14. False statements. Any false statement in any information submitted pursuant to this consent order is punishable as a criminal offense under Section 53a-157b of the Connecticut General Statutes and any other applicable law.

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15. Notice of transfer; liability of Respondent.  
Until Respondent has fully complied with this consent order, Respondent shall notify the Commissioner in writing no later than 15 days after transferring all or any portion of the facility, the operations, the site or the business which is the subject of this consent order or after obtaining a new mailing or location address. Respondent's obligations under this consent order shall not be affected by the passage of title to any property to any other person or municipality.
16. Commissioner's powers. Nothing in this consent order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by Respondent pursuant to this consent order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require Respondent to undertake further investigation or further action to prevent or abate violations or pollution.
17. Respondent's obligations under law. Nothing in this consent order shall relieve Respondent of other obligations under applicable federal, state and local law.
18. No assurance by Commissioner. No provision of this consent order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by Respondent pursuant to this consent order will result in compliance [or prevent or abate pollution].
19. Access to site. Any representative of the Department of Environmental Protection may enter the facility without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this consent order.
20. No effect on rights of other persons. This consent order neither creates nor affects any rights of persons or municipalities that are not parties to this consent order.
21. Notice to Commissioner of changes. Within 15 days of the date Respondent becomes aware of a change in any information submitted to the Commissioner under this consent order, or

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that any such information was inaccurate or misleading or that any relevant information was omitted, Respondent shall submit the correct or omitted information to the Commissioner.

22. Notification of noncompliance. In the event that Respondent becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this consent order or of any document required hereunder, Respondent shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice, Respondent shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and Respondent shall comply with any dates which may be approved in writing by the Commissioner. Notification by Respondent shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.
23. Submission of documents. Any document required to be submitted to the Commissioner under this consent order shall, unless otherwise specified in this consent order or in writing by the Commissioner, be directed to:

Wendy Jacobs  
Department of Environmental Protection  
Bureau of Air Management  
Compliance and Field Operations Division  
79 Elm Street  
Hartford, Connecticut 06106-5127

Respondent's Initials:

JRT

Date:

2/5/01

Respondent consents to the issuance of this consent order without further notice. The undersigned certifies that he/she is fully authorized to enter into this consent order and to legally bind the Respondent to the terms and conditions of the consent order.

BY: RESPONDENT Joan R. Taf  
Mayor  
February 5, 2001  
Date

Issued as a final order of the Commissioner of the Department of Environmental Protection on February 14, 2001.

Jack Stahl  
Arthur J. Rocque, Jr.  
Commissioner

BOROUGH OF NAUGATUCK LAND RECORDS  
MAILED CERTIFIED MAIL, RETURN RECEIPT REQUESTED  
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**REVISION TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Section 22a-174-22 Regulations of Connecticut State Agencies  
THROUGH USE OF DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

**WISVEST-CONNECTICUT, LLC  
TRADING AGREEMENT AND ORDER NO. 8177  
MODIFICATION NO. 1**

**APRIL 2002**

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**PART 2. DESCRIPTION OF DERC CREATION AND/OR USE  
By Trading Agreement and Order No. 8177 Modification No. 1**

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order 8177 Modification No. 1
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency's (EPA) State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in EIP guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from nitrogen oxides (NOx) control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERCS creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program includes approval of creation and use of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with Section 22a-174-22 of the Regulations of Connecticut State Agencies (Regulations), regarding control of NOx. Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERCS creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for more timely rule compliance because more options are available to the regulated source. DERCS trading is intended to benefit both the environment and the regulated entities and can achieve equal or better

environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized

by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of DERCs will not jeopardize RFP since the state's NOx rule emission limits for the sources creating and/or using DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources the baseline will be the lower of actual or allowable emissions.

### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This

reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with Section 22a-174-22 of the Regulations through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the SIP for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the Trading Agreement and Order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable.

Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION AND/OR USE  
By Trading Agreement and Order 8177 Modification No.1**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection  
Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected :**

NOx, Section 22a-174-22 of the Regulations of Connecticut State Agencies

**C. Source :**

Wisvest-Connecticut, LLC  
Bridgeport Harbor Station  
1 Atlantic Street  
Bridgeport, CT 06604  
Unit 3, permit number 015-0089

**D. Designated Representative:**

Name Robert Silvestri, Environmental Operations Leader  
Tel: (203) 551-6032

**E. Nonattainment Area Classification: Severe**

**F. Summary of Compliance**

**Time Period:** April 19, 1999 - prior to May 1, 2003

**Purpose:** NOx Emission compliance for the boiler during start-up and generation of DERCS and BERCS from the boiler.

**Annual DERCS needed:** None used in 2000 or 2001

**DERCS generated:** 560 ozone season BERCS and 605 non-ozone season DERCS were created in 2000. 637 ozone season BERCS and 729 non-ozone DERCS were created 2001.

**G. Description of Compliance**

Wisvest is an exempt wholesale electric generating company with its principal place of business in Shelton, Connecticut. On April 16, 1999 Wisvest purchased from The United

Illuminating Company and now owns and operates two fossil fuel-fired electric generating stations within the state. One of the two fossil fuel-fired electric generating stations within the state that Wisvest owns and operates is Bridgeport Harbor Station at 1 Atlantic Street in Bridgeport, Connecticut (facility). At the facility, Wisvest operates Bridgeport Harbor Station Unit 3, Connecticut Permit 015-0089, a tangentially-fired boiler, currently rated at 400 megawatts (boiler). The boiler has the dual capacity to operate on coal and/or fuel oil (No. 6 or No. 2). No. 2 fuel oil is used primarily as a start-up fuel. A continuous emissions monitor (CEM), certified to 40 Code of Federal Regulations Part 75, measures NOx emissions from the boiler. The boiler is generating and using DERCS in accordance with Trading Agreement and Order 8177. The order is being modified with respect to the generation and use of ozone season budget emission reduction credits (BERCS).

The modification No. 1 to Trading Agreement and Order No. 8177 pertains to the ozone season restrictions concerning generation and use.

Ozone Season Restrictions. The boiler is subject to Section 22a-174-22a of the Regulations (NOx Budget Program) in 1999 and every year thereafter. The boiler may generate ozone season BERCS to comply with Section 22a-174-22 of the Regulations: 1) BERCS shall only be generated by the boiler from May 1 through September 30 of a given year, 2) BERCS shall only be used by other NOx Budget Program sources located in Connecticut, 3) BERCS shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BERCS generated during a given year shall only be used during the following ozone season, with the exception of BERCS generated during 1999, which may be used in the 2001 ozone season. BERCS may be generated until May 1, 2003. BERCS are subject to all ERC requirements set forth in the Trading Agreement and Order except for those requirements pertaining solely to non-ozone season ERCs and as otherwise may be provided.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



STATE OF CONNECTICUT

AND

WISVEST-CONNECTICUT, LLC

TRADING AGREEMENT AND  
ORDER NO. 8177  
MODIFICATION NO. 1

TRADING AGREEMENT AND ORDER MODIFICATION

In the matter of a Trading Agreement and Order between the Commissioner of Environmental Protection ("Commissioner") and Wisvest-Connecticut, LLC ("Wisvest").

WHEREAS, the Commissioner and Wisvest, having agreed to the terms and conditions set forth in Trading Agreement and Order No. 8177 issued on May 31, 2000, do now, by mutual agreement, modify said Trading Agreement and Order as follows:

1. Delete paragraph C.1.c. and substitute the following therefor:

Ozone Season Restrictions. The boiler is subject to Section 22a-174-22a of the Regulations ("NOx Budget Program") in 1999 and every year thereafter. The boiler may generate ozone season BERCs to comply with Section 22a-174-22 of the Regulations in accordance with paragraph C.1.a. and the following conditions and restrictions: 1) BERCs shall only be generated by the boiler from May 1 through September 30 of a given year, 2) BERCs shall only be used by other NOx Budget Program sources located in Connecticut, 3) BERCs shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BERCs generated during a given year shall only be used during the following ozone season, with the exception of BERCs generated during 1999, which may be used in the 2001 ozone season. For example, BERCs generated during the 1999 ozone season may be used during the 2001 ozone season. However, BERCs generated during the 2000 ozone season may only be used during the 2001 ozone season. BERCs may be generated until May 1, 2003. BERCs are subject to all ERC requirements set forth in this Trading Agreement and Order except for those requirements pertaining solely to non-ozone season ERCs and as otherwise may be provided.

All other terms and conditions of Trading Agreement and Order no. 8177 issued by the Commissioner acting under Chapter 446c, Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes shall remain in effect.

Initials: TDK

Date: 7/22/01

WISVEST-CONNECTICUT, LLC

2

TRADING AGREEMENT AND ORDER  
NO. 8177 MODIFICATION NO. 1

Wisvest-Connecticut, LLC hereby consents to the entry of this modification to the Trading Agreement and Order without further notice.

Wisvest-Connecticut, LLC

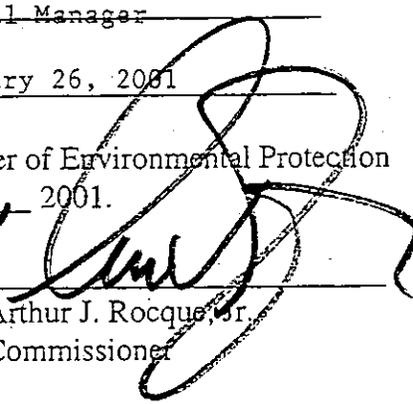
Signature: Thomas D Kirk

Type Name: Thomas D. Kirk

Type Title: General Manager

Date: February 26, 2001

Entered as a modification of ~~an~~ Order of the Commissioner of Environmental Protection  
numbered 8177 this 12<sup>th</sup> day of March, 2001.

  
Arthur J. Rocque, Jr.  
Commissioner

CITY OF BRIDGEPORT  
LAND RECORDS

MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document No. 1625 0394

**REVISION TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Section 22a-174-22 Regulations of Connecticut State Agencies  
THROUGH USE OF DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

**WISVEST-CONNECTICUT, LLC  
ORDER NO. 8176  
MODIFICATION NO. 1**

**APRIL 2002**

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### EXHIBITS

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order 8176 Modification No. 1
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency's (EPA) State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in EIP guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from nitrogen oxides (NOx) control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program includes approval of creation and use of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with Section 22a-174-22 of the Regulations of Connecticut State Agencies (Regulations), regarding control of NOx. Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for more timely rule compliance because more options are available to the regulated source. DERC trading is intended

to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCS in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCS, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCS and the eventual use of DERCS and conducts a yearly audit of the program.

DERCS produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCS.

Enforceable because the DERCS are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCS should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCS will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCS must be certified by the Department prior to use.

DERCS generated during non-ozone season months may not be used during the ozone season. Only the DERCS produced during ozone-season months of May through September are available for use during the ozone season.

DERCS are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of DERCs will not jeopardize RFP since the state's NOx rule emission limits for the sources creating and/or using DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources the baseline will be the lower of actual or allowable emissions.

### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(1) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCS created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCS are used only once, and to represent the DERCS and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCS will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCS to determine if additional restrictions are needed to assure that the use of DERCS does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCS agrees to have sufficient approved DERCS in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCS that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCS created may be used for approved purposes for compliance with Section 22a-174-22 of the Regulations through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the SIP for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the Trading Agreement and Order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERs by using the reporting procedures required herein. A summary of the creation and use of DERs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERs to determine if additional restrictions are needed to assure that the use of DERs does not jeopardize RFP. Tracking and monitoring of DER use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DER CREATION AND/OR USE  
By Trading Agreement and Order 8176 Modification No.1**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection  
Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected :**

NOx, Section 22a-174-22 of the Regulations of Connecticut State Agencies

**C. Source :**

Wisvest-Connecticut, LLC  
New Haven Harbor Station  
1 Waterfront Street  
New Haven, Connecticut

**D. Designated Representative:**

Name: Sally Kruse  
Title: Environmental Operations Specialist  
Tel: 203-974-5055

**E. Nonattainment Area Classification:** Serious

**F. Summary of Compliance**

**Time Period:** . April 19, 1999 - prior to May 1, 2003

**Purpose:** NOx Emission compliance for the boiler during start-up and generation of DERCS and BERCS.

**Estimate of Annual DERCS needed:** Estimated 1-2 tons ozone and 1-2 non-ozone

**DERCS generated:** 453 tons of non-ozone DERCS and 521 tons of ozone budget source DERCS (BERCS) from May 1999 to December 2000. 341 tons non-ozone and 187 tons ozone BERCS for 2001.

### G. Description of Compliance

Wisvest is an exempt wholesale electric generating company with its principal place of business in Shelton, Connecticut. On April 16, 1999 Wisvest purchased from The United Illuminating Company and now owns and operates two fossil fuel-fired electric generating stations within the state. One of the two fossil fuel-fired electric generating stations within the state that Wisvest owns and operates is New Haven Harbor Station at 1 Waterfront Street in New Haven, Connecticut (facility). At the facility, Wisvest operates New Haven Harbor Station Unit 1, Connecticut Permit 117-0031, a tangentially-fired boiler, currently rated at 465 megawatts (boiler). The boiler has the dual capacity to operate on fuel oil (No. 6 or No. 2) and/or natural gas. No. 2 fuel oil is used primarily as a start-up fuel. A continuous emissions monitor (CEM), certified to 40 Code of Federal Regulations Part 75, measures NOx emissions from the boiler. The boiler is generating and using DERCS in accordance with Trading Agreement and Order 8176. The order is being modified with respect to the generation and use of ozone season budget emission reduction credits (BERCS).

The modification No. 1 to Trading Agreement and Order No. 8176 pertains to the ozone season restrictions concerning generation and use.

Ozone Season Restrictions. The boiler is subject to Section 22a-174-22a of the Regulations (NOx Budget Program) in 1999 and every year thereafter. The boiler may generate ozone season BERCS to comply with Section 22a-174-22 of the Regulations. : 1) BERCS shall only be generated by the boiler from May 1 through September 30 of a given year, 2) BERCS shall only be used by other NOx Budget Program sources located in Connecticut, 3) BERCS shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BERCS generated during a given year shall only be used during the following ozone season, with the exception of BERCS generated during 1999, which may be used in the 2001 ozone season. BERCS may be generated until May 1, 2003. BERCS are subject to all DERC requirements set forth in the Trading Agreement and Order except for those requirements pertaining solely to non-ozone season DERCS and as otherwise may be provided.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



STATE OF CONNECTICUT

AND

WISVEST-CONNECTICUT, LLC

TRADING AGREEMENT AND  
ORDER NO. 8176  
MODIFICATION NO. 1

TRADING AGREEMENT AND ORDER MODIFICATION

In the matter of a Trading Agreement and Order between the Commissioner of Environmental Protection ("Commissioner") and Wisvest-Connecticut, LLC ("Wisvest").

WHEREAS, the Commissioner and Wisvest, having agreed to the terms and conditions set forth in Trading Agreement and Order No. 8176 issued on May 31, 2000, do now, by mutual agreement, modify said Trading Agreement and Order as follows:

1. Delete paragraph C.1.c. and substitute the following therefor:

Ozone Season Restrictions. The boiler is subject to Section 22a-174-22a of the Regulations ("NOx Budget Program") in 1999 and every year thereafter. The boiler may generate ozone season BERCs to comply with Section 22a-174-22 of the Regulations in accordance with paragraph C.1.a. and the following conditions and restrictions: 1) BERCs shall only be generated by the boiler from May 1 through September 30 of a given year, 2) BERCs shall only be used by other NOx Budget Program sources located in Connecticut, 3) BERCs shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BERCs generated during a given year shall only be used during the following ozone season, with the exception of BERCs generated during 1999, which may be used in the 2001 ozone season. For example, BERCs generated during the 1999 ozone season may be used during the 2001 ozone season. However, BERCs generated during the 2000 ozone season may only be used during the 2001 ozone season. BERCs may be generated until May 1, 2003. BERCs are subject to all ERC requirements set forth in this Trading Agreement and Order except for those requirements pertaining solely to non-ozone season ERCs and as otherwise may be provided.

All other terms and conditions of Trading Agreement and Order no. 8176 issued by the Commissioner acting under Chapter 446c, Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes shall remain in effect.

Initials: DK

Date: 2/22/01

WISVEST-CONNECTICUT, LLC

2

TRADING AGREEMENT AND ORDER  
NO. 8176 MODIFICATION NO. 1

Wisvest-Connecticut, LLC hereby consents to the entry of this modification to the Trading Agreement and Order without further notice.

Wisvest-Connecticut, LLC

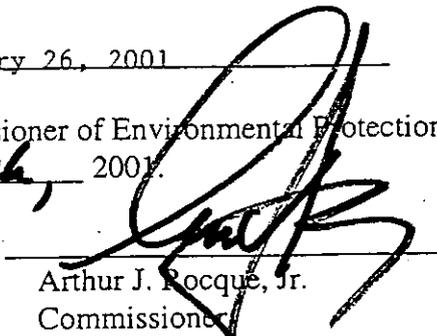
Signature: Thomas D. Kirk

Type Name: Thomas D. Kirk

Type Title: General Manager

Date: February 26, 2001

Entered as a modification of an Order of the Commissioner of Environmental Protection numbered 8176 this 12<sup>th</sup> day of March, 2001.

  
Arthur J. Pocque, Jr.  
Commissioner

CITY OF NEW HAVEN  
LAND RECORDS

MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document No. 1625 0370

**PROPOSED REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22  
THROUGH USE OF  
DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

**CONNECTICUT JET POWER LLC  
Trading Agreement and Order No. 8180**

**August, 2002**

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in Economic Incentive Program (EIP) guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from NOx control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program is to approve creation of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of nitrogen oxides (NOx). Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving these emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions

to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for timelier rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone

season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCs may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of these DERCs will not jeopardize RFP since the state's NOx rule emission limits for the source creating the DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions are at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For

individual sources, the baseline will be the lower of actual or allowable emissions.

#### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the trading agreement and order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION & USE**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source and Identifier:**

Connecticut Jet Power LLC ( All units are Pratt and Whitney FT4A-9 Turbines)  
Branford 10- Boston Post Road, Branford CT, 06405  
Cos Cob 10,11,12- Sound Shore Drive, Greenwich CT, 06830  
Franklin Drive 10- Franklin Drive, Torrington CT, 06790  
Torrington 10- South Main Street, Torrington CT, 06790

**D. Designated Representative:**

Ms. Cynthia Karlic  
Regional Manager  
Telephone No. (860) 638-3170

**E. CT Nonattainment Area Classification: Severe**

**F. Summary of Compliance:**

**Time Period:** December 15, 1999- May 1, 2003  
**Method:** DERCs generated from NRG's generating stations will be used to offset excess NOx emissions.

NOx RACT emission limit: 75 ppm (.289 lb/MMBtu)  
Full Load Emission Rate: (see table 1)

**Monitoring:** Estimate monthly fuel use and acquire credits prior to use.  
Record actual monthly fuel consumption and DERC use.  
Stack test at least every five years: average of three hour.

Annual DERCs needed: Estimated 120 tons/year

Peaking Unit	FUEL	FLER (lbs/MMBtu)	NOx RACT Rate (lbs/MMBtu)	Stack Test Rate (ppmvd)	Stack Test Rate (lbs/MMBtu)	Date of Stack Test
Branford 10	other oil	0.79	0.289	187.2	0.72	10/16/96
Cos Cob 10	other oil	0.74	0.289	174.6	0.67	10/31/96
Cos Cob 11	other oil	0.67	0.289	160.0	0.61	10/30/96
Cos Cob 12	other oil	0.80	0.289	189.4	0.73	10/29/96
Franklin Drive 10	other oil	0.68	0.289	158.2	0.741	05/15/96
Torrington Terminal 10	other oil	0.83	0.289	192.9	0.765	05/15/96

#### G. Description of Compliance:

Connecticut Jet Power LLC ("CJP") is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 CJP purchased from The Connecticut Light and Power Company ("CL&P") the six peaking units identified in table 1. All the peaking units are Pratt and Whitney FT4A-9 turbine generators. The peaking units are subject to the requirements of Sections 22a-174-22 (Reasonably Available Control of nitrogen oxide emissions) and 22a-174-22a and 22b (NOx Budget Program). After May 31, 1995 the peaking units are required to achieve a NOx emission limit of 75 ppmvd (.289 lbs/MMBtu), averaged over 3 hours. Official U.S. Environmental Protection Agency ("EPA") Reference Method 7E stack testing performed on the dates indicated in Table 1, resulted in NOx emission rates set forth in Table 1. In order to achieve compliance, CJP proposes to acquire emission reduction credits for the amount of NOx emissions that exceed the standards between December 15, 1999 and May 1, 2003 or until it achieves compliance through NOx controls or other approved means. Pursuant to Section 22a-174-22(j) of the Regulations, CJP proposes to acquire sufficient quantities of approved DERCs in advance of each month to offset excess NOx emissions on a monthly basis from the peaking units in accordance with the protocol of the Department's "Credit Trading for Sources with Irregular NOx Emissions", dated November 5, 1997.

In accordance with Section 22a-174-22(j) of the Regulations, CJP proposes to use DERCs for compliance when operating the peaking units. Each month, the quantity of DERCs required to offset the excess emissions generated during that month by the peaking units above the RACT limit will be determined. DERCs previously purchased and/or acquired and on-hand will be used to offset any remaining balance of excess emissions (debits) for that month. Design margins will be applied to the RACT emission rate for the peaking units to ensure an environmental benefit.

On December 15, 1999, CJP initially acquired from The Connecticut Light and Power Company, sufficient approved ozone season DERCs and non-ozone season DERCs to offset excess NOx emissions. CJP will use (retire) approximately 120 tons of DERCs to offset excess emissions annually. The DERCs will be used thereafter in accordance with the requirements in this SIP and attached Trading Agreement and Order No. 8180. Additional DERCs will be purchased or acquired as needed prior to use based on anticipated future fuel use through May 1, 2003. The number of DERCs initially acquired were calculated based on the estimated fuel usage for the peaking units and the FLERs listed in Table 1.

The NOx emission test rate was determined during the official testing program (approved stack testing) conducted on October 25, 1996. The FLERs, as shown in Table 1, are used to calculate actual emissions for the peaking units and is an enforceable limit for the peaking units. Prior to May 1, 2003, CJP will comply during operation of the peaking units with the FLERs, the 5 percent design margin and the NOx emission limit shown in Table 1 of Trading Agreement and Order No. 8180.

Starting December 15, 1999 and no later than the tenth day of each month, beginning the month after execution of Trading Agreement and Order No. 8180, CJP will calculate actual DERCs used in the preceding calendar month, in accordance with Trading Agreement and Order No. 8180.

CJP shall calculate the actual DERCs required for the calendar month for the peaking units and fuel used in excess of the RACT limit, based on the following calculations (described also in Exhibit 1 of Trading Agreement and Order No. 8180):

**At all times (mass calculation):**

$$\text{ERCs (in tons)} = \left[ \left( \text{FLER in lbs/MMBtu} - (0.95 \times \text{NOx RACT in lbs/MMBtu}) \right) \times \text{(actual fuel use in MMBtu)} \right] \div 2000 \text{ pounds/ton}$$

**During the ozone season only (peak day calculation):**

the maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthful," "unhealthful," or "very unhealthful," divided by 3 and then divided by 13 (with the result in tons):

$$\text{ERCs (in tons)} = \left[ \text{(Maximum excess NOx in lbs)} \div 3 \right] \div [13 \text{ lbs/day/ton}]$$

Where:

- FLER = full load emission rate presented in Table 1;
- RACT rate = RACT rate presented in Table 1;
- Discount = 5% design margin applied to the RACT rate.

As described in Exhibit 1 of Trading Agreement and Order No. 8180, to the extent that DERCs used to offset on a peak day basis during the ozone season exceed the total mass excess emissions, remaining DERCs may be used in the non-ozone season in the same or subsequent years until May 1, 2003. However, non-ozone season DERCs may only be used during the non-ozone season until May 1, 2003.

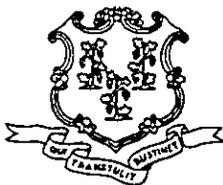
#### **H. SOURCE OF DERCS**

On December 15, 1999, CJP initially acquired approved ozone season DERCs and non-ozone season DERCs from The Connecticut Light and Power Company, approved by the Department on April 29, 1999 and other dates in 1999.

CJP may use or consume fewer DERCs than it intends to purchase because of a lower operating rate or upon early establishment of controls or other emission limitation strategies which result in attainment of NOx limitations applicable to the emitting peaking unit. Such residual DERCs may not be used for any purpose other than that described in Trading Agreement and Order No. 8180, contained in Exhibit 3, without the written approval of the Commissioner.

Pursuant to the intent of Section 22a-174-22a(f)(4) of the Regulations, CJP may use allowances acquired pursuant to the provisions of Section 22a-174-22a of the Regulations to comply with subsection (e) of Section 22a-174-22 of the Regulations pursuant to the provisions of subsection (j) of Section 22a-174-22 of the Regulations as long as CJP remains an owner or operator of a budget source, for purposes of this Trading Agreement and Order. Any allowance used for compliance with subsection (e) of Section 22a-174-22 of the Regulations shall be subject to all restrictions and/or requirements applicable to DERCs contained in this Trading Agreement and Order and/or Section 22a-174-22a of the Regulations.

CJP may acquire additional approved DERCs at any time prior to the need to use such DERCs. CJP will at all times maintain a balance of approved DERCs sufficient to allow operation for the current month. If, upon audit or inspection, CJP fails to demonstrate possession of an adequate amount of DERCs to cover the current month, it will be subject to violation as prescribed in Sections 22a-174-12 and 22a-174-22 of the Regulations.



**STATE OF CONNECTICUT**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**



In the matter of )  
 The State of Connecticut ) Trading Agreement  
 and ) and Order No. 8180  
 Connecticut Jet Power LLC )

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Connecticut Jet Power LLC ("CJP") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of emission reduction credit ("ERC") trading to reduce nitrogen oxide ("NOx") emissions will achieve this result in a timely and cost-effective manner:

- A. At the request and with the agreement of CJP, the Commissioner finds the following:
1. CJP is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On or before December 31, 1999 CJP will purchase from The Connecticut Light and Power Company and then own six (6) pieces of fuel-burning equipment ("peaking units") identified in Table 1 of this Trading Agreement and Order. All of these peaking units are combustion turbines.
  2. On or before December 31, 1999 NRG Middletown Operations Inc. will operate the six peaking units identified in Table 1 of this Trading Agreement and Order at CJP's facilities.
  3. Official U.S. Environmental Protection Agency ("EPA") Reference Method 7E stack testing performed on the dates indicated in Table 1, resulted in NOx emission rates set forth in Table 1.

Table 1 CJP - NOx EMISSION RATES AND RACT LIMITS (lbs/MMBtu)						
Peaking Unit	FUEL	FLER (lbs/MMBtu)	NOx RACT Rate (lbs/MMBtu)	Stack Test Rate (ppmvd)	Stack Test Rate (lbs/MMBtu)	Date of Stack Test
Branford 10	other oil	0.79	0.289	187.2	0.72	10/16/96
Cos Cob 10	other oil	0.74	0.289	174.6	0.67	10/31/96
Cos Cob 11	other oil	0.67	0.289	160.0	0.61	10/30/96
Cos Cob 12	other oil	0.80	0.289	189.4	0.73	10/29/96
Franklin Drive 10	other oil	0.68	0.289	158.2	0.62	05/15/96
Torrington Terminal 10	other oil	0.83	0.289	192.9	0.75	05/15/96

4. The emission rates for the peaking units and fuel specified in Table 1 are in excess of Section 22a-174-22, Table 22-2, of the (Printed on Recycled Paper)

Initials RJE

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An Equal Opportunity Employer

Date 12/29/99

Regulations Of Connecticut State Agencies ("Regulations"), NOx emission rate limits (Reasonably Available Control Technology "RACT").

5. Pursuant to Section 22a-174-22(b) of the Regulations, all of the peaking units are subject to Sections 22a-174-22(d) through (k) of the Regulations, pertaining to the control of NOx emissions.
  6. In accordance with Section 22a-174-22(j) of the Regulations, CJP proposes that for all peaking units identified in Table 1, CJP shall use ERC trading when burning "other oil", as that term is defined in Section 22a-174-22 of the Regulations.
  7. Pursuant to the Department of Environmental Protection's "Credit Trading for Sources with Irregular NOx Emissions" policy, with a revised date of November 5, 1997, attached hereto and incorporated by reference into this Trading Agreement and Order as Exhibit 1, these peaking units have peak daily NOx emissions greater than three times the average daily emissions during the ozone season and are therefore considered sources with irregular NOx emissions.
  8. Based on DEP approved stack test data, it has been determined that all of the peaking units' emissions will not meet the applicable requirements of RACT contained in Section 22a-174-22 of the Regulations. CJP proposes to use Full Load Emission Rates ("FLERs") identified in Table 1 for the purposes of calculating ERCs required.
  9. CJP intends to continue acquiring approved ERCs as needed.
  10. Approved ERCs are defined for the purpose of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations.
- B. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, and pursuant to Section 22a-174-22 (j) of the Regulations hereby allows CJP to comply with Section 22a-174-22 of the Regulations through use of ERC trading referenced in Section A, herein, to achieve the nitrogen oxide emission reduction required by Section 22a-174-22(d)(2) of the Regulations.
- C. With the agreement of CJP, the Commissioner, acting under Connecticut General Statutes Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177, orders CJP as follows:
1. Upon issuance of this Trading Agreement and Order CJP shall comply during operation of each peaking unit with the FLERs shown in Table 1 above.
  2. On and after the date which CJP purchases the peaking units identified in Table 1 of this Trading Agreement and Order, CJP shall have in its possession sufficient approved ERCs to meet applicable RACT requirements and the requirements of this Trading Agreement and Order.
  3. On and after the date which CJP purchases the peaking units identified in Table 1 of this Trading Agreement and Order, CJP shall, on a daily basis, document and record the amounts of all fuel used by each peaking unit each day and the number of ERCs used for the ozone season (from May 1 through September 30 of each year) and non-ozone season (the remainder of the year).
  4. On and after the date which CJP purchases the peaking units identified in Table 1 of this Trading Agreement and Order, pursuant to Section 22a-174-22(j) of the Regulations, CJP shall acquire from The Connecticut Light and Power Company sufficient approved non-ozone season ERCs in order to meet applicable RACT requirements and the requirements of this Trading Agreement and Order for the operation of the six peaking units identified in

Table 1 of this Trading Agreement and Order during the month of December, 1999.

5. Except as provided in paragraph C.4. of this Trading Agreement and Order, on and after the date which CJP purchases the peaking units identified in Table 1 of this Trading Agreement and Order, pursuant to Section 22a-174-22(j) of the Regulations, CJP shall acquire from The Connecticut Light and Power Company sufficient approved ozone season and non-ozone season ERCs in order to meet applicable RACT requirements and the requirements of this Trading Agreement and Order for the following month's operation.
6. In accordance with Exhibit 1 of this Trading Agreement and Order, ozone season ERCs for use during the ozone season shall be purchased by CJP prior to the beginning of the ozone season.
7. On and after the date which CJP purchases the peaking units identified in Table 1 of this Trading Agreement and Order, CJP shall maintain and provide the records required by paragraph C.3. of this Trading Agreement and Order in accordance with the following and Section 22a-174-4 of the Regulations, and shall:
  - a. Have in its possession sufficient approved ERCs for the current day, based on the following calculations (described also in Exhibit 1);
 

**At all times (mass calculation):**

$$\text{ERCs (in tons)} = [((\text{FLER in lbs/MMBtu}) - (0.95 \times \text{NOx RACT in lbs/MMBtu})) \times (\text{actual fuel use in lbs/MMBtu})] \div 2000$$

**During the ozone season only (peak day calculation):**

the maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthy," "unhealthy," or "very unhealthy," divided by 3 and then divided by 13 (with the result in tons):

$$\text{ERCs (in tons)} = [(\text{Maximum excess NOx in lbs}) \div 3] \div [13 \text{ lbs/day/ton}];$$
  - b. At a minimum, adjust upwards by 100% the ERCs required if ERCs are not in CJP's possession prior to use;
  - c. As described in Exhibit 1 of this Trading Agreement and Order, to the extent that ERCs used to offset on a peak day basis during the ozone season exceed the total mass excess emissions, remaining ERCs may be used in the non-ozone season in the same or subsequent years until May 1, 2003;
  - d. Document and record daily fuel use, excess NOx emissions and, during the ozone season, the ozone classification as forecasted by the Commissioner on the previous day;
  - e. No later than March 1, 2000, 2001, 2002, 2003 and 2004, include with its annual emissions report to the Commissioner, ERCs used (calculated as described in section C.7.a. above), by ozone and non-ozone seasons, for the previous calendar year;
  - f. Retain the records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records are created;
  - g. Maintain documentation to attest to the fact that ERCs used during the ozone season were generated during the ozone season. The ozone season is from May 1 through September 30 in any calendar year. Generator certification of this fact shall be sufficient; and

- h. Provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
8. Pursuant to the intent of Section 22a-174-22a(f)(4) of the Regulations, CJP may, for a budget source, use allowances acquired pursuant to the provisions of Section 22a-174-22a of the Regulations to comply with subsection (e) of Section 22a-174-22 of the Regulations pursuant to the provisions of subsection (j) of Section 22a-174-22 of the Regulations as long as CJP remains an owner of that budget source, for purposes of this Trading Agreement and Order. Any allowance used for compliance with subsection (e) of Section 22a-174-22 of the Regulations shall be subject to all restrictions and/or requirements applicable to ERCs contained in this Trading Agreement and Order and/or Section 22a-174-22a of the Regulations.
9. The terms and conditions established by this Trading Agreement and Order shall become effective on the date CJP purchases all peaking units identified in Table 1 of this Trading Agreement and Order, and upon issuance of this Trading Agreement and Order.
10. No later than May 1, 2003, CJP shall comply with the requirements of Section 22a-174-22(d)(2) of the Regulations. However, after full program review of this and other Trading Agreements and Orders and, if determined to be appropriate, the Commissioner may grant a written extension of this Trading Agreement and Order.
11. Definitions. As used in this order, "Commissioner" means the Commissioner of Environmental Protection or an agent of the Commissioner. "Other oil" means a fuel that is liquid at standard conditions and is not residual oil. "Residual oil" means any fuel oil of No. 4, No. 5, or No. 6 grades, as defined by Commercial Standard C.S. 12-48. "Ozone season" means the period from May 1 through September 30 in any given calendar year. "Issuance" means the date this Trading Agreement and Order is deposited in the U.S. Mail or the date it is personally delivered, whichever is earlier.
12. Notification of noncompliance. In the event that CJP becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, CJP shall by telephone immediately notify the Bureau of Air Management and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. CJP shall also notify the Commissioner in writing within ten days of becoming aware of the noncompliance or potential noncompliance stating the date, time, and duration of the noncompliance, the reasons for the noncompliance or delay and all activities which CJP and its agents, employees and representatives took to avoid or repair the results of the noncompliance and prevent the noncompliance, and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved. CJP shall comply with any dates which may be approved in writing by the Commissioner. Notification by CJP shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing. Nothing herein shall negate CJP's obligation to comply with Section 22a-174-7 of the Regulations. To the extent that the provisions of Section 22a-174-7 are inconsistent with the provisions of this Trading Agreement and Order, the more stringent of the provisions in the Trading Agreement and Order or Section 22a-174-7 shall control.
13. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by the responsible corporate officer of CJP or a duly authorized representative of such officer, as those terms are defined in Section 22a-430-3(b)(2) of the Regulations, and by the individual or individuals responsible for actually preparing such document, each of whom shall examine and be familiar with the

information submitted in the document and all attachments thereto, and shall make inquiry of those individuals responsible for obtaining the information to determine that the information is true, accurate, and complete, and each of whom shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes or, in accordance with Section 22a-6 of the Connecticut General Statutes, under Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

14. Final Agreement and Order. This Trading Agreement and Order is the final agreement and order by and between the Commissioner and CJP with respect to the matters addressed herein, and shall not be modified without the written agreement of both parties.
15. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes or, in accordance with Section 22a-6, under Section 53a-157b of the Connecticut General Statutes.
16. Notice of transfer; liability of CJP and others. Until CJP has fully complied with this Trading Agreement and Order, CJP shall notify the Commissioner in writing no later than fifteen (15) days after transferring all or any portion of the facility, the operations, the site or the business which are the subject of this Trading Agreement and Order, or obtaining a new mailing or location address. Any license transfer shall be conducted in accordance with Section 22a-60 of the Connecticut General Statutes. CJP's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
17. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law which are willful or criminally negligent or for which penalties have not been specifically provided in this Trading Agreement and Order, including but not limited to violations of any permit issued by the Commissioner. If at any time the Commissioner determines that the actions taken by CJP pursuant to this Trading Agreement and Order have not fully achieved compliance with Section 22a-174-22 of the Regulations, the Commissioner may institute any proceeding against CJP and/or require CJP to undertake further investigation or further action.
18. CJP's obligations under law. Nothing in this Trading Agreement and Order shall relieve CJP of other obligations under applicable federal, state and local law.
19. Access to records and facility. Any representative of the Department of Environmental Protection may enter and inspect the facility and inspect and copy records within normal business hours without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
20. No effect on rights of other persons. This Trading Agreement and Order shall neither create nor affect any rights of persons who or municipalities which are not parties to this Trading Agreement and Order.

21. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these ERCs.
22. Notice to Commissioner of changes. Within fifteen (15) days of the date CJP becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, CJP shall submit the correct or omitted information to the Commissioner.
23. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in writing by the Commissioner, be directed to:

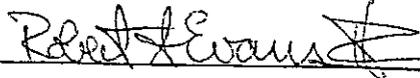
Mr. David Jawin  
Department of Environmental Protection  
Bureau of Air Management  
Compliance and Field Operations Division  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106

Connecticut Jet Power LLC

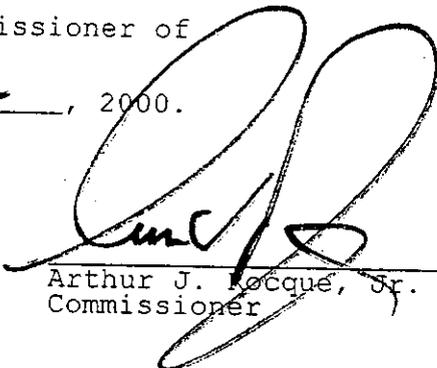
Trading Agreement  
and Order No. 8180

CJP consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind CJP to the terms and conditions of the Trading Agreement and Order.

Connecticut Jet Power LLC

Signature:   
Type Name: Robert S. Evans II  
Type Title: Executive Director, Environmental Services  
NRG Energy, Inc.  
Date: 12/29/99

Issued as a final consent order of the Commissioner of  
Environmental Protection on January 12, 2000.

  
Arthur J. Rocque, Jr.  
Commissioner

TOWNS/CITIES OF Branford, Greenwich  
and Torrington  
LAND RECORDS

MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document

Exhibit 1  
Trading Agreement and Order No. 8180



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



REVISED 11/5/97

**Credit Trading for Sources with Irregular NOx Emissions**

The following outlines the Department's concerns and methodology for dealing with NOx compliance pursuant to §22a-174-22(j), Regulations of Connecticut State Agencies ("Regulations"), emission trading for "peakers" and other sources that have peak emissions that are substantially higher than their average daily emissions. For purposes of this protocol, peaking units are defined as sources with peak daily NOx emissions greater than three times their average daily emissions during the ozone season.

The basic concept of the trading program is that sources with excess NOx emissions (a rate that exceeds the rate limits in the Regulations) may obtain NOx emission reduction credits ("ERCs") from sources that have "over-controlled" their NOx emissions. Although typical sources can obtain credits on a mass basis (one ton of ERCs to offset one ton of excess emissions) with an acceptable environmental outcome, sources with large variations in emissions from day to day pose an additional problem for ozone attainment planning.

The most common peaking units or "peakers" are electricity generating units that run during times of high electricity consumption. Electricity demand is often the highest during hot, humid days of the summer when the potential for ozone formation is also high. Peakers frequently have high emission rates. To the extent that these units produce emissions at exactly the time when emissions need to be reduced to limit ozone formation, allowing peakers to continue to comply with new rate limits through the use of ERCs on a ton-for-ton basis will exacerbate this effect. On the other hand, if it can be demonstrated that the ERCs being used by peakers were generated on a comparable basis (i.e., during days of high ozone potential), then ton-for-ton use by peakers would be appropriate.

The full impact of the NOx emissions from these types of facilities during summer operation must consider temporal variability as well as mass of excess emissions. Any ERC trade must consider equivalency to the NOx reductions that control equipment would produce on an ozone day on both a temporal and a mass basis. The protocol below places appropriate requirements on peaking units to reflect the greater impact of NOx emitted under this type of usage pattern. Attachment 1 provides a detailed example of this issue.

*NOx Emissions Reduction Credit Use Computation For Peakers*

- Peaking units are only considered to be a temporal issue for the ozone season months.
- All excess NOx emissions during the winter (non-ozone season) need only be offset by ERCs on a mass basis.
- Prior to each ozone season there will be a prospective calculation to determine how many tons of ERCs must be "on hand" during the ozone season. A retrospective calculation will determine how many ERCs were actually "used" during the ozone season.

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*For ERC use during the ozone season:*

1. Prospective calculation determines the number of ERCs that must be provided for the ozone season. (Beginning in 1996, the ERCs must be in place no later than May 1.)

ERCs required for the ozone season shall be calculated based on: (a) a **mass basis** (total anticipated excess NOx emissions over the ozone season) and (b) a **peak-day basis** (maximum excess emissions for any day during the ozone season). Sources will be required to provide credits equal to the **greater** of the amount calculated on a mass or peak-day basis. The timing of actual credit provision will be governed by the terms of the specific trading order issued for that source.

- (a) **Mass basis:** ERCs required will be equal to the total number of tons of anticipated excess NOx emissions over the entire ozone season, calculated in the same manner used for other sources using ERCs (i.e., including any discounts).
- (b) **Peak (daily rate) basis:** ERCs (in tons) required will be calculated by dividing one-third of the maximum daily excess emissions\* (in pounds) by 13 pounds/day/ton:

$$\text{ERCs required (tons)} = [(\text{Maximum Estimated Excess NOx in lbs.}) \div 3] \div [13 \text{ lbs./day/ton}]$$

\*Where maximum daily excess NOx emissions are the difference between the maximum estimated hours of operation per day at the full-load-emission-rate and 95% of the allowable NOx emissions under Section 22a-174-22(e) of the Regulations.

2. Retrospective calculation will determine the actual credit use and the ERC surplus, if any. At the end of the ozone season, the calculations required in item 1 above will be repeated using (a) the actual total excess emissions for the ozone season, and (b) the maximum actual excess NOx emissions on any of the days projected by the Commissioner to be "moderate to unhealthy", "unhealthy", or "very unhealthy". The actual "ERCs required" will be the **greater** of the ERCs calculated on the basis of total mass or maximum (peak) day. To the extent that the number of ERCs used to offset peak day emissions exceed the total mass of excess NOx emissions for the ozone season, the remaining mass value of such ERCs may be carried forward for use in the winter (non-ozone season). Any unused ERCs may be carried forward until May 1, 1999, except as may be limited by the trading agreement and order, or by regulation.

*Exhibit 1*  
*ERC Calculation for Peaking Units*

Unless it can be demonstrated otherwise, ERCs are assumed to be created by relatively small daily reductions in NOx emissions over the course of an entire ozone season (153 days). The average daily NOx emissions reduction represented by one ton of credit is 13 pounds/day calculated as follows:

$$(1 \text{ ton}) \times (2000 \text{ pounds/ton}) \div 153 \text{ days} = 13 \text{ pounds/day/ton}$$

Thus, an ERC (ton) would be equivalent to a reduction in NOx emissions of 13 pounds/day.

**EXAMPLE.** If a "peaking" source were to emit one ton of excess NOx per day when operating, but only operates for five days during the ozone season, the owner/operator of the source would nominally need to obtain five tons of ERCs. However, those ERCs are likely to have been created by relatively small daily reductions in NOx emissions over the course of an entire ozone season (153 days). In this example, assuming a purchase of five tons of ERCs, that calculates out to a daily NOx reduction of approximately 65 pounds.

$$(5 \text{ tons} \times 2000 \text{ pounds/ton}) \div 153 \text{ days} = 65 \text{ pounds/day}$$

Clearly, on any day that the "peaking" unit operates, there is much more excess NOx emissions that will not have been offset, on the order of 1,935 pounds:

$$(1 \text{ ton} \times 2000 \text{ pounds/ton}) - (65 \text{ pounds credit}) = 1,935 \text{ pounds excess NOx emissions}$$

While the total amount of NOx emitted would be controlled on a seasonal average basis, on the "peaking" day there would be a potentially significant increase in NOx emitted, and thus an increase in potential ozone creation. In order to achieve a commensurate reduction in ozone creation potential for peakers, an adjustment in the calculation of required ERCs is needed. One approach would be to require ERCs in a quantity that would ensure that the daily average reduction represented by those ERCs would equal the maximum daily excess-NOx emissions from the peaking source on any day that it ran. On this basis, a peaking source with a maximum 24-hour excess NOx emission of one ton would be required to purchase 153 tons of ERCs.

$$1 \text{ (ton)/day} \times 153 \text{ days/season} = 153 \text{ tons}$$

This 153 tons of ERCs would be adequate to "offset" excess emissions of one ton per day for as many days as the source operated during a particular ozone season. This has been deemed to be unduly stringent, given some diversity in operation of these sources. In light of the foregoing, this requirement is adjusted downward by two-thirds.

**PROPOSED REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22  
THROUGH USE OF  
DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

**CONNECTICUT JET POWER LLC**

**Trading Agreement and Order 8180 Modification No. 1**

**August, 2002**

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- Exhibit 1 Notice of Hearing and Hearing Certification
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- Exhibit 3 Trading Agreement and Order
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## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in Economic Incentive Program (EIP) guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from NOx control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program is to approve creation of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of nitrogen oxides (NOx). Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving these emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions

to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for timelier rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone

season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCs may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of these DERCs will not jeopardize RFP since the state's NOx rule emission limits for the source creating the DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions are at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For

individual sources, the baseline will be the lower of actual or allowable emissions.

#### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the trading agreement and order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION & USE**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source and Identifier:**

Connecticut Jet Power LLC (All units are Pratt and Whitney FT4A-9 Turbines)  
Branford 10- Boston Post Road, Branford CT, 06405  
Cos Cob 10,11,12- Sound Shore Drive, Greenwich CT, 06830  
Franklin Drive 10- Franklin Drive, Torrington CT, 06790  
Torrington 10- South Main Street, Torrington CT, 06790

**D. Designated Representative:**

Ms. Cynthia Karlic  
Regional Manager  
Telephone No. (860) 638-3170

**E. CT Nonattainment Area Classification: Severe**

**F. Summary of Compliance:**

**Time Period:** May 7, 2002- May 1, 2003  
**Method:** DERCs generated from NRG's generating stations will be used to offset excess NOx emissions.

NOx RACT emission limit: 75 ppm (.289 lb/MMBtu)  
Full Load Emission Rate: (see table 1)

**Monitoring:** Estimate monthly fuel use and acquire credits prior to use.  
Record actual monthly fuel consumption and DERC use.  
Stack test at least every five years: average of three hour.

Annual DERCs needed: Estimated 120 tons/year

Peaking Unit (serial number)	FUEL	FLER (lbs/MMBtu)	NOx RACT Rate (lbs/MMBtu)	Stack Test Concentration (ppmdv)	Stack Test Rate (lbs/MMBtu)	Date of Stack Test
Branford 10 (675102)	other oil	0.80	0.29	184	0.70	09/06/01
Cos Cob 10 (675337)	other oil	0.80	0.29	193	0.74	08/22/01
Cos Cob 11 (675192)	other oil	0.80	0.29	144	0.55	08/23/01
Cos Cob 12 (675342)	other oil	0.80	0.29	182	0.70	08/23/01
Franklin Drive 10 (F662098)	other oil	0.80	0.29	194	0.74	04/20/01
Torrington 10 (612599)	other oil	0.80	0.29	197	0.77	04/19/01

#### G. Description of Compliance:

Connecticut Jet Power LLC ("CJP") is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 CJP purchased from The Connecticut Light and Power Company ("CL&P") the six peaking units identified in table 1. All the peaking units are Pratt and Whitney FT4A-9 turbine generators. The peaking units are subject to the requirements of Sections 22a-174-22 (Reasonably Available Control of nitrogen oxide emissions) and 22a-174-22a and 22b (NOx Budget Program). After May 31, 1995 the peaking units are required to achieve a NOx emission limit of 75 ppmvd (.289 lbs/MMBtu), averaged over 3 hours. Official U.S. Environmental Protection Agency ("EPA") Reference Method 7E stack testing performed on the dates indicated in Table 1, resulted in NOx emission rates set forth in Table 1. On June 5, 2001 CJP requested a modification of Trading Agreement and Order 8180 to adjust the full load emission rates ("FLERs") as indicated in table 1. In order to achieve compliance, CJP proposes to acquire emission reduction credits for the amount of NOx emissions that exceed the standards between May 7, 2002 and May 1, 2003 or until it achieves compliance through NOx controls or other approved means. Pursuant to Section 22a-174-22(j) of the Regulations, CJP proposes to acquire sufficient quantities of approved DERCs in advance of each month to offset excess NOx emissions on a monthly basis from the peaking units in accordance with the protocol of the Department's "Credit Trading for Sources with Irregular NOx Emissions", dated February 27, 2001.

In accordance with Section 22a-174-22(j) of the Regulations, CJP proposes to use DERCs for compliance when operating the peaking units. Each month, the quantity of DERCs required to offset the excess emissions generated during that month by the peaking units above the RACT limit will be determined. DERCs previously purchased and/or acquired and on-hand will be used to offset any remaining balance of excess emissions (debits) for that month. Design margins will be applied to the RACT emission rate for the peaking units to ensure an environmental benefit.

On December 15, 1999, CJP initially acquired from The Connecticut Light and Power Company, sufficient approved ozone season DERCs and non-ozone season DERCs to offset excess NOx emissions. CJP will use (retire) approximately 120 tons of DERCs to offset excess emissions annually. The DERCs will be used thereafter in accordance with the requirements in this SIP and attached Trading Agreement and Order No. 8180 Modification No. 1. Additional DERCs will be purchased or acquired as needed prior to use based on anticipated future fuel use through May 1, 2003.

The NOx emission test rate was determined during the official testing program (approved stack testing) conducted on the dates listed in table 1. The FLERs, as shown in Table 1, are used to calculate actual emissions for the peaking units and are an enforceable limit for the peaking units. Prior to May 1, 2003, CJP will comply during operation of the peaking units with the FLERs, the 5 percent design margin and the NOx emission limit shown in Table 1 of Trading Agreement and Order No. 8180 Modification No. 1.

Starting May 7, 2002 and no later than the tenth day of each month, beginning the month after execution of Trading Agreement and Order No. 8180 Modification No. 1, CJP will calculate actual DERCs used in the preceding calendar month, in accordance with Trading Agreement and Order No. 8180 Modification No. 1.

CJP shall calculate the actual DERCs required for the calendar month for the peaking units and fuel used in excess of the RACT limit, based on the following calculations (described also in Exhibit 1 of Trading Agreement and Order No. 8180 Modification No. 1):

**At all times (mass calculation):**

$$\text{DERCs (in tons)} = [((\text{FLER in lbs/MMBtu}) - (0.95 \times \text{NOx RACT in lbs/MMBtu})) \times (\text{actual fuel use in MMBtu})] \div 2000 \text{ pounds/ton}$$

**During the ozone season only (peak day calculation):**

the maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthy," "unhealthy," or "very unhealthy," divided by 3 and then divided by 13 (with the result in tons):

$$\text{DERCs (in tons)} = [(\text{Maximum excess NOx in lbs}) \div 3] \div [13 \text{ lbs/day/ton}]$$

Where:

- FLER = full load emission rate presented in Table 1;
- RACT rate = RACT rate presented in Table 1;
- Discount = 5% design margin applied to the RACT rate.

As described in Exhibit 1 of Trading Agreement and Order No. 8180 Modification No. 1, to the extent that DERCS used to offset on a peak day basis during the ozone season exceed the total mass excess emissions, remaining DERCS may be used in the non-ozone season in the same or subsequent years until May 1, 2003. However, non-ozone season DERCS may only be used during the non-ozone season until May 1, 2003.

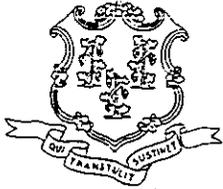
#### H. SOURCE OF DERCS

On December 15, 1999, CJP initially acquired approved ozone season DERCS and non-ozone season DERCS from The Connecticut Light and Power Company.

CJP may use or consume fewer DERCS than it intends to purchase because of a lower operating rate or upon early establishment of controls or other emission limitation strategies which result in attainment of NOx limitations applicable to the emitting peaking units. Such residual DERCS may not be used for any purpose other than that described in Trading Agreement and Order No. 8180 Modification No. 1, contained in Exhibit 3, without the written approval of the Commissioner.

Pursuant to the intent of Section 22a-174-22a(f)(4) of the Regulations, CJP may use allowances acquired pursuant to the provisions of Section 22a-174-22a of the Regulations to comply with subsection (e) of Section 22a-174-22 of the Regulations pursuant to the provisions of subsection (j) of Section 22a-174-22 of the Regulations as long as CJP remains an owner or operator of a budget source, for purposes of this Trading Agreement and Order. Any allowance used for compliance with subsection (e) of Section 22a-174-22 of the Regulations shall be subject to all restrictions and/or requirements applicable to DERCS contained in this Trading Agreement and Order and/or Section 22a-174-22a of the Regulations.

CJP may acquire additional approved DERCS at any time prior to the need to use such DERCS. CJP will at all times maintain a balance of approved DERCS sufficient to allow operation for the current month. If, upon audit or inspection, CJP fails to demonstrate possession of an adequate amount of DERCS to cover the current month, it will be subject to violation as prescribed in Sections 22a-174-12 and 22a-174-22 of the Regulations.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of  
The State of Connecticut  
and  
Connecticut Jet Power LLC

Trading Agreement  
and Order No. 8180  
Modification No. 1

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Connecticut Jet Power LLC ("CJP"), having agreed to the terms and conditions set forth in Trading Agreement and Order 8180 issued on January 12, 2000, do now, by mutual agreement, modify said Trading Agreement and Order as follows:

- Delete Table 1 and substitute the following therefor:

Peaking Unit (serial number)	FUEL	FLER (lbs/MMBtu)	NOx RACT Rate (lbs/MMBtu)	Stack Test Concentration (ppmdv)	Stack Test Rate (lbs/MMBtu)	Date of Stack Test
Branford 10 (675102)	other oil	0.80	0.29	184	0.70	09/06/01
Cos Cob 10 (675337)	other oil	0.80	0.29	193	0.74	08/22/01
Cos Cob 11 (675192)	other oil	0.80	0.29	144	0.55	08/23/01
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Franklin Drive 10 (F662098)	other oil	0.80	0.29	194	0.74	04/20/01
Torrington 10 (612599)	other oil	0.80	0.29	197	0.77	04/19/01

- Change the date specified in paragraph A.7. from November 5, 1997 to February 27, 2001.
- Delete paragraph C.2. and substitute the following therefor:

Initials TEW

Date 4/29/02

Connecticut Jet Power LLC

Trading Agreement  
and Order No. 8180  
Modification 1

2.

- a. On and after the date which CJP purchases the peaking units identified in Table 1 of this Trading Agreement and Order, CJP shall have in its possession sufficient approved ERCs to meet applicable RACT requirements and the requirements of this Trading Agreement and Order.
- b. For the period between January 1, 2000 and June 5, 2001, CJP shall retire 1 ozone season discrete emission reduction credit ("DERC") and 1 non-ozone season DERC.

All other terms and conditions of Trading Agreement and Order no. 8180 issued by the Commissioner acting under Chapter 446c, Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes shall remain in effect.

CJP consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind CJP to the terms and conditions of the Trading Agreement and Order.

Connecticut Jet Power LLC

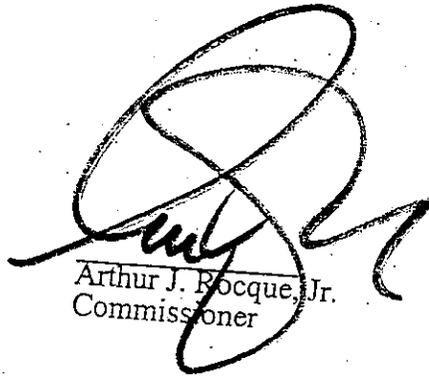
Signature: TE Walker

Type Name: THOMAS E. WALKER

Type Title: MANAGER

Date: 4/29/02

Issued as a final consent order of the Commissioner of  
Environmental Protection on 5/7, 2002.

  
Arthur J. Rocque, Jr.  
Commissioner

TOWNS/CITIES OF Branford, Greenwich  
and Torrington  
LAND RECORDS

MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document

Completed 7/17/02

**REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22 (NO<sub>x</sub> RULE)  
THROUGH USE OF DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

**Allegheny Ludlum Incorporated**

**Boiler Nos. 1, 2, and 3,  
and  
Mixed Acid Bath Scrubber Nos. 1 and 2**

**July 2002**

Allegheny Ludlum Incorporated

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By Trading Agreement and Order**

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**EXHIBITS**

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## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency's (EPA) State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in EIP guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from nitrogen oxides (NOx) control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program includes approval of creation and use of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with Section 22a-174-22 of the Regulations of Connecticut State Agencies (Regulations), regarding control of NOx. Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for more timely rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of DERCs will not jeopardize RFP since the state's NOx rule emission limits for the sources creating and/or using DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources the baseline will be the lower of actual or allowable emissions.

### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCS will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCS to determine if additional restrictions are needed to assure that the use of DERCS does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCS agrees to have sufficient approved DERCS in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCS that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCS created may be used for approved purposes for compliance with the Section 22a-17-22 of the Regulations through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the SIP for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the Trading Agreement and Order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCS by using the reporting procedures required herein. A summary of the creation and use of DERCS will be prepared each year along with an audit of each source, which is conducted every spring, and the programs overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCS to determine if additional restrictions are needed to assure that the use of DERCS does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION AND/OR USE  
By Trading Agreement and Order No 8188**

**Administering Agency:**

The State of Connecticut  
Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected :**

NOx: Regulations of Connecticut State Agencies (Regulation) Section 22a-174-22.

**C. Source and Identifier :** Client 2239 Sequence 1 Town # 189 Premise # 1

Allegheny Ludlum Corporation

Boiler Nos. 1 , 2 and 3, and Mixed acid Bath Pickle Scrubber Nos. 1 and 2

**D. Designated Representative:**

Mr. Kevin Grant, Tel: (203) 284-2213, Fax (203) 284-2212  
Environmental Engineer

**E. Nonattainment Area Classification:** Serious

**F. Summary of Compliance**

**Time Period:** May 31 , 1995 through October 31, 2000

**Purpose:** NOx Emission compliance for the following units:

**Annual DERCS needed:** 55.18 tons were used to true-up excess emissions and another 55.18 tons were used for 100% premium penalty . (No new credits are needed provided the process continues to be in compliance)

**Special Requirements:**

- ALC shall meet the 700 ppm allowable NOx emissions rates for the mixed acid bath scrubber.
- ALC shall maintain a minimum exhaust flow rate for each mixed acid tub scrubber of 1800 dscfm except during periods of startup, shutdown or malfunction.
- ALC shall install and operate an exhaust flow monitor, warning device and a data-recording device, acceptable to the Commissioner, on each of the two mixed acid tub scrubbers.
- Provide for emissions testing each calendar year commencing in the year 2002. After two (2) consecutive years of demonstrating compliance with the allowable emission rate limit of 700 ppmvd for appropriate processes in Section 22a-174-22 of the Regulations, ALC may submit in writing, for the Commissioner's review and written approval, a request to allow ALC to return to a longer emissions testing period not to exceed every five (5) years, with such time period commencing from the date of the last emission test.

## G. DESCRIPTION OF COMPLIANCE

### G.1 Background

The following is a description of the compliance issues and trading requirements for Allegheny Ludlum Corporation (ALC). These requirements are formally contained in Trading Agreement and Order No. 8188 attached in this EPA SIP submittal.

Allegheny Ludlum is a corporation, which heat-treats and processes specialty steel products at its principal place of business in Wallingford, Connecticut. At the facility, ALC operates three (3) package size steam boilers and a mixed pickle tub process with two exhaust scrubbers, which are subject to Section 22a-174-22 of the Regulations of Connecticut State Agencies.

Based on DEP witnessed emissions tests it was determined that during the period May 31, 1995 through March 31, 2000 ALC's three (3) boilers emitted 17.29 tons of excess NOx during the non-ozone season and during the period May 31, 1995 through October 31, 2000 ALC's mixed acid pickle tub scrubbers emitted 19.59 tons ozone and 18.30 tons non-ozone season excess NOx emissions. The total excess emissions were 55.18 tons.

### G.2 Efforts to Reduce NOx Emissions

On and after March 31, 2000 to reduce emissions, ALC switched from burning #6 oil to cleaner burning #2 oil in boilers Nos. 1, 2, and 3. ALC also installed new fan blades and tuned the acid scrubbers to improve their performance. As a result the scrubber NOx emissions were reduced to emission to below the 700 ppmvd requirement.

### G.3 Trading Summary and Penalty

In accordance with Section 22a-174-22(j) of the Regulations and Trading Agreement No. 8188, the quantity of DERCs required to compensate for the daily excess emissions above the NOx allowable limit for boiler nos. 1, 2 and 3 and the mixed acid pickle tub scrubbers was determined. Design margins, uncertainty factors were applied to the allowable emission rate for each boiler and the scrubbers to ensure an environmental benefit.

On October 31, 2001, ALC acquired and immediately retired a total of 110.36 tons of DERCs to compensate for the excess emissions. The first 55.18 tons ( 19.59 tons of ozone season DERCs and 35.59 tons of non-ozone season) DERCs were used to "true up" the 55.18 tons of excess emissions. An additional 55.18 tons were retired as a 100% penalty premium for exceeding Section 22a-174-22(e) table 22-1 allowable emission limits.

#### G.3.3 Equations for DERC Use.

For emissions on or before October 31, 2000, ALC is required to use the following calculations:

(a) Boilers Nos. 1, 2, and 3 (when burning #6 Oil) DERCs

$$\frac{\text{Boiler Nos. 1, 2, and 3 total (actual) monthly excess NOx emissions (tons/mo.)}}{\{[(\text{total monthly \#6 oil heat input}) \times ((\text{oil full load emission rate ("FLER") of 0.371 lbs/MMBtu}) - (0.95 \text{ design margin} \times 0.250 \text{ lbs/MMBtu NOx allowable limit}))]\} \div 2000}$$



9. During the period June 1, 1995 through March 31, 2000, ALC's excess NOx emissions from boilers Nos. 1, 2, and 3 are estimated to total 17.29 tons (0 tons ozone and 17.29 tons non-ozone).
10. During the period June 1, 1995 through October 31, 2000 ALC's excess NOx emissions from the mixed acid tub scrubbers No. 1 and No. 2 are estimated to total 37.89 tons (19.59 tons ozone and 18.30 tons non-ozone).
11. Pursuant to Section 22a-174-22 of the Regulations, ALC proposes to enter into a Trading Agreement and Order to comply with: 1) the allowable NOx emission rates in Table 22-1 for boilers Nos. 1, 2, and 3, when burning #6 oil; and, 2) the allowable NOx emissions limits set forth in Section 22a-174-22(e)(2)(G) of the Regulations when operating the mixed acid tub scrubbers Nos. 1 and 2.
12. ALC has converted the system so that #2 oil will fuel boilers Nos. 1, 2, and 3, and #6 oil will no longer be burned in boilers Nos. 1, 2, and 3.
13. On April 1, 2000, ALC discontinued burning #6 oil in boilers Nos. 1, 2, and 3 to comply with the emissions limits in Section 22a-174-22(e) of the Regulations until a Trading Agreement and Order could be established for their facility.
14. Pursuant to Section 22a-174-22(j) of the Regulations, ALC acquired and used approved DERCs monthly, as specified in Section C. of this Trading Agreement and Order to compensate for the excess NOx emissions from June 1, 1995 until March 31, 2000 for the boilers and from June 1, 1995 until October 31, 2000 for the mixed acid tub scrubbers.
15. Section 22a-174-22(j) of the Regulations allows the owner or operator of a source to use emission reduction trading to offset excess NOx emissions. Such reductions shall be, at a minimum, equivalent to those emission reductions that would be achieved by complying with all applicable emissions limitations in Section 22a-174-22 of the Regulations.
16. A third DEP witnessed emission test performed on November 2 and 3, 2000 of the mixed acid tub scrubbers Nos. 1 and 2, shows that the combined weighted average NOx emission rate for the mixed acid tub scrubbers Nos. 1 and 2 is 396 ppmvd which meets the 700 ppmvd allowable emission rate set forth in Section 22a-174-22(e) of the Regulations.
17. On October 31, 2000, ALC obtained a total of 117 tons (43 tons ozone and 74 tons non-ozone) of approved DERCs.
18. On October 31, 2000, in accordance with the requirements contained in paragraph C.1 of this Trading Agreement and Order, ALC retired a total of 110.36 tons of approved DERCs, including a 100% premium to compensate for the excess emissions of NOx that were emitted for the period from June 1, 1995 through October 31, 2000, as follows:
  - a. For boiler Nos. 1, 2, and 3: 17.29 tons of non-ozone season DERCs.
  - b. For mixed acid tub scrubbers: 19.59 tons of ozone and 18.30 tons of non-ozone season DERCs.
  - c. For having insufficient DERCs on hand prior to use for boiler Nos. 1, 2, and 3 and the mixed acid tub scrubbers: 19.59 tons of ozone season DERCs and 35.59 tons of non-ozone season DERCs.

- 19. For boilers Nos. 1, 2, and 3, prior to burning #2 oil, on March 15, 2001, ALC received an approved permit modification to burn #2 oil in boilers Nos. 1, 2, and 3.
- 20. By agreeing to the issuance of this Trading Agreement and Order, ALC does not admit that findings A.3. through A.10. are correct.
- B. The Commissioner, in accordance with the provisions of this trading agreement and order, pursuant to Section 22a-174-22(d)(3) of the Regulations, hereby allows ALC to comply with Section 22a-174-22(d)(1) of the Regulations through use of DERC trading.
- C. With the agreement of ALC, the Commissioner, acting under Connecticut General Statutes Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177, orders ALC as follows:
  - 1. Retrospective NOx Emissions

Relating to emissions on or before October 31, 2000, ALC shall obtain and retire a total of 110.36 tons of approved DERCs, including a 100% premium to compensate for the excess emissions of NOx that were emitted for the period from June 1, 1995 through October 31, 2000, as follows:

- a. For boiler Nos. 1, 2, and 3: 17.29 tons of non-ozone season DERCs.
- b. For mixed acid tub scrubbers: 19.59 tons of ozone and 18.30 tons of non-ozone season DERCs.
- c. For having insufficient DERCs on hand prior to use for boiler Nos. 1, 2, and 3 and the mixed acid tub scrubbers: 19.59 tons of ozone season DERCs and 35.59 tons of non-ozone season DERCs.
- d. Retrospective excess NOx emissions above shall be calculated as follows:

(a) Boilers Nos. 1, 2, and 3 (#6 Oil) DERCs

Boiler Nos. 1, 2, and 3 total (actual) monthly excess NOx emissions (tons/mo.) =  $\{[(\text{total monthly \#6 oil heat input}) \times ((\text{oil full load emission rate ("FLER") of 0.371 lbs/MMBtu}) - (0.95 \text{ design margin} \times 0.250 \text{ lbs/MMBtu NOx allowable limit}))] \} \div 2000 \text{ pounds/ton}$

(b) Mixed Acid Tub Scrubbers Nos. 1 and 2 DERCs

(i) For period June 1, 1995 through April 30, 2000

Mixed acid tub scrubbers Nos. 1 and 2 (Actual) DERCs (tons) =  $\{(((895 \text{ mixed acid tub FLER in ppmvd}) - (0.95 \text{ design margin} \times 700 \text{ ppmvd})) / 895 \text{ ppmvd}) \times [(8.575 \text{ pounds/hour}) \times (\text{total actual daily operating hours})]\} \div 2000 \text{ pounds/ton}$

(ii) For period May 1, 2000 through October 31, 2000

Mixed acid tub scrubbers Nos. 1 and 2 (Actual) DERCs (tons) =  $\{(((925 \text{ mixed acid tub FLER in ppmvd}) - (0.95 \text{ design margin} \times 700 \text{ ppmvd})) / 925 \text{ ppmvd}) \times [(19.4 \text{ pounds/hour}) \times (\text{total actual daily operating hours})]\} \div 2000 \text{ pounds/ton}$

- 2. On October 31, 2000, as documented in spreadsheets showing excess NOx emissions and DERCs retired, and DERC Sales Agreements signed by ALC (hereby incorporated into this Trading Agreement and Order as Attachments 1 and 2), the

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terms and conditions of Paragraph C.1. (a), (b) (c) and (d) were met as described in Paragraphs A.17 and A.18 of this Trading Agreement and Order.

3. Future Emissions for the mixed acid tub scrubbers Nos. 1 and 2:

- a. ALC shall maintain a minimum exhaust flow rate for each mixed acid tub scrubber of 1800 dscfm except during periods of startup, shutdown or malfunction.
- b. Within sixty (60) days of the issuance of this Trading Agreement and Order, ALC shall install and operate an exhaust flow monitor, warning device and a data-recording device, acceptable to the Commissioner, on each of the two mixed acid tub scrubbers. The data recording device shall record and store the differential pressure data representative of the exhaust gas flow rate of each mixed acid tub scrubber. ALC shall operate and maintain flow-monitoring equipment at all times during operation of the mixed acid tub scrubbers. Data shall be stored continuously for a minimum of six (6) months. The recording device will capture data for at least 95 percent of the operating time. A warning device shall be installed to alert the operator to take corrective action if the exhaust flow rate for a mixed acid tub scrubber falls below 1800 dscfm during normal operation.
- c. Records of the exhaust flow rate and corrective action activities shall be maintained at the facility for a minimum period of six (6) months.
- d. Emissions testing: In lieu of installing continuous emissions monitoring (CEM) on the mixed acid tub scrubbers, ALC shall conduct emissions testing on the mixed acid tub scrubbers. Within sixty (60) days of the issuance of this Trading Agreement and Order, ALC shall submit a NOx Emission Testing plan to the Commissioner for his review and written approval. Such plan shall, at a minimum:
  - 1) Provide for emissions testing each calendar year commencing in the year 2002;
  - 2) Be designed to demonstrate compliance with the allowable emission rate limit of 700 ppmvd for appropriate processes in Section 22a-174-22 of the Regulations; and
- e. After two (2) consecutive years of demonstrating compliance with the allowable emission rate limit of 700 ppmvd for appropriate processes in Section 22a-174-22 of the Regulations, ALC may submit in writing, for the Commissioner's review and written approval, a request to allow ALC to return to a longer emissions testing period not to exceed every five (5) years, with such time period commencing from the date of the last emission test.

4. Emission Testing Protocol for the mixed acid tub scrubbers Nos. 1 and 2.

- a. ALC shall submit to the Commissioner for his review and written approval an Intent-To-Test ("ITT") protocol not less than thirty (30) days prior to the emissions testing required pursuant to paragraph C.3.d. and C.3.e. of this Trading Agreement and Order. The ITT protocol shall include at least:
  - 1) The Department of Environmental Protection's Bureau of Air Management Test Form No. 1, "Intent to Test";

- 2) System operating parameters indicative of proper operation, including, but not limited to the mixed acid tub steel throughput and, for each mixed acid tub scrubber, the exhaust gas flow rate and NOx emissions rate in ppmvd and lbs/hr.
  - b. The ITT protocol shall provide that ALC shall perform testing as specified in Sections 22a-174-5 and 22a-174-22 of the Regulations, including operating the mixed acid tub process at not less than ninety percent (90%) of its maximum rated or permitted, whichever is less, capacity.
  - c. ALC shall perform all testing required by paragraph C.3.d and C.3.e in accordance with the approved ITT protocol.
  - d. In conducting and performing the testing required by paragraph C.3.d and C.3.e, and in analyzing the results of such testing, ALC shall adhere to methods specified in Sections 22a-174-5 and 22a-174-22 of the Regulations and as approved by the United States Environmental Protection Agency ("EPA") and the Commissioner.
  - e. ALC shall schedule all emissions testing so as to allow the Commissioner to be present during such testing and to independently verify facility operations, air pollution control equipment parameters, and testing procedures.
5. Within sixty (60) days after completing any emissions testing required by this Trading Agreement and Order, ALC shall submit to the Commissioner a written report providing the results of such testing. Within thirty (30) days of a notice from the Commissioner indicating any deficiencies in the emissions testing report, ALC shall submit a revised report.
  - a. ALC shall document and record monthly totals of steel throughput in tons, process hours of operation, and NOx emissions in accordance with the emission rates and limits set forth in Section 22a-174-22 (e) of the Regulations. Such records shall be maintained and provided to the Commissioner in accordance with Section 22a-174-4(c)(1) of the Regulations.
  - b. ALC shall retain records and supporting documentation as described in this Trading Agreement and Order for a minimum of five (5) years, commencing on the date such records were created.
  - c. ALC shall provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
6. Full compliance. ALC shall not be considered in full compliance with this Trading Agreement and Order until all actions required by this Trading Agreement and Order have been completed as approved and to the Commissioner's satisfaction.
7. Approvals. ALC shall use best efforts to submit to the Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form. If the Commissioner notifies ALC that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and ALC shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within thirty (30) days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the

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Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.

8. Definitions. As used in this Trading Agreement and Order, "Commissioner" means the Commissioner or a representative of the Commissioner. The date of "issuance" of this Trading Agreement and Order is the date the Trading Agreement and Order is deposited in the U.S. mail or personally delivered, whichever is earlier.
9. Dates. The date of submission to the Commissioner of any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner, whichever is earlier. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Trading Agreement and Order, the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.
10. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by ALC's chief executive officer or a duly authorized representative of such officer, as those terms are defined in Section 22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such document. ALC's chief executive officer or authorized representative and each such individual shall certify in writing as follows:  
  
"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under Section 53a-157b of the Connecticut General Statutes and any other applicable law."  
  
11. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject ALC to an injunction and penalties.
12. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.

13. Notice of transfer; liability of ALC. Until ALC has fully complied with this Trading Agreement and Order, ALC shall notify the Commissioner in writing no later than thirty (30) days after transferring all or any portion of the facility, the operations, the site or the business which is the subject of this Trading Agreement and Order or after obtaining a new mailing or location address. ALC's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
14. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by ALC pursuant to this Trading Agreement and Order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require ALC to undertake further investigation or further action to prevent or abate violations or pollution.
15. ALC's obligations under law. Nothing in this Trading Agreement and Order shall relieve ALC of other obligations under applicable federal, state and local law.
16. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by ALC pursuant to this Trading Agreement and Order will result in compliance.
17. Access to site. Any representative of the Department of Environmental Protection may enter the facility without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
18. No effect on rights of other persons. This Trading Agreement and Order neither creates nor affects any rights of persons or municipalities that are not parties to this Trading Agreement and Order.
19. Notice to Commissioner of changes. Within fifteen (15) days of the date ALC becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, ALC shall submit the correct or omitted information to the Commissioner.
20. Notification of Compliance. In the event that ALC becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, ALC shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice,

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ALC shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and ALC shall comply with any dates which may be approved in writing by the Commissioner. Notification by ALC shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.

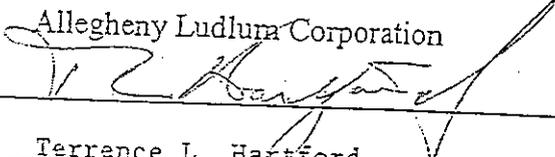
21. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in this Trading Agreement and Order in writing by the Commissioner, be directed to:

Mr. Roland L. Severance Jr., PE  
Department of Environmental Protection  
Bureau of Air Management  
Emissions and Credit Trading Section  
79 Elm Street, 5<sup>th</sup> Floor  
Hartford, Connecticut 06106-5127

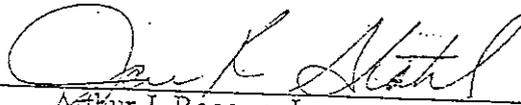
Allegheny Ludlum Corporation

Trading Agreement and Order No. 8188

ALC consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind ALC to the terms and conditions of the Trading Agreement and Order.

BY: Signature: Allegheny Ludlum Corporation  
  
Type Name: Terrence L. Hartford  
Type Title: President - Allegheny Rodney  
Date: 5/21/02

Entered as a final Trading Agreement and Order of the Commissioner of Environmental Protection numbered 8188 this 28<sup>th</sup> day of May 2002.

  
Arthur J. Rocque, Jr.  
Commissioner

CITY OF WALLINGFORD LAND RECORDS  
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REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22 (NO<sub>x</sub> RULE)  
THROUGH THE  
USE OF DISCRETE EMISSION REDUCTION CREDITS (DERCs)

BRISTOL MEYERS SQUIBB

Trading Agreement and Order 8220

August, 2002

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**PART 2. DESCRIPTION OF DERC CREATION AND USE**

**By Trading Agreement and Order**

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order 8220 to Use DERCS
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in Economic Incentive Program (EIP) guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from NOx control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program is to approve creation of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of nitrogen oxides (NOx). Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving these emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of

Bristol-Meyers Squibb

the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for timelier rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

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The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCs may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of these DERCs will not jeopardize RFP since the state's NOx rule emission limits for the source creating the DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions are at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### C. BASELINE

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state

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and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources, the baseline will be the lower of actual or allowable emissions.

#### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to

adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the trading agreement and order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

Bristol-Meyers Squibb

**PART 2. DESCRIPTION OF DERC USE**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx: Regulations of Connecticut State Agencies (Regulations) Section 22a-174-22.

**C. Source:**

Bristol-Meyers Squibb  
5 Research Parkway  
Wallingford, Connecticut 06604  
Registration Numbers 189-197-64  
189-197-73

**D. Designated Representative:**

Mr. Carl C. Noonan, CIH, CSP      Tel: (203) 677-6342      Fax: (203) 677-6252  
Associate Director-Environmental, Health and Safety

**E. CT Non-attainment Area Classification: Serious**

**F. Summary of Compliance:**

**Time Period:** On and after June 16, 1998 - prior to May 1, 2003.

**Purpose:** NOx emission compliance for two Peaking Units

**Annual DERCs needed:** Estimated 7 tons.

**Max. Emission Rates:**

Table 1  
BMS - NOx EMISSION RATES AND RACT LIMITS

Peaking Unit	FUEL	Stack Test (ppmv)	Emission Rates (lb/MMBtu)			
			Stack Test	FLER	RACT	Test Date
940 KVA Waukesha Diesel Generator #1	other oil	1640.7	3.27	3.60	2.56	Nov 10, 1999
940 KVA Waukesha Diesel Generator #2	other oil	1499.0	2.84	3.12	2.56	Nov 10, 1999

Bristol-Meyers Squibb

## G. DESCRIPTION OF COMPLIANCE

Bristol-Meyers Squibb (BMS) is a Pharmaceutical Research and Development Company with its principal place of business at 345 Park Ave., New York, NY. BMS operates two (2) Diesel Generators ("peaking units") identified in Table 1. Pursuant to Section 22a-174-22 of the Regulations, the peaking units are required to meet the NO<sub>x</sub> RACT limit of 75 ppmvd. In order to achieve compliance, BMS proposes to acquire emission reduction credits for the amount of NO<sub>x</sub> emissions that exceed the standard between June 16, 1998 and May 1, 2003 or until it achieves compliance through NO<sub>x</sub> controls or other approved means. Pursuant to Section 22a-174-22(j) of the Regulations, BMS proposes to acquire sufficient quantities of approved DERCs in advance of each month to offset excess NO<sub>x</sub> emissions on a monthly basis from the peaking unit in accordance with the protocol of the Department's "*Credit Trading for Sources with Irregular NO<sub>x</sub> Emissions*", dated February 27, 2001. Each month, the quantity of DERCs required to offset the excess emissions generated during that month by the peaking units above the RACT limit will be determined. DERCs previously purchased and/or acquired and on-hand will be used to offset any remaining balance of excess emissions (debits) for that month. Design margins will be applied to the RACT emission rate for the peaking unit to ensure an environmental benefit.

BMS has initially acquired approved DERCs from The United Illuminating Company to offset excess NO<sub>x</sub> emissions. The DERCs will be used thereafter in accordance with the requirements in this SIP and attached Trading Agreement and Order No. 8220. Additional DERCs will be purchased or acquired as needed prior to use based on anticipated future fuel use through May 1, 2003. The actual emission rate, as determined by approved stack test, and RACT rate for the peaking unit are shown in Table 1.

The NO<sub>x</sub> emission test rate was determined during the official testing program (DEP approved stack testing) conducted on November 10, 1999. The FLER, as shown in Table 1, is used to calculate actual emissions for the peaking unit and is an enforceable limit. Prior to May 1, 2003, BMS shall comply during operation of the peaking units with the FLER, the 5 percent design margin, and the NO<sub>x</sub> emission limit shown in Table 1.

Beginning the month after execution of Trading Agreement and Order No. 8220, and no later than the tenth day of each month, BMS will calculate actual DERCs used in the preceding calendar month, in accordance with Trading Agreement and Order No. 8220. BMS shall calculate the actual DERCs required for the calendar month for the peaking unit and fuel used by the peaking unit operating in excess of the RACT limit, based on the following calculations (described also in Exhibit 1 of Trading Agreement and Order No. 8220):

Bristol-Meyers Squibb

**At all times (mass calculation):**

$$\text{DERCs (in tons)} = \frac{[\text{FLER} - 0.95 \times \text{RACT}] \times (\text{actual fuel use in MMBtu})}{2000 \text{ pounds/ton}}$$

**During the ozone season only (peak day calculation):**

The maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthful," "unhealthful," or "very unhealthful," divided by 3 and then divided by 13 (with the result in tons):

$$\text{DERCs (in tons)} = \frac{[\text{FLER} - 0.95 \times \text{RACT}] \times (\text{actual fuel use in MMBtu/day})}{3 \times [13 \text{ lbs/day/ton}]}$$

Where:

FLER = full load emission rate in lbs/MMBtu presented in Table 1;

RACT rate = RACT rate in lbs/MMBtu presented in Table 1;

Discount = 5% design margin applied to the RACT rate.

As described in Exhibit 1 of Trading Agreement and Order No. 8220, to the extent that DERCs used to offset on a peak day basis during the ozone season exceed the total mass excess emissions, remaining DERCs may be used in the non-ozone season in the same or subsequent years until May 1, 2003. However, non-ozone season DERCs may only be used during the non-ozone season until May 1, 2003.

## **H. SOURCE OF DERCs**

On April 24, 2000 BMS acquired 25 approved DERCs from The United Illuminating Company to offset excess NOx emissions. BMS may acquire additional approved DERCs at any time prior to the need to use such DERCs. BMS will at all times maintain a balance of approved DERCs sufficient to allow operation for the current month. If, upon audit or inspection, BMS fails to demonstrate possession of an adequate amount of DERCs to cover the current month, it will be subject to violation as prescribed in Sections 22a-174-12 and 22a-174-22 of the Regulations.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of

The State of Connecticut

and

Bristol-Meyers Squibb Company

Trading Agreement

and Order No. 8220

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Bristol-Meyers Squibb Company ("BMS") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of discrete emission reduction credit ("DERC") trading to reduce nitrogen oxide ("NOx") emissions will achieve this result in a timely and cost-effective manner:

- A. At the request and with the agreement of BMS, the Commissioner finds the following:
1. BMS is a Pharmaceutical Research and Development Company with its principal place of business at 345 Park Ave., New York, NY. BMS operates two (2) Diesel Generators identified in Table 1 of this Trading Agreement and Order ("peaking units") at 5 Research Parkway, Wallingford CT ("facility").
  2. On June 16, 1998 the peaking units were operated for non-emergency use ("peak shaving"). The NOx emissions were 358.4 pounds. Pursuant to Section 22a-174-22(b) of the Regulations of Connecticut State Agencies ("Regulations"), the generators are subject to Section 22a-174-22(d) through (k) of the Regulations, pertaining to the control of NOx emissions.
  3. Official U.S. Environmental Protection Agency ("EPA") Reference Method 7E stack testing performed on the dates indicated in Table 1, resulted in NOx emission rates set forth in Table 1.
  4. The emission rates for the peaking units and fuel specified in Table 1 are in excess of the limits set forth in Section 22a-174-22(e), Table 22-1, of the Regulations Reasonably Available Control Technology ("RACT") emission rate limits.
  5. In accordance with Section 22a-174-22(j) of the Regulations, BMS proposes that for the peaking units identified in Table 1, BMS shall use-DERC trading to comply with the applicable emission limitation contained in Section 22a-174-22(e) of the Regulations.
  6. Approved DERCS are defined for the purpose of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations.

Initials

*BBB*

(Printed on Recycled Paper)

79 Elm Street • Hartford, CT 06106 - 5127

Date 9/12/98

Peaking Unit	FUEL	Stack Test (ppmv)	Emission Rates (lb/MMBtu)			
			Stack Test	FLER	RACT	Test Date
940 KVA Waukesha Diesel Generator #1	other oil	1640.7	3.27	3.60	2.56	Nov 10, 1999
940 KVA Waukesha Diesel Generator #2	other oil	1499.0	2.84	3.12	2.56	Nov 10, 1999

7. BMS proposes to use Full Load Emission Rates ("FLERs") identified in Table 1 for the purposes of calculating the DERCs required.
  8. Pursuant to the Department of Environmental Protection's "Credit Trading for Sources with Irregular NOx Emissions" policy, with a revised date of February 27, 2001 attached hereto and incorporated by reference into this Trading Agreement and Order as Exhibit 1, these peaking units have peak daily NOx emissions greater than three times the average daily emissions during the ozone season and are therefore considered sources with irregular NOx emissions.
  9. On April 24, 2000, pursuant to Section 22a-174-22(j) of the Regulations, BMS acquired from United Illuminating twenty-five (25) tons of approved ozone DERCs in order to meet the requirements of RACT and the requirements of this Trading Agreement and Order. BMS intends to acquire approved DERCs as needed.
  10. By Agreeing to the issuance of this Trading Agreement and Order BMS makes no admission of fact or law with respect to the matters addressed herein.
- B. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, and pursuant to Section 22a-174-22 (j) of the Regulations hereby allows BMS to comply with Section 22a-174-22 of the Regulations through use of DERC trading referenced in Section A, herein, to achieve the nitrogen oxide emission reduction required by Section 22a-174-22(d)(1) of the Regulations.
- C. With the agreement of BMS, the Commissioner, acting under Connecticut General Statutes Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177, orders BMS as follows:

1. On and after May 1, 1998 BMS shall comply with the FLER's shown in Table 1 above during operation of each peaking unit.
2. Upon issuance of this Trading Agreement and Order, BMS shall have in its possession sufficient approved DERCs to meet applicable RACT requirements and the requirements of this Trading Agreement and Order.
3. On and after May 1, 1998 BMS shall, on a daily basis, document and record the amounts of all fuel used by each peaking unit each day and the number of DERCs used for the ozone season (from May 1 through September 30 of each year) and non-ozone season (the remainder of the year).
4. Pursuant to Section 22a-174-22(j) of the Regulations, BMS shall acquire sufficient approved ozone season and non-ozone season DERCs in order to meet applicable RACT requirements and the requirements of this Trading Agreement and Order for the following month's operation. In accordance with Exhibit 1 of this Trading Agreement and Order, ozone season DERCs for use during the ozone season shall be purchased by BMS prior to the beginning of the ozone season. Approved DERCs shall be acquired until the peaking units achieve permanent compliance with the emissions standards in Section 22a-174-22(e) of the Regulations or until May 1, 2003, whichever occurs first.
5. On and after May 1, 1998 BMS shall maintain and provide the records required by paragraph C.3. of this Trading Agreement and Order in accordance with the following and Section 22a-174-4 of the Regulations, and shall:

- a. Have in its possession sufficient approved DERCs for the current day, based on the following calculations (described also in Exhibit 1);

At all times (mass calculation):

$$\text{DERCs (in tons)} = [((\text{FLER in lbs/MMBtu}) - (0.95 \times \text{NOx RACT in lbs/MMBtu})) \times (\text{actual fuel use in lbs/MMBtu})] / 2000 \text{ pounds/ton}$$

During the ozone season only (peak day calculation):

the maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthful," "unhealthful," or "very unhealthful," divided by 3 and then divided by 13 (with the result in tons):

$$\text{DERCs (in tons)} = [(\text{Maximum excess NOx in lbs}) / 3] / [13 \text{ lbs/day/ton}];$$

As described in Exhibit 1 of this Trading Agreement and Order, to the extent that DERCs used to offset on a peak-day basis during the ozone season exceed the total mass excess emissions, remaining DERCs may be used in the non-ozone season in the same or subsequent years until May 1, 2003;

- b. Adjust upwards by 100% the DERCs required if DERCs are not in BMS's possession prior to use. However, nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any action to require additional upward adjustment based on the gravity of the alleged noncompliance or violation of law;
  - c. Document and record daily fuel use, excess NOx emissions and, during the ozone season, the ozone classification as forecasted by the Commissioner on the previous day;
  - d. No later than March 1, 2002, 2003 and 2004, include with its annual emissions report to the Commissioner, DERCs used, calculated as described in section C.5.a. and C.5.b. of this Trading Agreement and Order, by ozone and non-ozone seasons, for the previous calendar year;
  - e. Retain the records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records are created;
  - f. Maintain documentation to attest to the fact that DERCs used during the ozone season were generated during the ozone season. The ozone season is from May 1 through September 30 in any calendar year. Generator certification of this fact shall be sufficient; and
  - g. Provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
6. For the period between June 16, 1998 and April 24, 2000, BMS shall retire 15 DERCs (two times the actual amount of excess NOx emissions during this time period) no later than ten (10) days after the issuance of this order.
  7. No later than May 1, 2003, BMS shall comply with the requirements of Section 22a-174-22(d)(1) of the Regulations. However, after full program review of this and other Trading Agreements and Orders and, if determined to be appropriate, the Commissioner may grant a written extension of this Trading Agreement and Order.
  8. The FLER's may be adjusted upon satisfactory demonstration to the Department and written approval by the Commissioner.

9. Non-compliance with the established FLER shall subject BMS to make restitution by matching the quantity of emissions ("true up") caused by the exceedance plus a 100% premium. The true up in tons of DERCS shall be equal to the FLER exceedance in lbs/MMBtu, multiplied by the total heat input during the period of noncompliance divided by 2000 lbs/ton. If the period of non-compliance is not known, the time period from completion of the last/previous Department witnessed stack test through the date the FLER compliance is achieved as approved by the Commissioner shall be used. However, nothing in this trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to require additional upward adjustment, based on the gravity of any alleged noncompliance or violation of law.
10. Pursuant to Section 22a-174-22(k) of the Regulations, BMS shall conduct NOx emission testing of the peaking units at least once every five years commencing from the date identified in Table 1 of this Trading Agreement and Order.
11. Approvals. BMS shall use best efforts to submit to the Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form. If the Commissioner notifies BMS that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and BMS shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.
12. Definitions. As used in this order, "Commissioner" means the Commissioner of Environmental Protection or an agent of the Commissioner. "Other oil" means a fuel that is liquid at standard conditions and is not residual oil. "Ozone season" means the period from May 1 through September 30 in any given calendar year. "Issuance" means the date this Trading Agreement and Order is deposited in the U.S. Mail or the date it is personally delivered, whichever is earlier.
13. Dates. The date of submission to the Commissioner of any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in

this Trading Agreement and Order, the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.

14. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by the responsible corporate officer of BMS or a duly authorized representative of such officer, as those terms are defined in Section 22a-430-3(b)(2) of the Regulations, and by the individual or individuals responsible for actually preparing such document, each of whom shall examine and be familiar with the information submitted in the document and all attachments thereto, and shall make inquiry of those individuals responsible for obtaining the information to determine that the information is true, accurate, and complete, and each of whom shall certify in writing as follows:  
  
"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes or, in accordance with Section 22a-6 of the Connecticut General Statutes, under Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."
15. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject BMS to an injunction and penalties.
16. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes or, in accordance with Section 22a-6, under Section 53a-157b of the Connecticut General Statutes.
17. Notice of transfer; liability of BMS and others. Until BMS has fully complied with this Trading Agreement and Order, BMS shall notify the Commissioner in writing no later than fifteen (15) days after transferring all or any portion of the facility, the operations, the site or the business which are the subject of this Trading Agreement and Order, or obtaining a new mailing or location address. Any license transfer shall be conducted in accordance with Section 22a-60 of the Connecticut General Statutes.

BMS's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.

18. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law which are willful or criminally negligent or for which penalties have not been specifically provided in this Trading Agreement and Order, including but not limited to violations of any permit issued by the Commissioner. If at any time the Commissioner determines that the actions taken by BMS pursuant to this Trading Agreement and Order have not fully achieved compliance with Section 22a-174-22 of the Regulations, the Commissioner may institute any proceeding against BMS and/or require BMS to undertake further investigation or further action.
19. BMS's obligations under law. Nothing in this Trading Agreement and Order shall relieve BMS of other obligations under applicable federal, state and local law.
20. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by BMS pursuant to this Trading Agreement and Order will result in compliance or prevent or abate pollution.
21. Access to records and facility. Any representative of the Department of Environmental Protection may enter and inspect the facility and inspect and copy records within normal business hours without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
22. No effect on rights of other persons. This Trading Agreement and Order shall neither create nor affect any rights of persons who or municipalities which are not parties to this Trading Agreement and Order.
23. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these DERCS.
24. Notice to Commissioner of changes. Within fifteen (15) days of the date BMS becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, BMS shall submit the correct or omitted information to the Commissioner.
25. Notification of noncompliance. In the event that BMS becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of

this Trading Agreement and Order or of any document required hereunder, BMS shall by telephone immediately notify the Bureau of Air Management and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. BMS shall also notify the Commissioner in writing within ten days of becoming aware of the noncompliance or potential noncompliance stating the date, time, and duration of the noncompliance, the reasons for the noncompliance or delay and all activities which BMS and its agents, employees and representatives took to avoid or repair the results of the noncompliance and prevent the noncompliance, and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved. BMS shall comply with any dates, which may be approved in writing by the Commissioner. Notification by BMS shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing

26. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in writing by the Commissioner, be directed to:

Mr. Michael LaFleur  
Department of Environmental Protection  
Bureau of Air Management  
Compliance and Field Operations Division  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106

Bristol-Meyers Squibb Company

Trading Agreement and Order 8220

BMS consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind BMS to the terms and conditions of the Trading Agreement and Order.

Bristol-Meyers Squibb Company

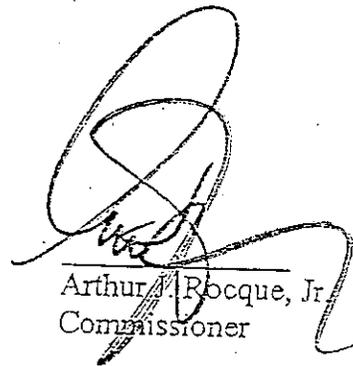
Signature: *B. Blessinger*

Type Name: Bernard E. Blessinger

Type Title: Sr. Director Facilities

Date: 9/17/01

Issued as a final consent order of the Commissioner of Environmental Protection on September 23, 2001.

  
Arthur J. Rocque, Jr.  
Commissioner

TOWN OF WALLINGFORD  
LAND RECORDS

MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document

[Note: This sheet is not a part of the order and is only attached to the original order which is retained in separate DEP files which are accessible to the public with close supervision. The order must be mailed to the User by certified mail, return receipt requested. If the User is a business, send a certified copy to the attention of a person at the business.]

### Certification of Mailing

On 9/26/01, 2001, at 2 A.M./P.M., I mailed a certified copy of Trading Agreement and Order No. 8220 to the following, by placing it in the [U.S. mail/interdepartmental mail]:

On \_\_\_\_\_, 2001, at \_\_\_\_ A.M./P.M., I mailed a plain copy of Trading Agreement and Order No. 8220 to the following, by placing it in the [U.S. mail/interdepartmental mail]:

Signature: Michael E. Lafleur

Name: MICHAEL LAFLUR

Title: Air Pollution Control Engineer

Date: 9/27/01

Completed 7/17/02

REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22 (NO<sub>x</sub> RULE)  
THROUGH USE OF DISCRETE EMISSION REDUCTION CREDITS (DERCs)

**Combustion Engineering Incorporated**

For  
Trading Agreement and Order No. 8154

July, 2002

**Combustion Engineering SIP Narrative  
Trading Agreement and Order No. 8154 Mod. 3**

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**PART 2. DESCRIPTION OF DERC CREATION AND USE  
By Trading Agreement and Order**

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency's (EPA) State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in EIP guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from nitrogen oxides (NOx) control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program includes approval of creation and use of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of NOx. Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for more timely rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NO<sub>x</sub> rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of DERCs will not jeopardize RFP since the state's NOx rule emission limits for the sources creating and/or using DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources the baseline will be the lower of actual or allowable emissions.

### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in

required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the SIP for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the Trading Agreement and Order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION AND/OR USE  
By Trading Agreement and Order**

**A. Administering Agency:**  
The State of Connecticut  
Department of Environmental Protection  
Bureau of Air Management

**Pollutant and Regulatory Standard Affected :**

NOx Regulations of Connecticut State Agencies (Regulations) Section 22a-174-22

**C. Source :**  
Combustion Engineering, Inc. (CE)  
2000 Day Hill Road  
Windsor, CT 06095  
Permit or Registration Number: R212-09, R212-10, P212-08

**D. Designated Representative:**

Mr. Keith Knauerhase,  
Title: Environmental Services Leader

Tel: (860) 285-9694  
Fax: (860) 285-5392

**E. Nonattainment Area Classification:** Serious

**F. Summary of Compliance:**

**Time Period:** On and after May 31, 1995 - prior to May 1, 2003.

**Purpose:** NOx emission reduction compliance for the units in Table 2:

**Annual DERCS needed:** Estimated 6 tons.

**Max. Emission Rate:** Full load emission rates (FLERs) (see Table 2 below):

Table 2 (Revised 8/31/00) CE - FLERs and NOx Emission Rates			
UNIT	FUEL	FLER (lb/MMBtu)	NOx EMISSION RATE LIMITS (lb/MMBtu)
Boiler No. 3	No. 6 oil	0.39	0.25
Boiler No. 4	No. 6 oil	0.47	0.25
Boiler No. 5	No. 6 oil	0.37	0.25

**DESCRIPTION OF COMPLIANCE**

The following is a summary of Combustion Engineering's compliance issues and a description of how Combustion Engineering (CE) will comply with Section 22a-174-22 of the RCSA through Modification No. 3 (Modification No. 2 was cancelled unissued) to the original Trading Agreement and Order No. 8154 issued on December 11, 1997 (See attachment).

CE is a Connecticut facility that is involved in the design, manufacturing and testing of steam boilers and other energy producing equipment. At the facility, CE operates boiler Nos. 3, 4, and 5, which burn natural gas and #6 oil, and are subject to Section 22a-174-22 of the Regulations of Connecticut State Agencies. The subject boilers provide steam for heating and various process applications.

G.1 Summary of Trading Requirements

This modification reduces the full load emissions rates (FLERs) used to calculate the the quantity of discrete emission reduction (DERCs) used when burning #6 oil in boiler Nos. 3, 4, and 5. DEP witnessed stack testing performed on, 4/22/97, 4/18/97 and 3/4/98 determined that the original FLERs were considerably higher than necessary and CE requested that they be reduced to a more reasonable and cost effective level. The new stack test results are shown in Table 1 below:

Table 1 CE - NOx EMISSION RATES AND RACT LIMITS (lbs/MMBtu) (Revised 8/31/00)					
UNIT	REG. Or PERMIT No.	FUEL	HEAT INPUT (MMBtu)	STACK TEST RATE	RACT RATE
Boiler No. 3	R212-09	No. 6 oil	14.3	0.338	0.25
		No. 2 oil	14.3	0.18	0.20
		Nat. Gas	13.8	0.11	0.20
Boiler No. 4	R212-10	No. 6 oil	30.8	0.403	0.25
		No. 2 oil	30.8	0.17	0.20
		Nat. Gas	30.0	0.10	0.20
Boiler No. 5	P212-08	No. 6 oil	30.8	0.317	0.25
		No. 2 oil	30.8	0.098	0.20
		Nat. Gas	30.0	0.101	0.20

The revised lower FLERs contained in Trading Agreement and Order No. 8154 modification No. 3 are shown in Table 2 below:

Table 2 (Revised 8/31/00) CE - FLERs and NOx Emission Rates					
UNIT	FUEL	Original FLER (lb/MMBtu)	Stack Test Rate	Revised FLER (lb/MMBtu)	NOx EMISSION RATE LIMITS (lb/MMBtu)
Boiler No. 3	No. 6 oil	0.504	0.338	0.39	0.25
Boiler No. 4	No. 6 oil	0.504	0.403	0.47	0.25
Boiler No. 5	No. 6 oil	0.504	0.317	0.37	0.25

## G.2 Special Requirements

If CE exceeds any of the FLERs specified in Table 2 of the Trading Agreement and Order, within sixty (60) days of CE having knowledge of the FLER exceedance, CE shall purchase and retire DERCS to offset excess emissions from the FLER exceedance. Such DERCS shall be equal to the exceedance in pounds per hour per boiler multiplied by the total operating hours of each boiler exceeding the FLER and summed together to determine the total insufficiency plus a 100% premium..

If the period of non-compliance with the FLER is not known, the time period since the last previous stack test shall be used to calculate the period of non-compliance unless evidence demonstrating, to the Commissioner's satisfaction, that a different time period should be used is submitted by CE to the Commissioner, in writing, within thirty 30 days of CE having knowledge of the FLER exceedance, and the Commissioner in his sole discretion accepts such time period.

All other terms and conditions of Trading Agreement and Order No. 8154 issued by the Commissioner acting under Sections 22a-6, 22a-171, 22a-174, 22a-176 and 22a-177 of the Connecticut General Statutes shall remain in effect.

## H. SOURCE OF DERCS

CE has procured a total of 46 tons of approved ozone season DERCS (40 ozone and 6 non-ozone) from Clean Air Action on or about the following dates: 12 tons 10/3/97, 5 tons 11/24/97, 6 tons 3/30/00, 2 tons 6/30/00, 6 tons 10/26/00, 9 tons 5/3/01 of ozone and 6 tons 5/11/01 non-ozone. CE may acquire additional approved DERCS at any time prior to the need to use such DERCS. CE will at all times maintain a balance of approved DERCS sufficient to allow operation for the current month. If, upon audit or inspection, CE fails to demonstrate possession of an adequate amount of DERCS to cover the current month, it will be subject to violation as prescribed in Sections 22a-174-12 and 22a-174-22 of the Regulations.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



STATE OF CONNECTICUT  
and  
COMBUSTION ENGINEERING, INC.

TRADING AGREEMENT and  
ORDER NO. 8154  
MODIFICATION No. 3

TRADING AGREEMENT AND ORDER MODIFICATION

In the matter of a Trading Agreement and Order between the Commissioner of Environmental Protection ("Commissioner") and Combustion Engineering, Inc. ("CE").

WHEREAS, the Commissioner and CE, having agreed to the terms and conditions set forth in Trading Agreement and Order No. 8154 issued on December 11, 1997, and a Modification thereto issued on June 3, 1998, do now, by mutual agreement, modify Trading Agreement and Order No. 8154;

WHEREAS, paragraph C.6. of the terms and conditions set forth in Trading Agreement and Order No. 8154 issued on December 11, 1997, state that "FLERs, stack test rates and fuels in Tables 1 and 2 may be modified only after the consent of the Commissioner by written modification of this Trading Agreement and Order";

WHEREAS, CE has completed Department of Environmental Protection ("DEP") approved stack testing when firing #6 fuel oil for boilers Nos. 3, 4, and 5 on 3/4/98, 4/22/97 and 4/18/97 and the results have been approved by the DEP; and,

WHEREAS, the Commissioner and CE, having agreed to the terms and conditions set forth in Trading Agreement and Order No. 8154 do now, by mutual agreement, modify this order as follows:

- 1) Delete paragraph A.3. and substitute the following therefor:

Official U.S. Environmental Protection Agency ("EPA") Reference Method 7E stack testing performed on 3/4/98, 4/22/97 and 4/18/97 for boilers Nos. 3, 4, and 5 respectively, resulted in NOx emission rates as follows:

Table 1  
CE - NOx EMISSION RATES AND RACT LIMITS (lbs/MMBtu) (Revised 4/15/00)

UNIT	REG. Or PERMIT No.	FUEL	HEAT INPUT (MMBtu)	STACK TEST RATE	RACT RATE
Boiler No. 3	R212-09	No. 6 oil	14.3	0.338	0.25
		No. 2 oil	14.3	0.18	0.20
		Nat. Gas	13.8	0.11	0.20
Boiler No. 4	R212-10	No. 6 oil	30.8	0.403	0.25
		No. 2 oil	30.8	0.17	0.20
		Nat. Gas	30.0	0.10	0.20
Boiler No. 5	P212-08	No. 6 oil	30.8	0.317	0.25
		No. 2 oil	30.8	0.098	0.20
		Nat. Gas	30.0	0.101	0.20

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Initials: RKK

Date: 3/26/98

2) Delete Table 2 of paragraph C.2 and substitute the following therefor:

Table 2 CE - FLERs and NOx Emission Rates (Revised 8/31/00)			
UNIT	FUEL	FLER (lb/MMBtu)	NOx EMISSION RATE LIMITS (lb/MMBtu)
Boiler No. 3	No. 6 oil	0.39	0.25
Boiler No. 4	No. 6 oil	0.47	0.25
Boiler No. 5	No. 6 oil	0.37	0.25

3) Delete paragraph C.6 and substitute the following therefor:

- a. If CE exceeds any of the FLERs specified in Table 2 of this Trading Agreement and Order, within sixty (60) days of CE having knowledge of the FLER exceedance, CE shall purchase and retire ERCs to Offset excess emissions from the FLER exceedance. Such ERCs shall be equal to the exceedance in pounds per hour per boiler multiplied by the total operating hours of each boiler exceeding the FLER and summed together to determine the total insufficiency plus a 100% premium.
- b. If the period of non-compliance with the FLER is not known, the time period since the last previous stack test shall be used to calculate the period of non-compliance unless evidence demonstrating, to the Commissioner's satisfaction, that a different time period should be used is submitted by CE to the Commissioner, in writing, within thirty 30 days of CE having knowledge of the FLER exceedance, and the Commissioner in his sole discretion accepts such time period.

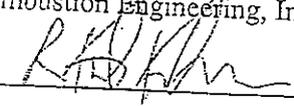
All other terms and conditions of Trading Agreement and Order No. 8154 issued by the Commissioner acting under Sections 22a-6, 22a-171, 22a-174, 22a-176 and 22a-177 of the Connecticut General Statutes shall remain in effect.

Combustion Engineering, Inc.

Trading Agreement and Order  
No. 8154 Mod. No. 3

Combustion Engineering, Inc. hereby consents to the entry of this modification to the Trading Agreement and Order without further notice.

Combustion Engineering, Inc.

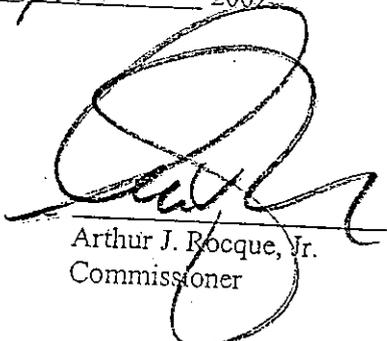
Signature: 

Type Name: R. Keith Knauerhase

Type Title: Manager, Environmental Engineering

Date: March 28, 2002

Entered as a modification of an Order of the Commissioner of Environmental Protection  
numbered 8154 this 21<sup>st</sup> day of April 2002

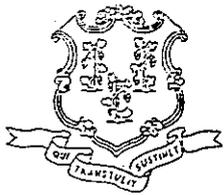
  
Arthur J. Rocque, Jr.  
Commissioner

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STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Mr. Keith Knaverhausr, Manager of Environmental Operations  
Combustion Engineering, Inc..  
P.O. Box 500  
2000 Day Hill Road  
Windsor, CT 06095

Re: Trading Agreement and Order No. 8154, Modification No. 3

Dear Mr.Knaverhausr:

Enclosed you will find Trading Agreement and Order No. 8154, Modification No. 3 for review and signature. This letter follows the request by Combustion Engineering, Inc. to decrease the full load emission rates (FLERs) for boilers 3, 4, and 5 when burning No. 6 fuel oil.

Please sign Trading Agreement and Order No. 8154, Modification No. 3 within fourteen (14) calendar days of your receipt of the Consent Order. Once the signed Trading Agreement and Order Modification is received by the Department, it will be presented to the Commissioner for signature. If signed by the Commissioner, Trading Agreement and Order No. 8154, Modification No. 3 will become a Final Order of the Commissioner and a certified copy of the Trading Agreement and Order Modification will be returned to you via registered mail.

If you have any questions regarding this letter, please do not hesitate to contact Roland L. Severance Jr., PE at (860) 424-3702.

Sincerely,

11/6/01  
Date

  
Carmine DiBattista, Chief  
Bureau of Air Management

Enc(1)  
Certified Document No.

**PROPOSED REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22  
THROUGH USE OF  
DISCRETE EMISSION REDUCTION CREDITS (DERC's)**

**MIDDLETOWN POWER LLC  
Trading Agreement and Order No. 8213**

**August, 2002**

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**By Trading Agreement and Order**

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in Economic Incentive Program (EIP) guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from NOx control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERCS creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program is to approve creation of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of nitrogen oxides (NOx). Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERCS creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving these emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions

to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for timelier rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of inter-temporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone

season. Only the DERCS produced during ozone-season months of May through September are available for use during the ozone season.

DERCS are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCS are utilized by sources. Upon approval by the Commissioner, however, such DERCS may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCS may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCS used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of these DERCS will not jeopardize RFP since the state's NOx rule emission limits for the source creating the DERCS are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCS exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCS improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCS upon their creation to assure a benefit to the environment and the inventorying of DERCS prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For

individual sources, the baseline will be the lower of actual or allowable emissions.

#### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCS created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCS are used only once, and to represent the DERCS and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCS will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERCS use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCS to determine if additional restrictions are needed to assure that the use of DERCS does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCS agrees to have sufficient approved DERCS in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCS that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCS created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the trading agreement and order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the overall performance of the program is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION & USE**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source and Identifier:**

Middletown Power LLC  
1866 River Road  
Middletown, Connecticut  
Unit 2, a 120 megawatt front-fired boiler  
Connecticut Registration Number 104-0098

**D. Designated Representative:**

Ms. Cynthia Karlic  
Regional Manager  
Telephone No. (860) 638-3170

**E. CT Nonattainment Area Classification: Serious**

**F. Summary of Compliance:**

**Time Period:** December 15, 1999- May 1, 2003

**Method:** Modifications to burners, combustion controls and operating conditions and installation of natural gas operating capabilities

**Max. Daily Emission Rate**  
pursuant to Section 22a-174-22

**Baseline:** 0.25 lb/MMBtu of heat input (24 hour average consuming No. 6 oil)  
0.17 lb/MMBtu of heat input (24 hour average consuming No. 2 oil)  
0.20 lb/MMBtu of heat input (24 hour average consuming natural gas)

**Monitoring:** Continuous Emission Monitoring (CEM), certified NOx mass rate

**Discrete tons:** 8 tons ozone season and 59 tons non-ozone between December 16, 1999 and June 30, 2000

**Rate of Creation:** determined by CEMs

**Discounts: Creation:** 10 percent to benefit the environment.

**G. Description of Compliance:**

Creator: Middletown Power LLC  
 Registration Numbers R104-0098

Middletown Power LLC ("MP") is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 MP purchased from The Connecticut Light and Power Company ("CL&P") four fossil fuel-fired electric generating stations. One of the four fossil fuel-fired electric generating stations is Middletown Station, at 1866 River Road in Middletown, Connecticut ("facility"). At the facility, NRG Middletown Operations Inc. operates Unit 2, Connecticut Registration Number 104-0098, a 120 megawatt front-fired boiler ("boiler") on No. 6 fuel oil, other oil, and natural gas. The boiler is registered and subject to the requirements of Section 22a-174-22 (Reasonably Available Control of nitrogen oxide emissions) and 22a-174-22a and 22b (NOx Budget Program). The boilers required modifications to the burners, combustion controls, and natural gas capability to meet the standard. CL&P modified the boilers prior to the May 31, 1995 effective date of the NOx RACT rule. Trading Agreement and Order 8160 was issued to CL&P as a mechanism for meeting the NOx RACT requirements. Trading Agreement and Order 8213 has been issued to MP because CL&P no longer owns the facility. The boiler has a dedicated CEM system, certified to 40 Code of Federal Regulations Part 75. The NOx CEM probes are located in the stack outlet of the boiler. The daily NOx emission rates will be monitored, calculated, and recorded using CEM 24-hour averages. A monthly summation of all NOx over-control may be submitted to DEP for the purpose of obtaining certified NOx DERCs. MP shall use 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil, 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil, and .20 lbs/MMBtu when operating on natural gas as the baseline emission rates for the boilers, or the proportioned baseline emission rate.

**H. Source of DERCs**

**Equation for the calculation of DERCs**

For the boilers with daily NOx emissions below the applicable baseline emission rate, MP shall calculate the amount of DERCs *generated* as follows:

$$\text{DERCs (tons)} = [\text{Total heat input}^1 \text{ of all fuels in MMBTU} \times (\text{proportioned RACT emission rate}^2 - \text{the CEM recorded NOx emission rate}^3) \div 2000 \text{ lbs/ton}] \times (0.90)^4$$

For the boilers with daily NOx emissions above the applicable baseline emission rate, MP shall calculate the amount of DERCs *used* as follows:

$$\text{DERCs (tons)} = [\text{Total heat input of all fuels in MMBTU} \times (\text{the CEM recorded NOx emission rate} - ((.95) \times \text{proportioned RACT emission rate}))] \div 2000 \text{ pounds.}$$

where:

<sup>1</sup> Heat input shall be calculated using the lower of CEM recorded data or actual fuel usage data in MMBTU per unit of fuel combusted.

<sup>2</sup>calculated pursuant to Section 22a-174-22 (f)(2)(A) of the Regulations.

<sup>3</sup> This rate shall be calculated pursuant to the methodology described in 40 Code of Federal Regulations Part 75. A ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boiler is operating on No. 2 fuel oil.

<sup>4</sup> Ten (10) percent of all DERCs (tons) created shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

#### Estimated emission reduction credits generated.

Sample calculation for June 16, 2001

$$\begin{aligned} \text{DERCs (tons)} &= [20632 \text{ MMBTU} \times (0.25 \text{ lb/MMBTU} - 0.212 \text{ lb/MMBTU}) \div 2000 \text{ lbs/ton}] \\ &= 0.39 \text{ tons of DERCs.} \end{aligned}$$

Less 10% for environmental benefit,  $.39 \times .90 = .35$  tons created

Attachment 1 of Trading Agreement and Order No. 8213 shows a summary of the proposed annual emission reductions and contains supporting data. Attachment 1 also includes spreadsheets of the monthly calculations and tables that will show the full set of 24-hour NOx emission data and operating hours used in these calculations.

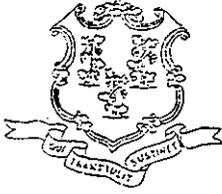
An accounting of all tons of NOx DERCs created by MP will be provided to the Commissioner on March 1 of every year until all tons are used. (If an approved DERC registry is available, this requirement may be waived by the Commissioner upon request.) This reporting will be included as part of the annual Emission Statement. This report will include all DERCs created by MP and

used by others, and will provide the state with information to be used in auditing the program as described in Part 1. MP may submit reports on a quarterly or semi-annual basis to document the creation of NOx DERCs. DERCs generated in the ozone season will be distinguished from DERCs generated in the non-ozone season. MP will include a summary of all NOx DERCs generated and/or used for the preceding year with the Facility's Annual Emission Statement, including approved DERCs generated and/or purchased from other facilities. Should MP choose not to generate DERCs, MP is expected to notify the Department in order to assist in DERC program planning. Calculations and reports will be in a form similar to that shown in Attachment 1. Following review and written prior approval by the Department, these DERCs will be available for use by approved sources for purposes of compliance with Section 22a-174-22 of the Regulations. Approval in this manner may continue until there are regulatory changes to the NOx rule that affect NOx limitations at the source or until May 1, 2003, whichever comes first.

#### **Restrictions on use**

MP proposes to reconcile DERCs generated on a monthly basis. Several restrictions are placed upon the use of DERCs:

- These DERCs may not be used prior to approval by the DEP.
- On average, these DERCs may not be used at a rate greater than that at which they were created.
- DERCs generated during non-ozone season months may not be used during the ozone season.
- Ozone Season Restrictions. The boiler is subject to Section 22a-174-22a of the Regulations (NOx Budget Program) in 1999 and every year thereafter. The boiler may generate ozone season BDERCs to comply with Section 22a-174-22 of the Regulations. :  
1) BDERCs shall only be generated by the boiler from May 1 through September 30 of a given year, 2) BDERCs shall only be used by other NOx Budget Program sources located in Connecticut, 3) BDERCs shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BDERCs generated during a given year shall only be used during the following ozone season, with the exception of BDERCs generated during 1999, which may be used in the 2001 ozone season. BDERCs may be generated until May 1, 2003. BDERCs are subject to all DERC requirements set forth in the Trading Agreement and Order except for those requirements pertaining solely to non-ozone season DERCs and as otherwise may be provided.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of )  
 The State of Connecticut and ) Trading Agreement  
 Middletown Power LLC ) and Order No. 8213

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Middletown Power LLC ("MP") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of emission reduction trading will achieve this result in a timely and cost-effective manner:

A. At the request and with the agreement of MP, the Commissioner finds the following:

1. MP is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 MP purchased from The Connecticut Light and Power Company and now owns one fossil fuel-fired electric generating station, Middletown Station, at 1866 River Road in Middletown, Connecticut ("facility").
2. At the facility, NRG Middletown Operations Inc. operates Middletown Station Unit 2, Connecticut Registration Number 104-0098, a 120 megawatt front-fired boiler ("boiler"). The boiler has the dual capacity to operate on fuel oil (No. 6 or No. 2) and/or natural gas. No. 2 fuel oil is used primarily as an ignition fuel as part of the start-up procedure. A continuous emissions monitor ("CEM"), certified to 40 Code of Federal Regulations ("CFR") Part 75, measures nitrogen oxide ("NOx") emissions from the boiler.
3. During the year 1981, prior to modifications of the boiler's burner, combustion controls and operating conditions, and prior to the installation of natural gas operating capabilities, and based on Department of Environmental Protection ("Department") approved stack test data and AP-42 emission factor data, the average

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Date: 3/1/02

annual NOx emission rate for Middletown Station Unit 2 was 0.283 pounds per million British thermal units ("lbs/MMBtu") of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil. On and after May 31, 1995, the Regulations of Connecticut State Agencies ("Regulations") require that the boiler emit NOx at a rate no greater than 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.20 lbs/MMBtu of heat input when operating on No. 2 fuel oil or natural gas.

4. In January 1994, The Connecticut Light and Power Company completed modifications of the boiler's burner and combustion controls, and began to test and adjust operating conditions, thereby reducing the boiler's NOx emission rates below its allowed and actual baseline emission rates. Natural gas operating capabilities were installed at the facility by July, 1997 to provide further reductions of NOx emissions. Such modifications and installation capabilities enabled MP's boiler to frequently meet and operate below the emission limitation specified in Section 22a-174-22(e) of the Regulations.
5. On and after December 15, 1999, MP may obtain approval of actual reductions in NOx emissions, generated by operating the boiler at a rate which is below 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil, 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil and 0.20 lbs/MMBtu of heat input when operating on natural gas for use as discrete emission reduction credits ("DERCs"). If DERCs are created during the ozone season, MP may obtain approval for such reductions for use as Budget discrete emission reduction credits ("BDERCs").
6. Pursuant to Section 22a-174-22(j) of the Regulations, MP intends to acquire and generate approved DERCs until May 1, 2003 at the facility. Approved DERCs are defined for purposes of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with

Section 22a-174-22 of the Regulations. MP will acquire approved DERCs monthly on an as-needed basis, as determined by actual NOx emissions in the event that the 24-hour average of actual NOx emissions exceeds the NOx emission limitations of Section 22a-174-22(e) of the Regulations.

7. When properly documented by MP, and approved by the Commissioner, the reductions in NOx emissions identified above, and as computed in accordance with the terms of this Trading Agreement and Order, will conform to the requirements of Section 22a-174-22(j)(3) of the Regulations. Specifically, the reductions will be:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on continuous emission monitoring data as applied in an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut statute or regulation mandated by a current State Implementation Plan ("SIP"), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control system and installation capabilities are in place and operating, and an appropriate tracking system is in place to monitor all data required to verify and quantify the creation of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively after the submission by MP of the seasonal or annual reports that will document

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their creation.

8. As documented in Attachment 1, attached to and incorporated by reference into this Trading Agreement and Order, 9.9 tons of ozone season NOx BDERCs and 66.1 tons of non-ozone season NOx DERCs were generated by the boiler between December 16, 1999 and June 30, 2000.
9. Ten (10) percent of these DERCs (1 ton ozone season, 6.6 tons non-ozone season) are retired and permanently removed from all calculations to assure a benefit to the environment. The total available for use, after rounding down to the nearest whole number for annual serial assignment purposes, is 67 DERCs (8 tons ozone season, 59 tons non-ozone season).

B.1. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, will allow MP and approved sources within Connecticut to use 8 tons of ozone season NOx BDERCs and 59 tons of non-ozone season NOx DERCs referenced in paragraph A.9. of this Trading Agreement and Order for purposes of compliance under Section 22a-174-22(j) of the Regulations to achieve a portion of the nitrogen oxide emission reductions required by Section 22a-174-22 of the Regulations. DERC creation serial numbers assigned by the Department to these approved reductions of NOx emissions are provided in Table 1 of this Trading Agreement and Order:

TABLE 1

	1999	2000
Ozone season NOx BDERC serial numbers	N/A	CT00/8213(BDC)R-98NOxoz1-8
Non-ozone season NOx DERC serial numbers	CT99/8213(DC)R-98NOxnoz1-8	CT00/8213(DC)R-98Noxnoz1-51

B.2. Ozone season BDERCs may be generated and used in accordance with this Trading Agreement and Order.

B.3. Upon sufficient documentation as prescribed below, the

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Commissioner may provide written approval of the generation of additional DERCs by MP retrospectively. Approved DERCs and BDERCs generated by MP may be held by MP or transferred to other persons in accordance with this Trading Agreement and Order.

B.4. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, hereby allows MP to comply with Section 22a-174-22(d)(1) of the Regulations through use of DERC trading.

C. With the agreement of MP, the Commissioner, acting under Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes, orders MP as follows:

1. DERC generation.

a. For purposes of generating DERCs from the boiler at the facility, MP shall use 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil, 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil and 0.20 lbs/MMBtu of heat input when operating on natural gas as the baseline emission rates for the boiler, or the proportioned baseline emission rate set forth in footnote 2 of paragraph C.11. of this Trading Agreement and Order, when simultaneously operating on more than one fuel. MP shall use the above referenced baseline emission rate(s) when calculating the proportioned baseline emission rate. When calculating DERCs, MP shall use the lower of daily total CEM-calculated MMBtu value or actual fuel usage data for the boiler in MMBtu/day, when determining heat input. The ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boiler is operating on No. 2 fuel oil as referenced in paragraph C.11. of this Trading Agreement and Order and shall be retired by the

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facility and permanently removed from all calculations on a daily basis. An additional ten (10) percent of all DERCs (tons) generated by the boiler shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

b. Non-ozone Season Restrictions. Non-ozone season NOx DERCs generated by MP shall be created and approved in accordance with this Trading Agreement and Order, and shall remain valid until they are used or until May 1, 2003, whichever occurs first.

c. Ozone Season Restrictions. The boiler is subject to Section 22a-174-22a of the Regulations ("NOx Budget Program") in 1999 and every year thereafter. The boiler may generate ozone season BDERCs to comply with Section 22a-174-22 of the Regulations in accordance with paragraph C.1.a. of this Trading Agreement and Order and the following conditions and restrictions: 1) BDERCs shall only be generated by the boiler from May 1 through September 30 of a given year, 2) BDERCs shall only be used by other NOx Budget Program sources located in Connecticut, 3) BDERCs shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BDERCs generated during a given year shall only be used during the following ozone season, with the exception of BDERCs generated during 1999, which may be used in the 2001 ozone season. For example, BDERCs generated during the 1999 ozone season may be used during the 2001 ozone season. However, BDERCs generated during the 2000 ozone season may only be used during the 2001 ozone season. BDERCs may be generated until May 1, 2003. BDERCs are subject to all DERC requirements set forth in this Trading Agreement and Order except for those requirements pertaining solely to non-ozone season DERCs and as otherwise may be provided.

2. DERC Use. Approved DERCs shall be acquired for compliance with the emission standards in Section 22a-174-22 of the Regulations for the period beginning

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December 15, 1999 and continuing until MP achieves permanent compliance for the boiler with the emission standards in Section 22a-174-22(e) of the Regulations or until May 1, 2003, whichever occurs first. MP shall acquire approved DERCs, and document and record the amounts of NOx emissions and DERCs used by serial number (if assigned) by the boiler each day, and shall maintain and provide such records in accordance with the following and Section 22a-174-4 of the Regulations, until May 1, 2003:

- a. Before the first day of each month, calculate projected worst case DERCs required for that calendar month as follows:

DERCs (tons) = {[estimated worst case NOx emission rate in lbs/MMBtu - ((0.95) x (NOx RACT limit or proportioned emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in lbs/MMBtu))] x (Estimated fuel use in MMBtu)} + 2000 pounds.

- b. Acquire sufficient approved DERCs no later than the first day of each month to assure compliance with the emission standards in Section 22a-174-22 of the Regulations for, at a minimum, that calendar month. With the exception of BDERCs, excess DERCs from previous months can be applied to subsequent months. BDERCs are subject to the limitations set forth in paragraph C.1.c. of this Trading Agreement and Order. At a minimum, DERCs required shall be adjusted upwards by 100% if DERCs are not in MP's possession prior to the first day of each month.
- c. No later than the twentieth day of each month, calculate DERCs used in the preceding calendar month, as follows:
- (1) For the boiler on each day, determine whether the 24-hour average NOx emission rate\* is

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less than the baseline emission rate or greater than the NOx RACT limit.

- (2) When the boiler has a daily NOx emission rate (24-hour average) exceeding the NOx RACT limit, calculate the amount of DERCs used, as follows:

$$\text{DERCs (tons)} = \{[(\text{CEM-recorded NOx daily average emission rate in lbs/MMBtu}^*) - ((0.95) \times (\text{NOx RACT limit or proportioned emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in lbs/MMBtu}))] \times (\text{actual fuel use in MMBtu})\} + 2000 \text{ pounds.}$$

\*This rate shall be calculated pursuant to the methodology described in 40 CFR Part 75.

- d. Maintain documentation to attest to the fact that DERCs used during the ozone season were generated during the ozone season. Generator certification of this fact shall be sufficient.
- e. After full program review, and if the Commissioner deems it appropriate, the Commissioner may allow the survival and use of approved DERCs beyond April 30, 2003, subject to the limitations set forth in paragraph C.1.c. of this Trading Agreement and Order.
- f. Pursuant to Section 22a-174-22(d)(3) of the Regulations, MP may use NOx allowances, pursuant to Section 22a-174-22(j) of the Regulations to achieve all or a portion of the reductions required by Section 22a-174-22 of the Regulations. Any allowance used for compliance with Section 22a-174-22(e) of the Regulations shall be subject to all restrictions and/or requirements applicable to DERCs contained in this Trading Agreement and Order.

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3. MP shall maintain records for the boiler showing daily NOx mass emissions, and actual NOx emission rates (24-hour average). MP shall also maintain records showing a daily total of all DERCS generated net of the applicable uncertainty and environmental discounts.
4. In requesting approval of DERCS generated by the boiler, MP shall provide documentation containing a sample spreadsheet with calculation formulas used to determine reported numbers; monthly operating reports of actual fuel usage including the fuel BTU content, number of barrels, gallons, and cubic feet used for each fuel type; daily MMBtu for each fuel type and actual heat input based upon CEM-recorded data; daily weighted and unweighted actual NOx emission rates (24-hour average); and DERCS generated using the baseline emission rate(s), or the proportioned baseline emission rate referenced in paragraph C.1. of this Trading Agreement and Order, net of the applicable uncertainty and environmental discounts.
5. When the daily CEM-recorded NOx emission rate is used to calculate DERCS generated by the boiler, MP shall not include missing data calculated in accordance with any missing data substitution procedures, including those allowed under 40 CFR Part 75. When the daily CEM-recorded NOx emission rate is used to calculate DERCS used by the boiler, MP shall include missing data calculated in accordance with missing data substitution procedures under 40 CFR Part 75.
6. No later than March 1 of every year after issuance of this Trading Agreement and Order, MP shall include with the Annual Emission Statement provided to the Commissioner, a record of each sale or other transfer, and use of any and all of the DERCS approved within and subsequent to issuance of this Trading Agreement and Order until all such DERCS have been used. MP shall also include actual NOx emissions from the boiler, and the amount of all DERCS used (including serial numbers

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(if assigned) and approved DERCs generated and/or purchased from other facilities), generated and/or approved for the previous calendar year. These reports shall be on a form prescribed by the Commissioner. This reporting may cease if a central registry is approved by the Commissioner. Should MP choose to discontinue the generation of DERCs, MP shall notify the Commissioner in writing upon discontinuance.

7. In order to consider CEM-recorded NOx emission rates valid for DERC approval, all NOx and CO<sub>2</sub>/O<sub>2</sub> CEMs must comply with 40 Code of Federal Regulations Part 75.
8. MP shall retain records and supporting documentation as described in this Trading Agreement and Order for a minimum of five years, commencing on the date such records were created. MP shall provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
9. Upon sufficient documentation, as determined by the Commissioner, that MP has met the requirements of paragraphs C.1., C.2., C.3, C.4., C.5., C.7., C.10, and C.11., of this Trading Agreement and Order, the Commissioner may provide written approval of DERCs generated by MP retrospectively, in addition to those approved in paragraph B. of this Trading Agreement and Order. Requests for approval of all subsequent DERCs generated shall be submitted in writing to the Commissioner. Approved DERCs generated by MP may be held or transferred to other persons. Such DERCs shall remain valid until they are used or until May 1, 2003, whichever occurs first.
10. Should MP choose to generate additional DERCs, reports documenting these DERCs shall be submitted to the Commissioner on an ozone season, non-ozone season (January through April and/or October through December), or annual basis. Such reports shall be compiled on a monthly basis and shall be submitted at

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least on an annual basis.

11. When the boiler has daily NOx emissions below the applicable baseline emission rate(s), or the proportioned baseline emission rate, MP shall calculate the amount of DERCs generated as follows:

$$\text{DERCs (tons)} = \{[\text{Total heat input}^1 \text{ of all fuels in MMBtu} \times ((\text{proportioned baseline emission rate}^2) - (\text{the CEM-recorded NOx emission rate}^3))] + 2000 \text{ lbs/ton}\} \times (0.90).^4$$

<sup>1</sup> Heat input shall be calculated using the lower of CEM-recorded data or actual fuel usage data in MMBtu per unit of fuel combusted.

<sup>2</sup> This rate shall be calculated by 1) multiplying the heat input of each fuel combusted by the baseline emission rate(s) for such fuel; 2) summing those products; and 3) dividing the sum by the total heat input. If the boiler is operating exclusively on one fuel, MP may replace the proportioned baseline emission rate with the applicable baseline emission rate, for that fuel. The ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boiler is operating on No. 2 fuel oil.

<sup>3</sup> This rate shall be calculated pursuant to the methodology described in 40 Code of Federal Regulations Part 75 and weighted pursuant to the Department's policy statement entitled "Guidance for Calculation of Emission Reduction Credits and Determination of Compliance with NOx RACT for Sources Subject to 40 CFR (Acid Rain Sources)" dated 12/18/98 which is attached to and incorporated by reference into this Trading Agreement and Order as part of Attachment I.

<sup>4</sup> An additional ten (10) percent of all DERCs (tons) generated by the boiler shall also be retired by the facility and permanently removed from all calculations

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on a daily basis to assure a benefit to the environment.

12. Each allowance used for compliance with Section 22a-174-22 of the Regulations shall be equivalent to one discrete emission reduction credit and shall be deducted from MP's NOx Budget Program compliance account upon such use. Allowances shall be considered used for compliance with Section 22a-174-22 of the Regulations when they are transferred from the facility's compliance account or overdraft account to a State of Connecticut NOx allowance retirement account.
13. Approvals. MP shall use best efforts to submit to the Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form. If the Commissioner notifies MP that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and MP shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.
14. Definitions. As used in this Trading Agreement and Order, "Commissioner" means the Commissioner or a representative of the Commissioner; "Ozone season" means the period from May 1 through September 30 in any given calendar year, and "NOx RACT" means NOx Reasonably Available Control Technology. The date of "issuance" of this Trading Agreement and Order is the date the Trading Agreement and Order is deposited in the U.S. mail or personally delivered, whichever is earlier.
15. Dates. The date of submission to the Commissioner of any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Trading Agreement and Order,

the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.

16. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by MP or, if MP is not an individual, by MP's chief executive officer or a duly authorized representative of such officer, as those terms are defined in §22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such document, and MP or MP's chief executive officer and each such individual shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law."
17. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject MP to an injunction and penalties.
18. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.
19. Notice of transfer; liability of MP. Until MP has fully complied with this Trading Agreement and Order, MP shall notify the Commissioner in writing no later than 15 days after transferring all or any portion of the facility, the operations, the site or the business which is the subject of this Trading Agreement and Order or after obtaining a new mailing or location address. MP's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property

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to any other person or municipality.

20. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by MP pursuant to this Trading Agreement and Order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require MP to undertake further investigation or further action to prevent or abate violations or pollution.
21. MP's obligations under law. Nothing in this Trading Agreement and Order shall relieve MP of other obligations under applicable federal, state and local law.
22. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by MP pursuant to this Trading Agreement and Order will result in compliance or prevent or abate pollution.
23. Access to facility. Any representative of the Department of Environmental Protection may enter the facility without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
24. No effect on rights of other persons. This Trading Agreement and Order neither creates nor affects any rights of persons or municipalities that are not parties to this Trading Agreement and Order.
25. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these DERCS.
26. Notice to Commissioner of changes. Within 15 days of the date MP becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, MP shall submit the correct or omitted information to the Commissioner.

27. Notification of noncompliance. In the event that MP becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, MP shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice, MP shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and MP shall comply with any dates which may be approved in writing by the Commissioner. Notification by MP shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.
28. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in this Trading Agreement and Order or in writing by the Commissioner, be directed to:

Wendy Jacobs  
Department of Environmental Protection  
Bureau of Air Management  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106-5127

Middletown Power LLC

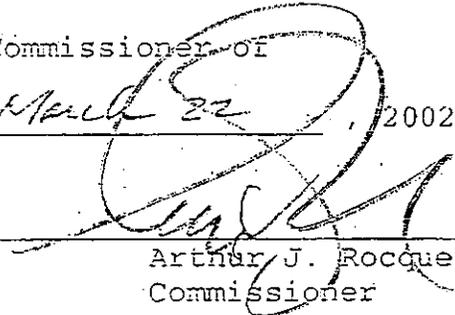
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MP consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind MP to the terms and conditions of the Trading Agreement and Order.

Middletown Power LLC

Signature: Bryan K. Riley  
Type Name: Bryan K. Riley  
Type Title: Vice President  
Date: 3/1/02

Issued as a final order of the Commissioner of  
Environmental Protection on March 22, 2002.

  
Arthur J. Rocque, Jr.  
Commissioner

TOWN OF MIDDLETOWN LAND RECORDS

MAILED CERTIFIED MAIL, RETURN RECEIPT REQUESTED  
Certified Document No.

**PROPOSED REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22  
THROUGH USE OF  
DISCRETE EMISSION REDUCTION CREDITS (DERC's)**

**MIDDLETOWN POWER LLC  
Trading Agreement and Order No. 8214**

**August, 2002**

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**PART 2. DESCRIPTION OF DERC CREATION AND USE  
By Trading Agreement and Order**

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in Economic Incentive Program (EIP) guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from NOx control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program is to approve creation of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of nitrogen oxides (NOx). Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving these emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions

to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for timelier rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of inter-temporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone

season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCs may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of these DERCs will not jeopardize RFP since the state's NOx rule emission limits for the source creating the DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For

individual sources, the baseline will be the lower of actual or allowable emissions.

#### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the trading agreement and order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the overall performance of the program is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION & USE**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source and Identifier:**

Middletown Power LLC  
1866 River Road  
Middletown, CT

Unit 3 245 megawatt cyclone boiler R-104-0100,

**D. Designated Representative:**

Ms. Cynthia Karlic  
Regional Manager  
Telephone No. (860) 638-3170

**E. CT Nonattainment Area Classification: Serious**

**F. Summary of Compliance:**

**Time Period:** December 15, 1999- May 1, 2003  
**Method:** Modifications to burners, combustion controls and operating conditions and installation of natural gas operating capabilities

Max. Daily Emission Rate  
pursuant to Section 22a-174-22

**Baseline:** 0.43 lb/MMBTU of heat input (24 hour average consuming No. 6 oil)  
0.43 lb/MMBTU of heat input (24 hour average consuming natural gas)  
0.17 lb/MMBTU of heat input (24 hour average consuming No. 2 oil)

**Monitoring:** Continuous Emission Monitoring (CEM), certified NOx mass rate  
**Discrete tons:** 200 ozone season and 338 non-ozone season between December 16, 1999 and June 30, 2000.

Rate of Creation: determined by CEM

Discounts: Creation: 10 percent to benefit the environment.

**G. Description of Compliance:**

Creator: The Connecticut Light and Power Company  
Registration Numbers R104-0100

Middletown Power LLC ("MP") is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 MP purchased from The Connecticut Light and Power Company ("CL&P") four fossil fuel-fired electric generating stations. One of the four fossil fuel-fired electric generating stations is Middletown Station, at 1866 River Road in Middletown, Connecticut ("facility"). At the facility, NRG Middletown Operations Inc. operates Unit 3, Connecticut Registration Number 104-0100, a 245 megawatt cyclone boiler ("boiler") on No. 6 fuel oil, other oil, and natural gas. The boiler is subject to the requirements of Section 22a-174-22 Reasonably Available Control of nitrogen oxide emissions, and 22a-174-22a and 22b The NOx Budget Program. The boilers required modifications to the burners, combustion controls and operating conditions to meet the standard. CL&P modified the boilers prior to the May 31, 1995 effective date of the NOx RACT rule. Trading Agreement and Order 8162 was issued to CL&P as a mechanism for meeting the NOx RACT requirements. Trading Agreement and Order 8214 has been issued to MP because CL&P no longer owns the facility. The boiler has a dedicated CEM system, certified to 40 Code of Federal Regulations Part 75. The NOx CEM probes are located in the stack outlet of the boiler. The daily NOx emission rates will be monitored, calculated, and recorded using CEM 24-hour averages. A monthly summation of all NOx over-control may be submitted to DEP for the purpose of obtaining certified NOx DERCs. MP shall use 0.43 lbs/MMBtu of heat input when operating on No. 6 fuel oil, 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil, and .43 lbs/MMBtu when operating on natural gas as the baseline emission rates for the boilers, or the proportioned baseline emission rate.

**H. Source of DERCs****Equation for the calculation of DERCs**

For the boilers with daily NOx emissions below the applicable baseline emission rate, MP shall calculate the amount of DERCs *generated* as follows:

$$\text{DERCs (tons)} = [\text{Total heat input}^1 \text{ of all fuels in MMBTU} \times (\text{proportioned RACT emission rate}^2 - \text{the CEM recorded NOx emission rate}^3) \div 2000 \text{ lbs/ton}] \times (0.90).^4$$

For the boilers with daily NOx emissions above the applicable baseline emission rate, MP shall calculate the amount of DERCs *used* as follows:

$$\text{DERCs (tons)} = [\text{Total heat input of all fuels in MMBTU} \times (\text{the CEM recorded NOx emission rate} - ((.95) \times \text{proportioned RACT emission rate}))] \div 2000 \text{ pounds.}$$

where:

<sup>1</sup> Heat input shall be calculated using the lower of CEM recorded data or actual fuel usage data in MMBTU per unit of fuel combusted.

<sup>2</sup>calculated pursuant to Section 22a-174-22 (f)(2)(A) of the Regulations.

<sup>3</sup> This rate shall be calculated pursuant to the methodology described in 40 Code of Federal Regulations Part 75. A ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boiler is operating on No. 2 fuel oil.

<sup>4</sup> Ten (10) percent of all DERCS (tons) created shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

**Estimated emission reduction credits generated.**

Sample calculation for May 9, 2001

$$\begin{aligned} \text{DERCs (tons)} &= [45309 \text{ MMBTU} \times (0.43 \text{ lb/MMBTU} - 0.352 \text{ lb/MMBTU}) \div 2000 \text{ lbs/ton}] \\ &= 1.77 \text{ tons of DERCs.} \end{aligned}$$

Less 10% for environmental benefit,  $1.77 \times .9 = 1.59$  tons created

Attachment 1 of Trading Agreement and Order No. 8214 shows a summary of the proposed annual emission reductions and contains supporting data. Attachment 1 also includes spreadsheets of the monthly calculations and tables which will show the full set of 24-hour NOx emission data and operating hours used in these calculations.

An accounting of all tons of NOx DERCS created by MP will be provided to the Commissioner on March 1 of every year until all tons are used. (If an approved DERC registry is available, this requirement may be waived by the Commissioner upon request.) This reporting will be included as part of the annual Emission Statement. This report will include all DERCS created by MP and used by others, and will provide the state with information to be used in auditing the program as described in Part 1. MP may submit reports on a quarterly or semi-annual basis to document the creation of NOx DERCS. DERCS generated in the ozone season will be distinguished from DERCS

generated in the non-ozone season. MP will include a summary of all NOx DERCs generated and/or used for the preceding year with the Facility's Annual Emission Statement, including approved DERCs generated and/or purchased from other facilities. Should MP choose not to generate DERCs, MP is expected to notify the Department in order to assist in DERC program planning. Calculations and reports will be in a form similar to that shown in Attachment 1. Following review and written prior approval by the Department, these DERCs will be available for use by approved sources for purposes of compliance with Section 22a-174-22 of the Regulations. Approval in this manner may continue until there are regulatory changes to the NOx rule that affect NOx limitations at the source or until May 1, 2003, whichever comes first.

#### **Restrictions on use**

MP proposes to reconcile DERCs generated on a monthly basis. Several restrictions are placed upon the use of DERCs:

- These DERCs may not be used prior to approval by the DEP.
- On average, these DERCs may not be used at a rate greater than that at which they were created.
- DERCs generated during non-ozone season months may not be used during the ozone season.
- Ozone Season Restrictions. The boiler is subject to Section 22a-174-22a of the Regulations (NOx Budget Program) in 1999 and every year thereafter. The boiler may generate ozone season BDERCs to comply with Section 22a-174-22 of the Regulations. :  
1) BDERCs shall only be generated by the boiler from May 1 through September 30 of a given year, 2) BDERCs shall only be used by other NOx Budget Program sources located in Connecticut, 3) BDERCs shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BDERCs generated during a given year shall only be used during the following ozone season, with the exception of BDERCs generated during 1999, which may be used in the 2001 ozone season. BDERCs may be generated until May 1, 2003. BDERCs are subject to all DERC requirements set forth in the Trading Agreement and Order except for those requirements pertaining solely to non-ozone season DERCs and as otherwise may be provided.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of

The State of Connecticut and )

Middletown Power LLC )

) Trading Agreement  
) and Order No. 8214  
)

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Middletown Power LLC ("MP") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of emission reduction trading will achieve this result in a timely and cost-effective manner:

A. At the request and with the agreement of MP, the Commissioner finds the following:

1. MP is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 MP purchased from The Connecticut Light and Power Company and now owns one fossil fuel-fired electric generating station, Middletown Station, at 1866 River Road in Middletown, Connecticut ("facility").
2. At the facility, NRG Middletown Operations Inc. operates Middletown Station Unit 3, Connecticut Registration Number 104-0100, a 245 megawatt cyclone boiler ("boiler"). The boiler has the dual capacity to operate on fuel oil (No. 6 or No. 2) and/or natural gas. No. 2 fuel oil is used primarily as an ignition fuel as part of the start-up procedure. A continuous emissions monitor ("CEM"), certified to 40 Code of Federal Regulations ("CFR") Part 75, measures nitrogen oxide ("NOx") emissions from the boiler.
3. During the year 1981, prior to modifications of the boiler's burner, combustion controls and operating conditions, and prior to the installation of natural gas operating capabilities, and based on Department of Environmental Protection approved stack test data and

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AP-42 emission factor data, the average annual NOx emission rate for Middletown Station Unit 3 was 0.876 pounds per million British thermal units ("lbs/MMBtu") of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil. On and after May 31, 1995, the Regulations of Connecticut State Agencies ("Regulations") require that the boiler emit NOx at a rate no greater than 0.43 lbs/MMBtu of heat input when operating on No. 6 fuel oil, No. 2 oil and natural gas.

4. In January 1994, The Connecticut Light and Power Company completed modifications of the boiler's burner and combustion controls, and began to test and adjust operating conditions, thereby reducing the boiler's NOx emission rates below its allowed and actual baseline emission rates. Natural gas operating capabilities were installed at the facility by July, 1997 to provide further reductions of NOx emissions. Such modifications and installation capabilities enabled MP's boiler to frequently meet and operate below the emission limitation specified in Section 22a-174-22(e) of the Regulations.
5. On and after December 15, 1999, MP may obtain approval of actual reductions in NOx emissions, generated by operating the boiler at a rate which is below 0.43 lbs/MMBtu of heat input when operating on No. 6 fuel oil, 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil, and 0.43 lbs/MMBtu of heat input when operating on natural gas for use as discrete emission reduction credits ("DERCs"). If DERCs are created during the ozone season, MP may obtain approval for such reductions for use as Budget discrete emission reduction credits ("BDERCs").
6. Pursuant to Section 22a-174-22(j) of the Regulations, MP intends to acquire and generate approved DERCs until May 1, 2003 at the facility. Approved DERCs are defined for purposes of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with

Section 22a-174-22 of the Regulations. MP will acquire approved DERCs monthly on an as-needed basis, as determined by actual NOx emissions in the event that the 24-hour average of actual NOx emissions exceeds the NOx emission limitations of Section 22a-174-22(e) of the Regulations.

7. When properly documented by MP, and approved by the Commissioner, the reductions in NOx emissions identified above, and as computed in accordance with the terms of this Trading Agreement and Order, will conform to the requirements of Section 22a-174-22(j)(3) of the Regulations. Specifically, the reductions will be:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on continuous emission monitoring data as applied in an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut statute or regulation mandated by a current State Implementation Plan ("SIP"), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control system and installation capabilities are in place and operating, and an appropriate tracking system is in place to monitor all data required to verify and quantify the creation of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively after the submission by MP of the quarterly or semi-annual report that will document their creation.

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8. As documented in Attachment 1, attached to and incorporated by reference into this Trading Agreement and Order, 376.2 tons of non-ozone season NOx DERCs and 222.9 tons of NOx BDERCs were generated by the boiler between December 16, 1999 and June 30, 2000.
  9. Ten (10) percent of these DERCs (37.6 tons non-ozone season, 22.3 tons ozone season) are retired and permanently removed from all calculations to assure a benefit to the environment. The total available for use, after rounding down to the nearest whole number for annual serial assignment purposes, is 538 DERCs (338 tons non-ozone season, 200 tons ozone season).
  10. On July 29, 1995 and December 14, 1995, The Connecticut Light and Power Company did not have sufficient DERCs on hand to cover excess NOx emissions from the boiler. Excess NOx emissions on said dates totaled one ozone season DERC and one non-ozone season DERC.
  11. The Connecticut Light and Power Company adjusted the two tons required in paragraph A.10. upward by 100% and retired the required DERCs (two tons of ozone season DERCs and two tons of non-ozone season DERCs) prior to the transfer of the facility from The Connecticut Light and Power Company to MP.
- B.1. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, will allow MP and approved sources within Connecticut to use 338 tons of non-ozone season NOx DERCs and 200 tons of ozone season NOx BDERCs referenced in paragraph A.9. of this Trading Agreement and Order for purposes of compliance under Section 22a-174-22(j) of the Regulations to achieve a portion of the nitrogen oxide emission reductions required by Section 22a-174-22 of the Regulations. DERC creation serial numbers assigned by the Department to these approved reductions of NOx emissions are provided in Table 1 of this Trading Agreement and Order:

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TABLE 1

	1999	2000
Ozone season NOx BDERC serial numbers	N/A	CT00/8214(BDC)R- 100Noxoz1-200
Non-ozone season NOx DERC serial numbers	CT99/8214(DC)R- 100Noxnoz1-8	CT00/8214(DC)R- 100Noxnoz1-330

- B.2. Ozone season BDERCs may be generated and used in accordance with this Trading Agreement and Order.
- B.3. Upon sufficient documentation as prescribed below, the Commissioner may provide written approval of the generation of additional DERCs by MP retrospectively. Approved DERCs and BDERCs generated by MP may be held by MP or transferred to other persons in accordance with this Trading Agreement and Order.
- B.4. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, hereby allows MP to comply with Section 22a-174-22(d)(1) of the Regulations through use of DERC trading.
- C. With the agreement of MP, the Commissioner, acting under Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes, orders MP as follows:
1. DERC generation.
    - a. For purposes of generating DERCs from the boiler at the facility, MP shall use 0.43 lbs/MMBtu of heat input when operating on No. 6 fuel oil, 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil and 0.43 lbs/MMBtu of heat input when operating on natural gas as the baseline emission rates for the boiler, or the proportioned baseline emission rate set forth in footnote 2 of paragraph C.11. of this Trading Agreement and Order, when simultaneously operating on more than one fuel. MP shall use the above referenced baseline emission rate(s) when calculating the proportioned baseline

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emission rate. When calculating DERCs, MP shall use the lower of daily total CEM-calculated MMBtu value or actual fuel usage data for the boiler in MMBtu/day, when determining heat input. The ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boiler is operating on No. 2 fuel oil as referenced in paragraph C.11. of this Trading Agreement and Order and shall be retired by the facility and permanently removed from all calculations on a daily basis. An additional ten (10) percent of all DERCs (tons) generated by the boiler shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

- b. Non-ozone Season Restrictions. Non-ozone season NOx DERCs generated by MP shall be created and approved in accordance with this Trading Agreement and Order, and shall remain valid until they are used or until May 1, 2003, whichever occurs first.
- c. Ozone Season Restrictions. The boiler is subject to Section 22a-174-22a of the Regulations ("NOx Budget Program") in 1999 and every year thereafter. The boiler may generate ozone season BDERCs to comply with Section 22a-174-22 of the Regulations in accordance with paragraph C.1.a. of this Trading Agreement and Order, and the following conditions and restrictions: 1) BDERCs shall only be generated by the boiler from May 1 through September 30 of a given year, 2) BDERCs shall only be used by other NOx Budget Program sources located in Connecticut, 3) BDERCs shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BDERCs generated during a given year shall only be used during the following ozone season, with the exception of BDERCs generated during 1999, which may be used in the 2001 ozone season. For

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example, BDERCs generated during the 1999 ozone season may be used during the 2001 ozone season. However, BDERCs generated during the 2000 ozone season may only be used during the 2001 ozone season. BDERCs may be generated until May 1, 2003. BDERCs are subject to all DERC requirements set forth in this Trading Agreement and Order except for those requirements pertaining solely to non-ozone season DERCs and as otherwise may be provided.

2. DERC Use. Approved DERCs shall be acquired for compliance with the emission standards in Section 22a-174-22 of the Regulations for the period beginning December 15, 1999 and continuing until MP achieves permanent compliance for the boiler with the emission standards in Section 22a-174-22(e) of the Regulations or until May 1, 2003, whichever occurs first. MP shall acquire approved DERCs, and document and record the amounts of NOx emissions and DERCs used by serial number (if assigned) by the boiler each day, and shall maintain and provide such records in accordance with the following and Section 22a-174-4 of the Regulations, until May 1, 2003:
  - a. Before the first day of each month, calculate projected worst case DERCs required for that calendar month as follows:
$$\text{DERCs (tons)} = \{[\text{estimated worst case NOx emission rate in lbs/MMBtu} - ((0.95) \times (\text{NOx RACT limit or proportioned emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in lbs/MMBtu})] \times (\text{Estimated fuel use in MMBtu})\} + 2000 \text{ pounds.}$$
  - b. Acquire sufficient approved DERCs no later than the first day of each month to assure compliance with the emission standards in Section 22a-174-22 of the Regulations for, at a minimum, that calendar month. With the exception of BDERCs,

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excess DERCs from previous months can be applied to subsequent months. At a minimum, DERCs required shall be adjusted upwards by 100% if DERCs are not in MP's possession prior to the first day of each month.

- c. No later than the twentieth day of each month, calculate DERCs used in the preceding calendar month, as follows:
- (1) For the boiler on each day, determine whether the 24-hour average NOx emission rate\* is less than the baseline emission rate or greater than the NOx RACT limit.
  - (2) When the boiler has a daily NOx emission rate (24-hour average) exceeding the NOx RACT limit, calculate the amount of DERCs used, as follows:  
$$\text{DERCs (tons)} = \{[(\text{CEM-recorded NOx daily average emission rate in lbs/MMBtu}) - ((0.95) \times (\text{NOx RACT limit or proportioned emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in lbs/MMBtu})] \times (\text{actual fuel use in MMBtu})\} + 2000 \text{ pounds.}$$

\*This rate shall be calculated pursuant to the methodology described in 40 CFR Part 75.
- d. Maintain documentation to attest to the fact that DERCs used during the ozone season were generated during the ozone season. Generator certification of this fact shall be sufficient.
- e. After full program review, and if the Commissioner deems it appropriate, the Commissioner may allow the survival and use of approved DERCs beyond April 30, 2003, subject to the limitations set forth in paragraph C.1.c. of this Trading Agreement and Order.

- f. Pursuant to Section 22a-174-22(d)(3) of the Regulations, MP may use NOx allowances, pursuant to Section 22a-174-22(j) of the Regulations to achieve all or a portion of the reductions required by Section 22a-174-22 of the Regulations. Any allowance used for compliance with Section 22a-174-22(e) of the Regulations shall be subject to all restrictions and/or requirements applicable to DERCs contained in this Trading Agreement and Order.
3. MP shall maintain records for the boiler showing daily NOx mass emissions, and actual NOx emission rate (24-hour average). MP shall also maintain records showing a daily total of all DERCs generated net of the applicable uncertainty and environmental discounts.
4. In requesting approval of DERCs generated by the boiler, MP shall provide documentation containing a sample spreadsheet with calculation formulas used to determine reported numbers; monthly operating reports of actual fuel usage including the fuel BTU content, number of barrels, gallons, and cubic feet used for each fuel type; daily MMBtu for each fuel type and actual heat input based upon CEM-recorded data; daily weighted and unweighted actual NOx emission rates (24-hour average); and DERCs generated using the baseline emission rate(s), or the proportioned baseline emission rate referenced in paragraph C.1. of this Trading Agreement and Order, net of the applicable uncertainty and environmental discounts.
5. When the daily CEM-recorded NOx emission rate is used to calculate DERCs generated by the boiler, MP shall not include missing data calculated in accordance with any missing data substitution procedures, including those allowed under 40 CFR Part 75. When the daily CEM-recorded NOx emission rate is used to calculate DERCs used by the boiler, MP shall include missing data calculated in accordance with missing data substitution procedures under 40 CFR Part 75.

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6. No later than March 1 of every year after issuance of this Trading Agreement and Order, MP shall include with the Annual Emission Statement provided to the Commissioner, a record of each sale or other transfer, and use of any and all of the DERCs approved within and subsequent to issuance of this Trading Agreement and Order until all such DERCs have been used. MP shall also include actual NOx emissions from the boiler, and the amount of all DERCs used (including serial numbers (if assigned) and approved DERCs generated and/or purchased from other facilities), generated and/or approved for the previous calendar year. These reports shall be on a form prescribed by the Commissioner. This reporting may cease if a central registry is approved by the Commissioner. Should MP choose to discontinue the generation of DERCs, MP shall notify the Commissioner in writing upon discontinuance.
7. In order to consider CEM-recorded NOx emission rates valid for DERC approval, all NOx and CO<sub>2</sub>/O<sub>2</sub> CEMs must comply with 40 Code of Federal Regulations Part 75.
8. MP shall retain records and supporting documentation as described in this Trading Agreement and Order for a minimum of five years, commencing on the date such records were created. MP shall provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
9. Upon sufficient documentation, as determined by the Commissioner, that MP has met the requirements of paragraphs C.1., C.2., C.3, C.4., C.5., C.7., C.10., and C.11., of this Trading Agreement and Order, the Commissioner may provide written approval of DERCs generated by MP retrospectively, in addition to those approved in paragraph B. of this Trading Agreement and Order. Requests for approval of all subsequent DERCs generated shall be submitted in writing to the Commissioner. Approved DERCs generated by MP may be held or transferred to other persons. Such DERCs shall remain valid until they are used or until May 1, 2003, whichever occurs first.

10. Should MP choose to generate additional DERCs, reports documenting these DERCs shall be submitted to the Commissioner on an ozone season, non-ozone season (January through April and/or October through December), or annual basis. Such reports shall be compiled on a monthly basis and shall be submitted at least on an annual basis.
11. When the boiler has daily NOx emissions below the applicable baseline emission rate, or the proportioned baseline emission rate, MP shall calculate the amount of DERCs generated as follows:

$$\text{DERCs (tons)} = \{[\text{Total heat input}^1 \text{ of all fuels in MMBtu} \times ((\text{proportioned baseline emission rate}^2) - (\text{the CEM-recorded NOx emission rate}^3))] \div 2000 \text{ lbs/ton}\} \times (0.90).^4$$

<sup>1</sup> Heat input shall be calculated using the lower of CEM-recorded data or actual fuel usage data in MMBtu per unit of fuel combusted.

<sup>2</sup> This rate shall be calculated by 1) multiplying the heat input of each fuel combusted by the baseline emission rate(s) for such fuel; 2) summing those products; and 3) dividing the sum by the total heat input. If the boiler is operating exclusively on one fuel, MP may replace the proportioned baseline emission rate with the applicable baseline emission rate, for that fuel. The ten (10) percent uncertainty discount due to not having data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boiler is operating on No. 2 fuel oil.

<sup>3</sup> This rate shall be calculated pursuant to the methodology described in 40 Code of Federal Regulations Part 75 and weighted pursuant to the Department of Environmental Protection's policy statement entitled "Guidance for Calculation of Emission Reduction Credits and Determination of Compliance with NOx RACT for

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Sources Subject to 40 CFR (Acid Rain Sources)" dated 12/18/98 which is attached to and incorporated by reference into this Trading Agreement and Order as part of Attachment 1.

<sup>4</sup> Ten (10) percent of all ERCs (tons) generated by the boiler shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

12. Each allowance used for compliance with Section 22a-174-22 of the Regulations shall be equivalent to one discrete emission reduction credit and shall be deducted from MP's NOx Budget Program compliance account upon such use. Allowances shall be considered used for compliance with Section 22a-174-22 of the Regulations when they are transferred from the facility's compliance account or overdraft account to a State of Connecticut NOx allowance retirement account.
13. Approvals. MP shall use best efforts to submit to the Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form. If the Commissioner notifies MP that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and MP shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.
14. Definitions. As used in this Trading Agreement and Order, "Commissioner" means the Commissioner or a representative of the Commissioner; "Ozone season" means the period from May 1 through September 30 in any given calendar year. The date of "issuance" of this Trading Agreement and Order is the date the Trading Agreement and Order is deposited in the U.S. mail or personally delivered, whichever is earlier.
15. Dates. The date of submission to the Commissioner of

any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Trading Agreement and Order, the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.

15. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by MP or, if MP is not an individual, by MP's chief executive officer or a duly authorized representative of such officer, as those terms are defined in §22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such document, and MP or MP's chief executive officer and each such individual shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law."
17. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject MP to an injunction and penalties.
18. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.

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19. Notice of transfer; liability of MP. Until MP has fully complied with this Trading Agreement and Order, MP shall notify the Commissioner in writing no later than 15 days after transferring all or any portion of the facility, the operations, the site or the business which is the subject of this Trading Agreement and Order or after obtaining a new mailing or location address. MP's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
20. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by MP pursuant to this Trading Agreement and Order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require MP to undertake further investigation or further action to prevent or abate violations or pollution.
21. MP's obligations under law. Nothing in this Trading Agreement and Order shall relieve MP of other obligations under applicable federal, state and local law.
22. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by MP pursuant to this Trading Agreement and Order will result in compliance or prevent or abate pollution.
23. Access to facility. Any representative of the Department of Environmental Protection may enter the facility without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
24. No effect on rights of other persons. This Trading Agreement and Order neither creates nor affects any rights of persons or municipalities that are not parties to this Trading Agreement and Order.
25. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with

respect to these DERCs.

26. Notice to Commissioner of changes. Within 15 days of the date MP becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, MP shall submit the correct or omitted information to the Commissioner.
27. Notification of noncompliance. In the event that MP becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, MP shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice, MP shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and MP shall comply with any dates which may be approved in writing by the Commissioner. Notification by MP shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.
28. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in this Trading Agreement and Order or in writing by the Commissioner, be directed to:

Wendy Jacobs  
Department of Environmental Protection  
Bureau of Air Management  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106-5127

Initials:

BCR

Date:

3/1/02

Middletown Power LLC

Trading Agreement  
and Order No. 8214

MP consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind MP to the terms and conditions of the Trading Agreement and Order.

Middletown Power LLC

Signature:

Bryan K. Riley

Type Name:

Bryan K. Riley

Type Title:

Vice President

Date:

3/1/02

Issued as a final order of the Commissioner of  
Environmental Protection on March 22, 2002.

Arthur J. Rocque, Jr.  
Commissioner

TOWN OF MIDDLETOWN LAND RECORDS

MAILED CERTIFIED MAIL, RETURN RECEIPT REQUESTED  
Certified Document No.

**PROPOSED REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22  
THROUGH USE OF  
DISCRETE EMISSION REDUCTION CREDITS (DERC's)**

**MIDDLETOWN POWER LLC  
Trading Agreement and Order No. 8215**

**August, 2002**

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**PART 2. DESCRIPTION OF DERC CREATION AND USE**

**By Trading Agreement and Order**

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in Economic Incentive Program (EIP) guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from NOx control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERCS creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program is to approve creation of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of nitrogen oxides (NOx). Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERCS creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving these emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions.

to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for timelier rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of inter-temporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone

season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCs may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of these DERCs will not jeopardize RFP since the state's NOx rule emission limits for the source creating the DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For

individual sources, the baseline will be the lower of actual or allowable emissions.

#### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the trading agreement and order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the overall performance of the program is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION & USE**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source and Identifier:**

Middletown Power LLC  
1866 River Road  
Middletown, Connecticut

Unit 4 400 megawatt tangentially-fired boiler                      P-104-0003

**D. Designated Representative:**

Ms. Cynthia Karlic  
Regional Manager  
Telephone No. (860) 638-3170

**E. CT Nonattainment Area Classification: Serious**

**F. Summary of Compliance:**

**Time Period:** December 15, 1999- May 1, 2003  
**Method:** Modifications to burners, combustion controls and operating conditions.

Max. Daily Emission Rate  
pursuant to Section 22a-174-22

Baseline:            0.25 lb/MMBTU of heat input (24 hour average consuming No. 6 oil)  
                          0.17 lb/MMBTU of heat input (24 hour average consuming No. 2 oil)

Monitoring:        Continuous Emission Monitoring (CEM), certified NOx mass rate

Discrete tons:     36 tons ozone season, 62 tons non-ozone season between December 16, 1999 and June 30, 2000

Rate of Creation: determined by CEM

Discounts: Creation:    10 percent to benefit the environment.

**G. Description of Compliance:**

Creator: The Connecticut Light and Power Company  
Registration Numbers R104-0003

Middletown Power LLC ("MP") is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 MP purchased from The Connecticut Light and Power Company ("CL&P") four fossil fuel-fired electric generating stations. One of the four fossil fuel-fired electric generating stations is Middletown Station, at 1866 River Road in Middletown, Connecticut ("facility"). At the facility, NRG Middletown Operations Inc. operates Unit 4, Connecticut Registration Number 104-0003, a 400 megawatt tangentially-fired boiler ("boiler") on No. 6 fuel oil, and natural gas. The boiler is subject to the requirements of Section 22a-174-22 Reasonably Available Control of nitrogen oxide emissions and 22a-174-22a and 22b The NOx Budget Program. The boilers required modifications to the burners, combustion controls and operating conditions to meet the standard. CL&P modified the boilers prior to the May 31, 1995 effective date of the NOx RACT rule. Trading Agreement and Order 8157 was issued to CL&P as a mechanism for meeting the NOx RACT requirements. Trading Agreement and Order 8215 has been issued to MP because CL&P no longer owns the facility. The boiler has a dedicated CEM system, certified to 40 Code of Federal Regulations Part 75. The NOx CEM probes are located in the stack outlet of the boiler. The daily NOx emission rates will be monitored, calculated, and recorded using CEM 24-hour averages. A monthly summation of all NOx over-control may be submitted to DEP for the purpose of obtaining certified NOx DERCs. MP shall use 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil, or the proportioned baseline emission rate.

**H. Source of DERCs**

**Equation for the calculation of DERCs**

For the boilers with daily NOx emissions below the applicable baseline emission rate, MP shall calculate the amount of DERCs *generated* as follows:

$$\text{DERCs (tons)} = [\text{Total heat input}^1 \text{ of all fuels in MMBTU} \times (\text{proportioned RACT emission rate}^2 - \text{the CEM recorded NOx emission rate}^3) \div 2000 \text{ lbs/ton}] \times (0.90).^4$$

For the boilers with daily NOx emissions above the applicable baseline emission rate, MP shall calculate the amount of DERCs *used* as follows:

$$\text{DERCs (tons)} = [\text{Total heat input of all fuels in MMBTU} \times (\text{the CEM recorded NOx emission rate} - ((.95) \times \text{proportioned RACT emission rate})) \div 2000 \text{ pounds}.$$

where:

<sup>1</sup> Heat input shall be calculated using the lower of CEM recorded data or actual fuel usage data in MMBTU per unit of fuel combusted.

<sup>2</sup>calculated pursuant to Section 22a-174-22 (f)(2)(A) of the Regulations.

<sup>3</sup> This rate shall be calculated pursuant to the methodology described in 40 Code of Federal Regulations Part 75. A ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boiler is operating on No. 2 fuel oil.

<sup>4</sup> Ten (10) percent of all DERCs (tons) created shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

**Estimated emission reduction credits generated.**

Sample calculation for May 1, 2001

$$\begin{aligned} \text{DERCs (tons)} &= [33556 \text{ MMBTU} \times (0.25 \text{ lb/MMBTU} - 0.1815 \text{ lb/MMBTU}) \div 2000 \text{ lbs/ton}] \\ &= 1.15 \text{ tons of DERCs.} \end{aligned}$$

$$\text{Less 10\% for environmental benefit, } 1.15 \times .9 = 1.03 \text{ tons created}$$

Attachment 1 of Trading Agreement and Order No. 8215 shows a summary of the proposed annual emission reductions and contains supporting data. Attachment 1 also includes spreadsheets of the monthly calculations and tables which will show the full set of 24-hour NOx emission data and operating hours used in these calculations.

An accounting of all tons of NOx DERCs created by MP will be provided to the Commissioner on March 1 of every year until all tons are used. (If an approved DERC registry is available, this requirement may be waived by the Commissioner upon request.) This reporting will be included as part of the annual Emission Statement. This report will include all DERCs created by MP and used by others, and will provide the state with information to be used in auditing the program as

described in Part 1. MP may submit reports on a quarterly or semi-annual basis to document the creation of NOx DERCs. DERCs generated in the ozone season will be distinguished from DERCs generated in the non-ozone season. MP will include a summary of all NOx DERCs generated and/or used for the preceding year with the Facility's Annual Emission Statement, including approved DERCs generated and/or purchased from other facilities. Should MP choose not to generate DERCs, MP is expected to notify the Department in order to assist in DERC program planning. Calculations and reports will be in a form similar to that shown in Attachment 1. Following review and written prior approval by the Department, these DERCs will be available for use by approved sources for purposes of compliance with Section 22a-174-22 of the Regulations. Approval in this manner may continue until there are regulatory changes to the NOx rule that affect NOx limitations at the source or until May 1, 2003, whichever comes first.

#### **Restrictions on use**

MP proposes to reconcile DERCs generated on a monthly basis. Several restrictions are placed upon the use of DERCs:

- These DERCs may not be used prior to approval by the DEP.
- On average, these DERCs may not be used at a rate greater than that at which they were created.
- DERCs generated during non-ozone season months may not be used during the ozone season.
- Ozone Season Restrictions. The boiler is subject to Section 22a-174-22a of the Regulations (NOx Budget Program) in 1999 and every year thereafter. The boiler may generate ozone season BDERCs to comply with Section 22a-174-22 of the Regulations. :  
1) BDERCs shall only be generated by the boiler from May 1 through September 30 of a given year, 2) BDERCs shall only be used by other NOx Budget Program sources located in Connecticut, 3) BDERCs shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BDERCs generated during a given year shall only be used during the following ozone season, with the exception of BDERCs generated during 1999, which may be used in the 2001 ozone season. BDERCs may be generated until May 1, 2003. BDERCs are subject to all DERC requirements set forth in the Trading Agreement and Order except for those requirements pertaining solely to non-ozone season DERCs and as otherwise may be provided.



of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil. On and after May 31, 1995, the Regulations of Connecticut State Agencies ("Regulations") require that the boiler emit NOx at a rate no greater than 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.20 lbs/MMBtu of heat input when operating on No. 2 fuel oil.

4. In January 1994, The Connecticut Light and Power Company completed modifications of the boiler's burner and combustion controls, and began to test and adjust operating conditions, thereby reducing the boiler's NOx emission rates below its permitted, allowed and actual baseline emissions rate. Such modifications enabled MP's boiler to frequently meet and operate below the emission limitation specified in Section 22a-174-22(e) of the Regulations.
5. After December 15, 1999, MP may obtain approval of actual reductions in NOx emissions, generated by operating the boiler at a rate which is below 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil for use as discrete emission reduction credits ("DERCs"). If DERCs are created during the ozone season, MP may obtain approval for such reductions for use as Budget discrete emission reductions credits ("BDERCs").
6. Pursuant to Section 22a-174-22(j) of the Regulations, MP intends to acquire and generate approved DERCs until May 1, 2003 at the facility. Approved DERCs are defined for purposes of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations. MP will acquire approved DERCs monthly on an as-needed basis, as determined by actual NOx emissions in the event that the 24-hour average of actual NOx emissions exceeds the NOx emission limitations of Section 22a-174-22(e) of the Regulations.

Initials:

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Date:

3/1/02

7. When properly documented by MP, and approved by the Commissioner, the reductions in NOx emissions identified above, and as computed in accordance with the terms of this Trading Agreement and Order, will conform to the requirements of Section 22a-174-22(j)(3) of the Regulations. Specifically, the reductions will be:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on continuous emission monitoring data as applied in an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut statute or regulation mandated by a current State Implementation Plan ("SIP"), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control system is in place and operating, and an appropriate tracking system is in place to monitor all data required to verify and quantify the creation of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively after the submission by MP of the seasonal or annual report that will document their creation.

8. As documented in Attachment 1, attached to and incorporated by reference into this Trading Agreement and Order, 70 tons of non-ozone season NOx DERCs and 40.8 tons of ozone season NOx BDERCs were generated by the boiler between December 15, 1999 and June 30, 2000.
9. Ten (10) percent of these DERCs (7 tons non-ozone season, 4.1 tons ozone season) are retired and permanently removed from all calculations to assure a

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benefit to the environment. The total available for use, after rounding down to the nearest whole number for annual serial assignment purposes, is 98 DERCs (62 tons non-ozone season, 36 tons ozone season).

- B. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, will allow MP and approved sources within Connecticut to use 62 tons of non-ozone season NOx DERCs and 36 tons of ozone season NOx BDERCs referenced in paragraph A.9. of this Trading Agreement and Order for purposes of compliance under Section 22a-174-22(j) of the Regulations to achieve a portion of the nitrogen oxide emission reductions required by Section 22a-174-22 of the Regulations. DERC creation serial numbers assigned by the Department to these approved reductions of NOx emissions are provided in Table 1 of this Trading Agreement and Order:

TABLE 1

	1999	2000
Non-ozone season NOx DERC serial numbers	CT99/8215(DC)P-3NOxnoz1-7	CT00/8215(DC)P-3NOxnoz1-55
Ozone season NOx BDERC serial numbers	N/A	CT00/8215(BDC)P-3NOxoz1-36

- B.2. Ozone season BDERCs may be generated and used in accordance with this Trading Agreement and Order.
- B.3. Upon sufficient documentation as prescribed below, the Commissioner may provide written approval of the generation of additional DERCs by MP retrospectively. Approved DERCs and BDERCs generated by MP may be held by MP or transferred to other persons in accordance with this Trading Agreement and Order.
- B.4. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, hereby allows MP to comply with Section 22a-174-22(d)(1) of the Regulations through use of DERC trading.

Initials: BKR

Date: 3/1/02

C. With the agreement of MP, the Commissioner, acting under Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes, orders MP as follows:

1. DERC generation.

a. For purposes of generating DERCS from the boiler at the facility, MP shall use 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil as the baseline emission rates for the boiler, or the proportioned baseline emission rate set forth in footnote 2 of paragraph C.11. of this Trading Agreement and Order, when simultaneously operating on more than one fuel. MP shall use the above referenced baseline emission rate(s) when calculating the proportioned baseline emission rate. When calculating DERCS, MP shall use the lower of daily total CEM-calculated MMBtu value or actual fuel usage data for the boiler in MMBtu/day, when determining heat input. The ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boiler is operating on No. 2 fuel oil as referenced in paragraph C.11. of this Trading Agreement and Order and shall be retired by the facility and permanently removed from all calculations on a daily basis. An additional ten (10) percent of all DERCS (tons) generated by the boiler shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

b. Non-ozone Season Restrictions. Non-ozone season NOx DERCS generated by MP shall be created and approved in accordance with this Trading Agreement and Order, and shall remain valid until they are used or until May 1, 2003, whichever occurs first.

c. Ozone Season Restrictions. The boiler is subject

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to Section 22a-174-22a of the Regulations ("NOx Budget Program") in 1999 and every year thereafter. The boiler may generate ozone season BDERCs to comply with Section 22a-174-22 of the Regulations in accordance with paragraph C.1.a. of this Trading Agreement and Order and the following conditions and restrictions: 1) BDERCs shall only be generated by the boiler from May 1 through September 30 of a given year, 2) BDERCs shall only be used by other NOx Budget Program sources located in Connecticut, 3) BDERCs shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BDERCs generated during a given year shall only be used during the following ozone season, with the exception of BDERCs generated during 1999, which may be used in the 2001 ozone season. For example, BDERCs generated during the 1999 ozone season may be used during the 2001 ozone season. However, BDERCs generated during the 2000 ozone season may only be used during the 2001 ozone season. BDERCs may be generated until May 1, 2003. BDERCs are subject to all DERC requirements set forth in this Trading Agreement and Order except for those requirements pertaining solely to non-ozone season DERCs and as otherwise may be provided.

2. DERC Use. Approved DERCs shall be acquired for compliance with the emission standards in Section 22a-174-22 of the Regulations for the period beginning December 15, 1999 and continuing until MP achieves permanent compliance for the boiler with the emission standards in Section 22a-174-22(e) of the Regulations or until May 1, 2003, whichever occurs first. MP shall acquire approved DERCs, and document and record the amounts of NOx emissions and DERCs used by serial number (if assigned) by the boiler each day, and shall maintain and provide such records in accordance with the following and Section 22a-174-4 of the Regulations, until May 1, 2003:

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Date:

3/1/02

Middletown Power LLC

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- a. Before the first day of each month, calculate projected worst case DERCs required for that calendar month as follows:

DERCs (tons) = {[estimated worst case NOx emission rate in lbs/MMBtu - ((0.95) x (NOx RACT limit or proportioned emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in lbs/MMBtu))] x (Estimated fuel use in MMBtu)} + 2000 pounds.

- b. Acquire sufficient approved DERCs no later than the first day of each month to assure compliance with the emission standards in Section 22a-174-22 of the Regulations for, at a minimum, that calendar month. With the exception of BDERCs, excess DERCs from previous months can be applied to subsequent months. BDERCs are subject to the limitations set forth in paragraph C.1.c. of this Trading Agreement and Order. At a minimum, DERCs required shall be adjusted upwards by 100% if DERCs are not in MP's possession prior to the first day of each month.

- c. No later than the twentieth day of each month, calculate DERCs used in the preceding calendar month, as follows:

- (1) For the boiler on each day, determine whether the 24-hour average NOx emission rate\* is less than the baseline emission rate or greater than the NOx RACT limit.
- (2) When the boiler has a daily NOx emission rate (24-hour average) exceeding the NOx RACT limit, calculate the amount of DERCs used, as follows:

DERCs (tons) = {[(CEM-recorded NOx daily average emission rate in lbs/MMBtu\*) - ((0.95) x (NOx RACT limit or proportioned emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in

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lbs/MMBtu)) x (actual fuel use in MMBtu)) +  
2000 pounds.

\*This rate shall be calculated pursuant to  
the methodology described in 40 CFR Part 75.

- d. Maintain documentation to attest to the fact that DERCs used during the ozone season were generated during the ozone season. Generator certification of this fact shall be sufficient.
  - e. After full program review, and if the Commissioner deems it appropriate, the Commissioner may allow the survival and use of approved DERCs beyond April 30, 2003, subject to the limitations set forth in paragraph C.1.c. of this Trading Agreement and Order.
  - f. Pursuant to Section 22a-174-22(d)(3) of the Regulations, MP may use NOx allowances, pursuant to Section 22a-174-22(j) of the Regulations to achieve all or a portion of the reductions required by Section 22a-174-22 of the Regulations. Any allowance used for compliance with Section 22a-174-22(e) of the Regulations shall be subject to all restrictions and/or requirements applicable to DERCs contained in this Trading Agreement and Order.
3. MP shall maintain records for the boiler showing daily NOx mass emissions, and actual NOx emission rates (24-hour average). MP shall also maintain records showing a daily total of all DERCs generated net of the applicable uncertainty and environmental discounts.
  4. In requesting approval of DERCs generated by the boiler, MP shall provide documentation containing a sample spreadsheet with calculation formulas used to determine reported numbers; monthly operating reports of actual fuel usage including the fuel BTU content, number of barrels, gallons, and cubic feet used for each fuel type; daily MMBtu for each fuel type and actual heat input based upon CEM-recorded data; daily weighted and unweighted actual NOx emission rates (24-

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- hour average); and DERCs generated using the baseline emission rate(s), or the proportioned baseline emission rate referenced in paragraph C.1. of this Trading Agreement and Order, net of the applicable uncertainty and environmental discounts.
5. When the daily CEM-recorded NOx emission rate is used to calculate DERCs generated by the boiler, MP shall not include missing data calculated in accordance with any missing data substitution procedures, including those allowed under 40 CFR Part 75. When the daily CEM-recorded NOx emission rate is used to calculate DERCs used by the boiler, MP shall include missing data calculated in accordance with missing data substitution procedures under 40 CFR Part 75.
  6. No later than March 1 of every year after issuance of this Trading Agreement and Order, MP shall include with the Annual Emission Statement provided to the Commissioner, a record of each sale or other transfer, and use of any and all of the DERCs approved within and subsequent to issuance of this Trading Agreement and Order until all such DERCs have been used. MP shall also include actual NOx emissions from the boiler, and the amount of all DERCs used (including serial numbers (if assigned) and approved DERCs generated and/or purchased from other facilities), generated and/or approved for the previous calendar year. These reports shall be on a form prescribed by the Commissioner. This reporting may cease if a central registry is approved by the Commissioner. Should MP choose to discontinue the generation of DERCs, MP shall notify the Commissioner in writing upon discontinuance.
  7. In order to consider CEM-recorded NOx emission rates valid for DERC approval, all NOx and CO<sub>2</sub>/O<sub>2</sub> CEMs must comply with 40 Code of Federal Regulations Part 75.
  8. MP shall retain records and supporting documentation as described in this Trading Agreement and Order for a minimum of five years, commencing on the date such records were created. MP shall provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the

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Commissioner.

9. Upon sufficient documentation, as determined by the Commissioner, that MP has met the requirements of paragraphs C.1., C.2., C.3, C.4., C.5., C.7., C.10., and C.11., of this Trading Agreement and Order, the Commissioner may provide written approval of DERCs generated by MP retrospectively, in addition to those approved in paragraph B. of this Trading Agreement and Order. Requests for approval of all subsequent DERCs generated shall be submitted in writing to the Commissioner. Approved DERCs created by MP may be held or transferred to other persons. Such DERCs shall remain valid until they are used or until May 1, 2003, whichever occurs first.
10. Should MP choose to generate additional DERCs, reports documenting these DERCs shall be submitted to the Commissioner on an ozone season, non-ozone season (January through April and/or October through December), or annual basis. Such reports shall be compiled on a monthly basis and shall be submitted at least on an annual basis.
11. When the boiler has daily NOx emissions below the applicable baseline emission rate(s), or the proportioned baseline emission rate, MP shall calculate the amount of DERCs generated as follows:

$$\text{DERCs (tons)} = \{[\text{Total heat input}^1 \text{ of all fuels in MMBtu} \times ((\text{proportioned baseline emission rate}^2) - (\text{the CEM-recorded NOx emission rate}^3))] \div 2000 \text{ lbs/ton}\} \times (0.90).^4$$

where:

<sup>1</sup> Heat input shall be calculated using the lower of CEM-recorded data or actual fuel usage data in MMBtu per unit of fuel combusted.

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<sup>2</sup> This rate shall be calculated by 1) multiplying the heat input of each fuel combusted by the baseline emission rate(s) for such fuel; 2) summing those products; and 3) dividing the sum by the total heat input. If the boiler is operating exclusively on one fuel, MP may replace the proportioned baseline emission rate with the applicable baseline emission rate, for that fuel. The ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boiler is operating on No. 2 fuel oil.

<sup>3</sup> This rate shall be calculated pursuant to the methodology described in 40 Code of Federal Regulations Part 75 and weighted pursuant to the Department of Environmental Protection's policy statement entitled "Guidance for Calculation of Emission Reduction Credits and Determination of Compliance with NOx RACT for Sources Subject to 40 CFR (Acid Rain Sources)" dated 12/18/98 which is attached to and incorporated by reference into this Trading Agreement and Order as part of Attachment 1.

<sup>4</sup> An additional ten (10) percent of all DERCS (tons) generated by the boiler shall also be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

12. Each allowance used for compliance with Section 22a-174-22 of the Regulations shall be equivalent to one discrete emission reduction credit and shall be deducted from MP's NOx Budget Program compliance account upon such use. Allowances shall be considered used for compliance with Section 22a-174-22 of the Regulations when they are transferred from the facility's compliance account or overdraft account to a State of Connecticut NOx allowance retirement account.
13. Approvals. MP shall use best efforts to submit to the Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form.

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If the Commissioner notifies MP that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and MP shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.

14. Definitions. As used in this Trading Agreement and Order, "Commissioner" means the Commissioner or a representative of the Commissioner; "Ozone season" means the period from May 1 through September 30 in any given calendar year; "NOx RACT" means NOx Reasonably Available Control Technology. The date of "issuance" of this Trading Agreement and Order is the date the Trading Agreement and Order is deposited in the U.S. mail or personally delivered, whichever is earlier.
15. Dates. The date of submission to the Commissioner of any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Trading Agreement and Order, the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.
16. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by MP or, if MP is not an individual, by MP's chief executive officer or a duly authorized representative of such officer, as those terms are defined in §22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such document, and MP or MP's chief executive officer and

each such individual shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law."

17. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject MP to an injunction and penalties.
18. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.
19. Notice of transfer; liability of MP. Until MP has fully complied with this Trading Agreement and Order, MP shall notify the Commissioner in writing no later than 15 days after transferring all or any portion of the facility, the operations, the site or the business which is the subject of this Trading Agreement and Order or after obtaining a new mailing or location address. MP's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
20. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by MP pursuant to this Trading Agreement and Order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require MP to undertake further investigation or further action to prevent or abate violations or pollution.
21. MP's obligations under law. Nothing in this Trading

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Agreement and Order shall relieve MP of other obligations under applicable federal, state and local law.

22. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by MP pursuant to this Trading Agreement and Order will result in compliance or prevent or abate pollution.
23. Access to facility. Any representative of the Department of Environmental Protection may enter the facility without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
24. No effect on rights of other persons. This Trading Agreement and Order neither creates nor affects any rights of persons or municipalities that are not parties to this Trading Agreement and Order.
25. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these DERCS.
26. Notice to Commissioner of changes. Within 15 days of the date MP becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, MP shall submit the correct or omitted information to the Commissioner.
27. Notification of noncompliance. In the event that MP becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, MP shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice, MP shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and MP shall comply with any dates which may be approved in writing by the Commissioner. Notification by MP shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by

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the Commissioner in writing.

28. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in this Trading Agreement and Order or in writing by the Commissioner, be directed to:

Wendy Jacobs  
Department of Environmental Protection  
Bureau of Air Management  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106-5127

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Date:

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Middletown Power LLC

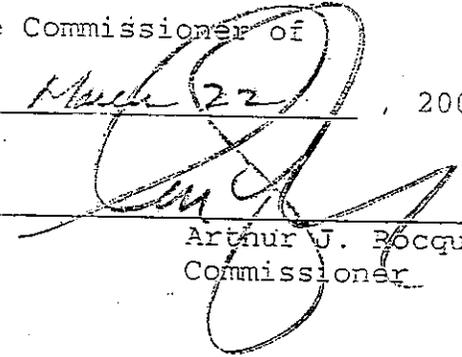
Trading Agreement  
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MP consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind MP to the terms and conditions of the Trading Agreement and Order.

Middletown Power LLC

Signature: Bryan K. Riley  
Type Name: Bryan K. Riley  
Type Title: Vice President  
Date: 3/1/02

Issued as a final order of the Commissioner of  
Environmental Protection on March 22, 2002.

  
Arthur J. Rocque, Jr.  
Commissioner

TOWN OF MIDDLETOWN LAND RECORDS

MAILED CERTIFIED MAIL, RETURN RECEIPT REQUESTED  
Certified Document No.

**PROPOSED REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22  
THROUGH USE OF  
DISCRETE EMISSION REDUCTION CREDITS (DERC's)**

**MIDDLETOWN POWER LLC  
Trading Agreement and Order No. 8182**

**August, 2002**

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By Trading Agreement and Order**

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in Economic Incentive Program (EIP) guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from NOx control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program is to approve creation of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of nitrogen oxides (NOx). Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving these emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions

to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for timelier rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of inter-temporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone

season. Only the DERCS produced during ozone-season months of May through September are available for use during the ozone season.

DERCS are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCS are utilized by sources. Upon approval by the Commissioner, however, such DERCS may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCS may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCS used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERCS generation and use will allow timely program changes, as required.

Use of these DERCS will not jeopardize RFP since the state's NOx rule emission limits for the source creating the DERCS are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERCS use and creation by the state will allow for timely program changes if the use of DERCS exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCS improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCS upon their creation to assure a benefit to the environment and the inventorying of DERCS prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For

individual sources, the baseline will be the lower of actual or allowable emissions.

#### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the trading agreement and order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the overall performance of the program is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION & USE**

**A. Administering Agency:**

The State of Connecticut  
 Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source and Identifier:**

Middletown Power LLC  
 1866 River Road  
 Middletown, Connecticut  
 Unit 10- Pratt and Whitney FT4A-9 turbine generator

**D. Designated Representative:**

Ms. Cynthia Karlic  
 Regional Manager  
 Telephone No. (860) 638-3170

**E. CT Nonattainment Area Classification: Serious**

**F. Summary of Compliance:**

**Time Period:** On and after December 15, 1999 - prior to May 1, 2003.

**Purpose:** NOx emission reduction compliance for the peaking unit in Table 1:

**Annual DERCs needed:** Estimated 20 DERCs.

**Max. Emission Rate:** Full load emission rate (FLER) (see Table 1 below):

Table 1 MP - NOx EMISSION RATE AND RACT LIMIT (lbs/MMBtu)						
Peaking Unit	FUEL	FLER (lbs/MMBtu)	NOx RACT Rate (lbs/MMBtu)	Stack Test Rate (ppmvd)	Stack Test Rate (lbs/MMBtu)	Date of Stack Test
Middletown 10	other oil	0.67	0.289	159.7*	0.61*	10/18/96

(\*) Indicates exceedance of the RACT rate limit for that fuel.

## G. DESCRIPTION OF COMPLIANCE

Middletown Power LLC (MP) is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 MP purchased from The Connecticut Light and Power Company and now owns one (1) piece of fuel-burning equipment ("peaking unit") identified in Table 1 of Trading Agreement and Order No. 8182. This peaking unit is a combustion turbine. On and after December 15, 1999 NRG Middletown Operations Inc. will operate the peaking unit identified in Table 1 of Trading Agreement and Order No. 8182 at MP's facility. Pursuant to Section 22a-174-22 of the Regulations, The Connecticut Light and Power Company filed a NOx compliance plan dated September 1, 1994. In this plan, The Connecticut Light and Power Company indicated that the peaking unit was not able to meet the NOx RACT limit of 75 ppmvd. The peaking unit is registered and operates subject to the requirements of Section 22a-174-22 of the Regulations. After May 31, 1995 the peaking unit is required to have a NOx emission rate limitation of 75 ppmvd, averaged over 3 hours. In order to achieve compliance, MP proposes to acquire emission reduction credits for the amount of NOx emissions that exceed the standards between December 15, 1999 and May 1, 2003 or until it achieves compliance through NOx controls or other approved means. Pursuant to Section 22a-174-22(j) of the Regulations, MP proposes to acquire sufficient quantities of approved DERCs in advance of each month to offset excess NOx emissions on a monthly basis from the peaking unit in accordance with the protocol of the Department's "*Credit Trading for Sources with Irregular NOx Emissions*", dated November 5, 1997.

In accordance with Section 22a-174-22(j) of the Regulations, MP proposes to use DERCs for compliance at the Middletown Station peaking unit. Each month, the quantity of DERCs required to offset the excess emissions generated during that month by the peaking unit above the RACT limit will be determined. DERCs previously purchased and/or acquired and on-hand will be used to offset any remaining balance of excess emissions (debits) for that month. Design margins will be applied to the RACT emission rate for the peaking unit to ensure an environmental benefit.

On December 15, 1999, MP initially acquired from The Connecticut Light and Power Company, sufficient approved ozone season DERCs and non-ozone season DERCs to offset excess NOx emissions. MP will use (retire) approximately 17 tons of DERCs to offset excess emissions annually. The DERCs will be used thereafter in accordance with the requirements in this SIP and attached Trading Agreement and Order No. 8182. Additional DERCs will be purchased or acquired as needed prior to use based on anticipated future fuel use through May 1, 2003. The number of DERCs initially acquired were calculated based on the estimated fuel usage for the peaking unit and the FLER listed in Table 1.

The NOx emission test rate was determined during the official testing program (approved stack testing) conducted on October 18, 1996. The FLER, as shown in Table 1, is used to calculate actual emissions for the peaking unit and is an enforceable limit for the peaking unit. Prior to May 1, 2003, MP will comply during operation of the peaking unit with the FLER, the 5 percent design margin and the NOx emission limit shown in Table 1 of Trading Agreement and Order No. 8182.

Starting December 15, 1999 and no later than the tenth day of each month, beginning the month after execution of Trading Agreement and Order No. 8182, MP will calculate actual DERCs used

in the preceding calendar month, in accordance with Trading Agreement and Order No. 8182.

MP shall calculate the actual DERCS required for the calendar month for the peaking unit and fuel used in excess of the RACT limit, based on the following calculations (described also in Exhibit 1 of Trading Agreement and Order No. 8182):

**At all times (mass calculation):**

$$\text{ERCs (in tons)} = [((\text{FLER in lbs/MMBtu}) - (0.95 \times \text{NOx RACT in lbs/MMBtu})) \times (\text{actual fuel use in lbs/MMBtu})] \div 2000 \text{ pounds/ton}$$

**During the ozone season only (peak day calculation):**

the maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthy," "unhealthy," or "very unhealthy," divided by 3 and then divided by 13 (with the result in tons):

$$\text{ERCs (in tons)} = [(\text{Maximum excess NOx in lbs}) \div 3] \div [13 \text{ lbs/day/ton}]$$

Where:

- FLER = full load emission rate presented in Table 1;
- RACT rate = RACT rate presented in Table 1;
- Discount = 5% design margin applied to the RACT rate.

As described in Exhibit 1 of Trading Agreement and Order No. 8182, to the extent that DERCS used to offset on a peak day basis during the ozone season exceed the total mass excess emissions, remaining DERCS may be used in the non-ozone season in the same or subsequent years until May 1, 2003. However, non-ozone season DERCS may only be used during the non-ozone season until May 1, 2003.

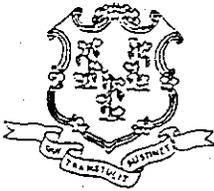
## **H. SOURCE OF DERCS**

On December 15, 1999, MP has initially acquired approved ozone season DERCS and non-ozone season DERCS from The Connecticut Light and Power Company, approved by the Department on April 29, 1999 and other dates in 1999.

MP may use or consume fewer DERCS than it intends to purchase because of a lower operating rate or upon early establishment of controls or other emission limitation strategies which result in attainment of NOx limitations applicable to the emitting peaking unit. Such residual DERCS may not be used for any purpose other than that described in Trading Agreement and Order No. 8182, contained in Exhibit 3, without the written approval of the Commissioner.

Pursuant to the intent of Section 22a-174-22a(f)(4) of the Regulations, MP may use allowances acquired pursuant to the provisions of Section 22a-174-22a of the Regulations to comply with subsection (e) of Section 22a-174-22 of the Regulations pursuant to the provisions of subsection (j) of Section 22a-174-22 of the Regulations as long as MP remains an owner or operator of a budget source, for purposes of this Trading Agreement and Order. Any allowance used for compliance with subsection (e) of Section 22a-174-22 of the Regulations shall be subject to all restrictions and/or requirements applicable to DERCs contained in this Trading Agreement and Order and/or Section 22a-174-22a of the Regulations.

MP may acquire additional approved DERCs at any time prior to the need to use such DERCs. MP will at all times maintain a balance of approved DERCs sufficient to allow operation for the current month. If, upon audit or inspection, MP fails to demonstrate possession of an adequate amount of DERCs to cover the current month, it will be subject to violation as prescribed in Sections 22a-174-12 and 22a-174-22 of the Regulations.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of  
The State of Connecticut  
and  
Middletown Power LLC

Trading Agreement  
and Order No. 8182

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Middletown Power LLC ("MP") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of emission reduction credit ("ERC") trading to reduce nitrogen oxide ("NOx") emissions will achieve this result in a timely and cost-effective manner:

A. At the request and with the agreement of MP, the Commissioner finds the following:

1. MP is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On or before December 31, 1999 MP will purchase from The Connecticut Light and Power Company and then own one (1) piece of fuel-burning equipment ("peaking unit") identified in Table 1 of this Trading Agreement and Order. This peaking unit is a combustion turbine.
2. On or before December 31, 1999 NRG Middletown Operations Inc. will operate the peaking unit identified in Table 1 of this Trading Agreement and Order at MP's facility.
3. Official U.S. Environmental Protection Agency ("EPA") Reference Method 7E stack testing performed on the date indicated in Table 1, resulted in a NOx emission rate set forth in Table 1.

Peaking Unit	FUEL	FLER (lbs/MMBtu)	NOx RACT Rate (lbs/MMBtu)	Stack Test Rate (ppmvd)	Stack Test Rate (lbs/MMBtu)	Date of Stack Test
Middletown 10	other oil	0.57	0.289	159.7	0.61	10/18/96

4. The emission rate for the peaking unit and fuel specified in Table 1 is in excess of Section 22a-174-22, Table 22-2, of the Regulations of Connecticut State Agencies ("Regulations"), NOx emission rate limits (Reasonably Available Control Technology "RACT").

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Date 12/29/99

5. Pursuant to Section 22a-174-22(b) of the Regulations, the peaking unit is subject to Sections 22a-174-22(d) through (k) of the Regulations, pertaining to the control of NOx emissions.
  6. In accordance with Section 22a-174-22(j) of the Regulations, MP proposes that for the peaking unit identified in Table 1, MP shall use ERC trading when burning "other oil", as that term is defined in Section 22a-174-22 of the Regulations.
  7. Pursuant to the Department of Environmental Protection's "Credit Trading for Sources with Irregular NOx Emissions" policy, with a revised date of November 5, 1997, attached hereto and incorporated by reference into this Trading Agreement and Order as Exhibit 1, the peaking unit has peak daily NOx emissions greater than three times the average daily emissions during the ozone season and is therefore considered a source with irregular NOx emissions.
  8. Based on DEP approved stack test data, it has been determined that the peaking unit's emissions will not meet the applicable requirements of RACT contained in Section 22a-174-22 of the Regulations. MP proposes to use a Full Load Emission Rate ("FLER") identified in Table 1 for the purposes of calculating ERCs required.
  9. MP intends to continue acquiring approved ERCs as needed.
  10. Approved ERCs are defined for the purpose of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations.
- B. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, and pursuant to Section 22a-174-22 (j) of the Regulations hereby allows MP to comply with Section 22a-174-22 of the Regulations through use of ERC trading referenced in Section A, herein, to achieve the nitrogen oxide emission reduction required by Section 22a-174-22(d) (2) of the Regulations.
- C. With the agreement of MP, the Commissioner, acting under Connecticut General Statutes Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177, orders MP as follows:
1. Upon issuance of this Trading Agreement and Order MP shall comply during operation of the peaking unit with the FLER shown in Table 1 above.
  2. On and after the date which MP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, MP shall have in its possession sufficient approved ERCs to meet applicable RACT requirements and the requirements of this Trading Agreement and Order.
  3. On and after the date which MP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, MP shall, on a daily basis, document and record the amounts of all fuel used by the peaking unit each day and the number of ERCs used for the ozone season (from May 1 through September 30 of each year) and non-ozone season (the remainder of the year).
  4. On and after the date which MP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, pursuant to Section 22a-174-22(j) of the Regulations, MP shall acquire from The Connecticut Light and Power Company sufficient approved non-ozone season ERCs in order to meet applicable RACT requirements and the requirements of this Trading Agreement and Order for the operation of the peaking unit identified in Table 1 of this Trading Agreement and Order during the month of December, 1999.

5. Except as provided in paragraph C.4. of this Trading Agreement and Order, on and after the date which MP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, pursuant to Section 22a-174-22(j) of the Regulations, MP shall acquire from The Connecticut Light and Power Company sufficient approved ozone and non-ozone season ERCs in order to meet applicable RACT requirements and the requirements of this Trading Agreement and Order for the following month's operation.
6. In accordance with Exhibit 1 of this Trading Agreement and Order, ozone season ERCs for use during the ozone season shall be purchased by MP prior to the beginning of the ozone season.
7. On and after the date which MP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, MP shall maintain and provide the records required by paragraph C.3. of this Trading Agreement and Order in accordance with the following and Section 22a-174-4 of the Regulations, and shall:
- Have in its possession sufficient approved ERCs for the current day, based on the following calculations (described also in Exhibit 1);
 

At all times (mass calculation):

$$\text{ERCs (in tons)} = [((\text{FLER in lbs/MMBtu}) - (0.95 \times \text{NOx RACT in lbs/MMBtu})) \times (\text{actual fuel use in lbs/MMBtu})] + 2000$$

During the ozone season only (peak day calculation):

the maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthy," "unhealthy," or "very unhealthy," divided by 3 and then divided by 13 (with the result in tons):

$$\text{ERCs (in tons)} = [(\text{Maximum excess NOx in lbs}) + 3] + [13 \text{ lbs/day/ton}]$$
  - At a minimum, adjust upwards by 100% the ERCs required if ERCs are not in MP's possession prior to use;
  - As described in Exhibit 1 of this Trading Agreement and Order, to the extent that ERCs used to offset on a peak day basis during the ozone season exceed the total mass excess emissions, remaining ERCs may be used in the non-ozone season in the same or subsequent years until May 1, 2003;
  - Document and record daily fuel use, excess NOx emissions and, during the ozone season, the ozone classification as forecasted by the Commissioner on the previous day;
  - No later than March 1, 2000, 2001, 2002, 2003 and 2004, include with its annual emissions report to the Commissioner, ERCs used (calculated as described in section C.7.a. above), by ozone and non-ozone seasons, for the previous calendar year;
  - Retain the records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records are created;
  - Maintain documentation to attest to the fact that ERCs used during the ozone season were generated during the ozone season. The ozone season is from May 1 through September 30 in any calendar year. Generator certification of this fact shall be sufficient; and

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RETDate 12/29/99

- h. Provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
8. Pursuant to the intent of Section 22a-174-22a(f)(4) of the Regulations, MP may, for a budget source, use allowances acquired pursuant to the provisions of Section 22a-174-22a of the Regulations to comply with subsection (e) of Section 22a-174-22 of the Regulations pursuant to the provisions of subsection (j) of Section 22a-174-22 of the Regulations as long as MP remains an owner of that budget source, for purposes of this Trading Agreement and Order. Any allowance used for compliance with subsection (e) of Section 22a-174-22 of the Regulations shall be subject to all restrictions and/or requirements applicable to ERCs contained in this Trading Agreement and Order and/or Section 22a-174-22a of the Regulations.
9. The terms and conditions established by this Trading Agreement and Order shall become effective on the date MP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, and upon issuance of this Trading Agreement and Order.
10. No later than May 1, 2003, MP shall comply with the requirements of Section 22a-174-22(d)(2) of the Regulations. However, after full program review of this and other Trading Agreements and Orders and, if determined to be appropriate, the Commissioner may grant a written extension of this Trading Agreement and Order.
11. Definitions. As used in this order, "Commissioner" means the Commissioner of Environmental Protection or an agent of the Commissioner. "Other oil" means a fuel that is liquid at standard conditions and is not residual oil. "Residual oil" means any fuel oil of No. 4, No. 5, or No. 6 grades, as defined by Commercial Standard C.S. 12-48. "Ozone season" means the period from May 1 through September 30 in any given calendar year. "Issuance" means the date this Trading Agreement and Order is deposited in the U.S. Mail or the date it is personally delivered, whichever is earlier.
12. Notification of noncompliance. In the event that MP becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, MP shall by telephone immediately notify the Bureau of Air Management and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. MP shall also notify the Commissioner in writing within ten days of becoming aware of the noncompliance or potential noncompliance stating the date, time, and duration of the noncompliance, the reasons for the noncompliance or delay and all activities which MP and its agents, employees and representatives took to avoid or repair the results of the noncompliance and prevent the noncompliance, and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved. MP shall comply with any dates which may be approved in writing by the Commissioner. Notification by MP shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing. Nothing herein shall negate MP's obligation to comply with Section 22a-174-7 of the Regulations. To the extent that the provisions of Section 22a-174-7 are inconsistent with the provisions of this Trading Agreement and Order, the more stringent of the provisions in the Trading Agreement and Order or Section 22a-174-7 shall control.
13. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by the responsible corporate officer of MP or a duly

authorized representative of such officer, as those terms are defined in Section 22a-430-3(b)(2) of the Regulations, and by the individual or individuals responsible for actually preparing such document, each of whom shall examine and be familiar with the information submitted in the document and all attachments thereto, and shall make inquiry of those individuals responsible for obtaining the information to determine that the information is true, accurate, and complete, and each of whom shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes or, in accordance with Section 22a-6 of the Connecticut General Statutes, under Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

14. Final Agreement and Order. This Trading Agreement and Order is the final agreement and order by and between the Commissioner and MP with respect to the matters addressed herein, and shall not be modified without the written agreement of both parties.
15. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes or, in accordance with Section 22a-6, under Section 53a-157b of the Connecticut General Statutes.
16. Notice of transfer; liability of MP and others. Until MP has fully complied with this Trading Agreement and Order, MP shall notify the Commissioner in writing no later than fifteen (15) days after transferring all or any portion of the facility, the operations, the site or the business which are the subject of this Trading Agreement and Order, or obtaining a new mailing or location address. Any license transfer shall be conducted in accordance with Section 22a-50 of the Connecticut General Statutes. MP's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
17. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law, which are willful or criminally negligent or for which penalties have not been specifically provided in this Trading Agreement and Order, including but not limited to violations of any permit issued by the Commissioner. If at any time the Commissioner determines that the actions taken by MP pursuant to this Trading Agreement and Order have not fully achieved compliance with Section 22a-174-22 of the Regulations, the Commissioner may institute any proceeding against MP and/or require MP to undertake further investigation or further action.
18. MP's obligations under law. Nothing in this Trading Agreement and Order shall relieve MP of other obligations under applicable federal, state and local law.
19. Access to records and facility. Any representative of the Department of Environmental Protection may enter and inspect the facility and inspect and copy records within normal business hours without prior notice for the purposes of monitoring and enforcing

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the actions required or allowed by this Trading Agreement and Order.

20. No effect on rights of other persons. This Trading Agreement and Order shall neither create nor affect any rights of persons who or municipalities which are not parties to this Trading Agreement and Order.
21. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these ERCs.
22. Notice to Commissioner of changes. Within fifteen (15) days of the date MP becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, MP shall submit the correct or omitted information to the Commissioner.
23. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in writing by the Commissioner, be directed to:

Mr. David Jawin  
Department of Environmental Protection  
Bureau of Air Management  
Compliance and Field Operations Division  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106

Middletown Power LLC

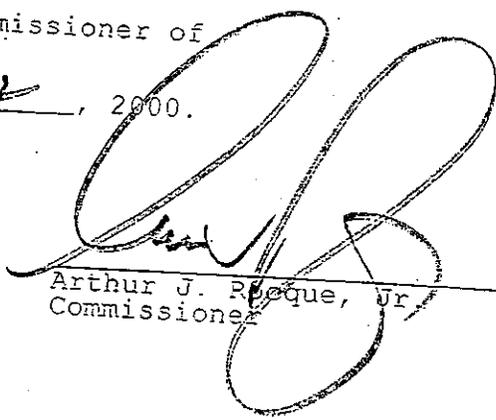
Trading Agreement  
and Order No. 8182

MP consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind MP to the terms and conditions of the Trading Agreement and Order.

Middletown Power LLC

Signature:   
Type Name: Robert S. Evans II  
Type Title: Executive Director, Environmental Services  
NRG Energy, Inc.  
Date: 12/29/99

Issued as a final consent order of the Commissioner of  
Environmental Protection on January 12, 2000.

  
Arthur J. Peque, Jr.  
Commissioner

CITY OF MIDDLETOWN  
LAND RECORDS

MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document

Exhibit 1  
Trading Agreement and Order No. 8182



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



REVISED 11/5/97

Credit Trading for Sources with Irregular NOx Emissions

The following outlines the Department's concerns and methodology for dealing with NOx compliance pursuant to §22a-174-22(j), Regulations of Connecticut State Agencies ("Regulations"), emission trading for "peakers" and other sources that have peak emissions that are substantially higher than their average daily emissions. For purposes of this protocol, peaking units are defined as sources with peak daily NOx emissions greater than three times their average daily emissions during the ozone season.

The basic concept of the trading program is that sources with excess NOx emissions (a rate that exceeds the rate limits in the Regulations) may obtain NOx emission reduction credits ("ERCs") from sources that have "over-controlled" their NOx emissions. Although typical sources can obtain credits on a mass basis (one ton of ERCs to offset one ton of excess emissions) with an acceptable environmental outcome, sources with large variations in emissions from day to day pose an additional problem for ozone attainment planning.

The most common peaking units or "peakers" are electricity generating units that run during times of high electricity consumption. Electricity demand is often the highest during hot, humid days of the summer when the potential for ozone formation is also high. Peakers frequently have high emission rates. To the extent that these units produce emissions at exactly the time when emissions need to be reduced to limit ozone formation, allowing peakers to continue to comply with new rate limits through the use of ERCs on a ton-for-ton basis will exacerbate this effect. On the other hand, if it can be demonstrated that the ERCs being used by peakers were generated on a comparable basis (i.e., during days of high ozone potential), then ton-for-ton use by peakers would be appropriate.

The full impact of the NOx emissions from these types of facilities during summer operation must consider temporal variability as well as mass of excess emissions. Any ERC trade must consider equivalency to the NOx reductions that control equipment would produce on an ozone day on both a temporal and a mass basis. The protocol below places appropriate requirements on peaking units to reflect the greater impact of NOx emitted under this type of usage pattern. Attachment 1 provides a detailed example of this issue.

*NOx Emissions Reduction Credit Use Computation For Peakers*

- Peaking units are only considered to be a temporal issue for the ozone season months.
- All excess NOx emissions during the winter (non-ozone season) need only be offset by ERCs on a mass basis.
- Prior to each ozone season there will be a prospective calculation to determine how many tons of ERCs must be "on hand" during the ozone season. A retrospective calculation will determine how many ERCs were actually "used" during the ozone season.

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*For ERC use during the ozone season:*

1. Prospective calculation determines the number of ERCs that must be provided for the ozone season. (Beginning in 1996, the ERCs must be in place no later than May 1.)

ERCs required for the ozone season shall be calculated based on: (a) a mass basis (total anticipated excess NOx emissions over the ozone season) and (b) a peak-day basis (maximum excess emissions for any day during the ozone season). Sources will be required to provide credits equal to the greater of the amount calculated on a mass or peak-day basis. The timing of actual credit provision will be governed by the terms of the specific trading order issued for that source.

- (a) **Mass basis:** ERCs required will be equal to the total number of tons of anticipated excess NOx emissions over the entire ozone season, calculated in the same manner used for other sources using ERCs (i.e., including any discounts).
- (b) **Peak (daily rate) basis:** ERCs (in tons) required will be calculated by dividing one-third of the maximum daily excess emissions\* (in pounds) by 13 pounds/day/ton:

$$\text{ERCs required (tons)} = [(\text{Maximum Estimated Excess NOx in lbs.}) + 3] \div [13 \text{ lbs./day/ton}]$$

\*Where maximum daily excess NOx emissions are the difference between the maximum estimated hours of operation per day at the full-load-emission-rate and 95% of the allowable NOx emissions under Section 22a-174-22(e) of the Regulations.

2. Retrospective calculation will determine the actual credit use and the ERC surplus, if any. At the end of the ozone season, the calculations required in item 1 above will be repeated using (a) the actual total excess emissions for the ozone season, and (b) the maximum actual excess NOx emissions on any of the days projected by the Commissioner to be "moderate to unhealthful", "unhealthful", or "very unhealthful". The actual "ERCs required" will be the greater of the ERCs calculated on the basis of total mass or maximum (peak) day. To the extent that the number of ERCs used to offset peak day emissions exceed the total mass of excess NOx emissions for the ozone season, the remaining mass value of such ERCs may be carried forward for use in the winter (non-ozone season). Any unused ERCs may be carried forward until May 1, 1999, except as may be limited by the trading agreement and order, or by regulation.

*Exhibit I*  
*ERC Calculation for Peaking Units*

Unless it can be demonstrated otherwise, ERCs are assumed to be created by relatively small daily reductions in NOx emissions over the course of an entire ozone season (153 days). The average daily NOx emissions reduction represented by one ton of credit is 13 pounds/day calculated as follows:

$$(1 \text{ ton}) \times (2000 \text{ pounds/ton}) \div 153 \text{ days} = 13 \text{ pounds/day/ton}$$

Thus, an ERC (ton) would be equivalent to a reduction in NOx emissions of 13 pounds/day.

**EXAMPLE.** If a "peaking" source were to emit one ton of excess NOx per day when operating, but only operates for five days during the ozone season, the owner/operator of the source would nominally need to obtain five tons of ERCs. However, those ERCs are likely to have been created by relatively small daily reductions in NOx emissions over the course of an entire ozone season (153 days). In this example, assuming a purchase of five tons of ERCs, that calculates out to a daily NOx reduction of approximately 65 pounds.

$$(5 \text{ tons} \times 2000 \text{ pounds/ton}) \div 153 \text{ days} = 65 \text{ pounds/day}$$

Clearly, on any day that the "peaking" unit operates, there is much more excess NOx emissions that will not have been offset, on the order of 1,935 pounds:

$$(1 \text{ ton} \times 2000 \text{ pounds/ton}) - (65 \text{ pounds credit}) = 1,935 \text{ pounds excess NOx emissions}$$

While the total amount of NOx emitted would be controlled on a seasonal average basis, on the "peaking" day there would be a potentially significant increase in NOx emitted, and thus an increase in potential ozone creation. In order to achieve a commensurate reduction in ozone creation potential for peakers, an adjustment in the calculation of required ERCs is needed. One approach would be to require ERCs in a quantity that would ensure that the daily average reduction represented by those ERCs would equal the maximum daily excess NOx emissions from the peaking source on any day that it ran. On this basis, a peaking source with a maximum 24-hour excess NOx emission of one ton would be required to purchase 153 tons of ERCs.

$$1 \text{ (ton)/day} \times 153 \text{ days/season} = 153 \text{ tons}$$

This 153 tons of ERCs would be adequate to "offset" excess emissions of one ton per day for as many days as the source operated during a particular ozone season. This has been deemed to be unduly stringent, given some diversity in operation of these sources. In light of the foregoing, this requirement is adjusted downward by two-thirds.

**REVISION TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Section 22a-174-22 Regulations of Connecticut State Agencies  
THROUGH USE OF DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

**Middletown Power, LLC  
Consent Order No. 8227**

**April 2002**

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## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency's (EPA) State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in EIP guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from nitrogen oxides (NOx) control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program includes approval of creation and use of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with Section 22a-174-22 of the Regulations of Connecticut State Agencies (Regulations), regarding control of NOx. Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for more timely rule compliance because more options are available to the

regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCs may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of DERCs will not jeopardize RFP since the state's NOx rule emission limits for the sources creating and/or using DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### C. BASELINE

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources the baseline will be the lower of actual or allowable emissions.

#### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with Section 22a-174-22 of the Regulations through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the SIP for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

## G. ENFORCEMENT MECHANISMS

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the Trading Agreement and Order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

## H. AUDIT AND RECONCILIATION

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

## PART 2. DESCRIPTION OF DERC CREATION AND/OR USE By Consent Order No. 8227

Please note that the narrative above refers to a Trading Agreement and Order and for the purposes of this SIP that should be read as Consent Order.

### A. Administering Agency:

The State of Connecticut  
Department of Environmental Protection  
Bureau of Air Management

### B. Pollutant and Regulatory Standard Affected :

NOx, Section 22a-174-22 of the Regulations of Connecticut State Agencies

### C. Source :

Middletown Power, LLC  
Middletown Station  
1866 River Road  
Middletown, Connecticut

Auxiliary boiler, permit no.104-0002,

### D. Designated Representative:

Cynthia Karlic  
Tel: 638-9454 (cell)

**E. Nonattainment Area Classification:** Serious

**F. Summary of Compliance**

**Time Period:** From issuance of Consent Order to May 1, 2003

**Purpose:** NOx Emission compliance

**Initial DERCS needed:** 15 tons of ozone season NOx DERCS and 33 tons of non-ozone season NOx DERCS for December 16, 1999 through November 30, 2001.

**Maximum Emission Rate:** FLER of .44 lbs/MMBtu heat input, averaged on a 24-hour basis.

**Recordkeeping and Reporting**

Middletown Power, LLC is required to make and keep records of the fuels each month.

Middletown Power, LLC, no later than March 1, 2002, 2003 and 2004, is required to include with the Annual Emission Statement provided to the Commissioner, actual NOx emissions from the auxiliary boiler, and the amount of all DERCS used (including serial numbers (if assigned) and approved DERCS purchased from other facilities) for the previous calendar year.

Middletown Power, LLC is required to keep records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records are created.

Middletown Power, LLC is required to keep documentation to demonstrate that DERCS used during the ozone season were generated during the ozone season. The ozone season is from May 1 through September 30 in any calendar year. Generator certification of this fact shall be sufficient.

Middletown Power, LLC is required to submit the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.

**G. Description of Compliance**

Middletown Power, LLC is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 Middletown Power, LLC purchased from The Connecticut Light and Power Company and now owns one fossil fuel-fired electric generating station, Middletown Station, at 1866 River Road in Middletown, Connecticut ("facility").

At the facility, NRG Middletown Operations Inc. operates an auxiliary boiler, permit no.104-0002, a 160 MMBtu/hr auxiliary steam boiler. The auxiliary boiler operates on residual fuel oil. An emission test measures NOx emissions from the auxiliary boiler. On June 12, 2001, Middletown Power, LLC performed a NOx stack test and based upon Department approved stack test data, the NOx emission rate for the auxiliary boiler was 0.399 lbs/MMBtu of heat input when operating on residual fuel oil, in excess of the emission limit in Section 22a-174-22(e) of the Regulations. Middletown Power, LLC is using DERCs to comply with Section 22a-174-22 of the Regulations.

#### H. Source of DERCs:

Middletown Power, LLC is required to acquire approved DERCs monthly on an as-needed basis, as determined by actual NOx emissions in the event that the 24-hour average of actual NOx emissions exceeds the NOx emission limitations.

Before the first day of each month Middletown Power, LLC is required to calculate projected worst case DERCs required for that calendar month as provided in the Consent Order. Middletown Power, LLC is required to acquire sufficient approved DERCs no later than the first day of each month to assure compliance with the emission standards in Section 22a-174-22 of the Regulations for, at a minimum, that calendar month. Excess DERCs from previous months can be applied to subsequent months. At a minimum, DERCs required shall be adjusted upwards by 100% if DERCs are not in their possession prior to the first day of each month. No later than the twentieth day of each month, Middletown Power, LLC is required to calculate DERCs used in the preceding calendar month, as provided in the consent order.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of )  
The State of Connecticut and )  
Middletown Power LLC )

Consent Order No. 8227

A. With the agreement of Middletown Power LLC ("Respondent"), the Commissioner of Environmental Protection ("Commissioner") finds the following:

1. Respondent is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 Respondent purchased from The Connecticut Light and Power Company and now owns one fossil fuel-fired electric generating station, Middletown Station, at 1866 River Road in Middletown, Connecticut ("facility").
2. At the facility, NRG Middletown Operations Inc. operates an auxiliary boiler, Connecticut Permit Number 104-0002, a 160 million British thermal units per hour ("MMBtu/hr") auxiliary steam boiler ("auxiliary boiler"). The auxiliary boiler operates on residual fuel oil. An emission test measures nitrogen oxide ("NOx") emissions from the auxiliary boiler.
3. On and after May 31, 1995, the Regulations of Connecticut State Agencies ("Regulations") require that the auxiliary boiler emit NOx at a rate no greater than 0.25 pounds per million British thermal units ("lbs/MMBtu") of heat input when operating on residual fuel oil.
4. On October 10, 1995 the Commissioner issued Trading Agreement and Order #8106 to The Connecticut Light and Power Company, which previously owned the facility, to offset the excess NOx emissions from the auxiliary boiler until May 31, 1996.

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5. On June 14, 1996, The Connecticut Light and Power Company performed a NOx emissions stack test on the auxiliary boiler and based upon Department of Environmental Protection ("Department") approved stack test data, the NOx emission rate for the auxiliary boiler was 0.25 lbs/MMBtu of heat input when operating on residual fuel oil.
6. On June 12, 2001, Respondent performed a NOx stack test and based upon Department approved stack test data, the NOx emission rate for the auxiliary boiler was 0.399 lbs/MMBtu of heat input when operating on residual fuel oil. Respondent notified the Department of the stack test results and requested a trading order on or about July 17, 2001.
7. By virtue of the above, Respondent violated Section 22a-174-22(e) of the Regulations.
8. The Department of Environmental Protection issued notice of violation #14726 dated July 20, 2001 to Respondent alleging the violation described in paragraphs A.6 and A.7 of this Consent Order.
9. Respondent proposes to use approved discrete emission reduction credits ("DERCs") to offset excess NOx emissions from the auxiliary boiler, until Respondent complies with the emission limitation in Section 22a-174-22(e) of the Regulations.
10. Pursuant to Section 22a-174-22(j) of the Regulations, Respondent intends to acquire approved DERCs until May 1, 2003 at the facility. Approved DERCs are defined for purposes of this Consent Order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations. Respondent will acquire approved DERCs monthly on an as-needed basis, as determined by actual NOx emissions in the event that the 24-hour average of actual NOx emissions exceeds the NOx emission limitations of Section 22a-174-22(e) of the Regulations.

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11. By agreeing to issuance of this Consent Order, Respondent makes no admission of fact or law with respect to matters addressed herein other than the facts asserted in paragraphs A.1., A.2. and A.6. of this Consent Order.
- B. The Commissioner, in accordance with the provisions of this Consent Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, hereby allows Respondent to comply with Section 22a-174-22(d)(1) of the Regulations through use of DERC trading.
- C. With the agreement of Respondent, the Commissioner, acting under Sections 22a-6, 22a-171, 22a-174, 22a-175, 22a-177 and 22a-178 of the Connecticut General Statutes, orders Respondent as follows:
  1. On or before thirty (30) days after issuance of this Consent Order, Respondent shall permanently retire 48 tons of approved NOx DERCS (15 tons of ozone season NOx DERCS and 33 tons of non-ozone season NOx DERCS) to offset excess NOx emissions from the auxiliary boiler from the period of December 16, 1999 through November 30, 2001.
  2. DERC Use. Approved DERCS shall be acquired for compliance with the emission standards in Section 22a-174-22 of the Regulations for the period beginning December 1, 2001, and continuing until Respondent achieves permanent compliance for the auxiliary boiler with the emission standards in Section 22a-174-22(e) of the Regulations or until May 1, 2003, whichever occurs first. Respondent shall acquire approved DERCS, and document and record the amounts of NOx emissions and DERCS used by serial number (if assigned) by the auxiliary boiler each day, and shall maintain and provide such records in accordance with the following and Section 22a-174-4 of the Regulations, until May 1, 2003:
    - a. Before the first day of each month, beginning the first full month after the issuance of this Consent Order, Respondent shall calculate projected worst case DERCS required for that calendar month as follows:

DERCS (tons) estimated = { [Full Load Emission Rate ("FLER") in lbs/MMBtu - ((0.95) x (the limit in Section 22a-174-22(e) of the Regulations or proportioned

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emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in lbs/MMBtu)) x (estimated fuel use in MMBtu) + 2000 pounds.

- b. Respondent shall acquire sufficient approved DERCs no later than the first day of each month to assure compliance with the emission standards in Section 22a-174-22 of the Regulations for, at a minimum, that calendar month. Excess DERCs from previous months can be applied to subsequent months. At a minimum, DERCs required shall be adjusted upwards by 100% if DERCs are not in Respondent's possession prior to the first day of each month.
- c. No later than the twentieth day of each month, beginning the first full month after the issuance of this Consent Order Respondent shall calculate DERCs used in the preceding calendar month, as follows:
- $$\text{DERCs (tons) actual} = \{ [( \text{FLER in lbs/MMBtu} - (0.95) \times (\text{limit in Section 22a-174-22(e) of the Regulations or proportioned emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in lbs/MMBtu}) ) ] \times (\text{actual fuel use in MMBtu}) \} + 2000 \text{ pounds.}$$
- d. Respondent shall maintain documentation to attest to the fact that DERCs used during the ozone season were generated during the ozone season. Generator certification of this fact shall be sufficient.
- e. After full program review, and if the Commissioner deems it appropriate, the Commissioner may allow the survival and use of approved DERCs beyond April 30, 2003.
- f. On or before the twentieth day of the month following the first full month after the issuance of this Consent Order, Respondent shall permanently retire approved NOx DERCs, calculated in accordance with the formula in paragraph C.2.c. of this Consent Order, to offset the excess NOx emissions from the auxiliary boiler from the period beginning

December 1, 2001 through the first full month after issuance of this Consent Order.

- g. Respondent shall comply during the operation of the auxiliary boiler with a FLER of .44 lbs/MMBtu heat input, averaged on a 24-hour basis, until Respondent achieves permanent compliance for the auxiliary boiler with the emission standards in Section 22a-174-22(e) of the Regulations or until May 1, 2003, whichever occurs first.
3. In accordance with the provisions of Section 22a-174-22(k) of the Regulations, Respondent shall conduct a NOx emission test of the auxiliary boiler no later than June 30<sup>th</sup> of each calendar year, following the issuance of this Consent Order, and continuing until the Commissioner's administrative enforcement representative approves results of three consecutive annual NOx emission tests for the auxiliary boiler, each of which demonstrate compliance with the allowable emission rate in Section 22a-174-22(e) of the Regulations.
4. Subsequent to Department approval of three consecutive annual NOx emission tests for the auxiliary boiler demonstrating compliance with the allowable emission rate in Section 22a-174-22(e) of the Regulations, the Respondent shall conduct, in accordance with the provisions of Section 22a-174-22(k) of the Regulations, NOx emission tests of the auxiliary boiler at least once every five years commencing from the date of the last NOx emission test of the three consecutive annual NOx emission tests that demonstrated compliance with the allowable emission rate in Section 22a-174-22(e) of the Regulations.
5. The FLER as set forth in paragraph C.2.g. of this Consent Order may be modified only after the consent of the Commissioner by written modification of this Consent Order.
6. Noncompliance with an established FLER shall subject Respondent to make restitution by matching the quantity of emissions ("true up") caused by the exceedance plus a 100% premium. The true up in tons of DERCS shall be equal to the FLER exceedance in Lbs/MMBtu, multiplied by the total heat input during the period of noncompliance divided by 2000 lbs/ton. If the period of noncompliance is not known, the time period from the completion of the last/previous Department witnessed stack test through the date the FLER compliance is achieved as approved by the

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Commissioner shall be used. However, nothing in this Consent Order shall affect the Commissioner's authority to institute any proceeding or take any other action to require additional upward adjustment, based on the gravity of any alleged noncompliance or violation of law.

7. Upon issuance of this Consent Order Respondent shall maintain records for the auxiliary boiler showing daily NOx mass emissions, and actual NOx emission rates (24-hour average).
8. No later than March 1 of every year after issuance of this Consent Order, Respondent shall include with the Annual Emission Statement provided to the Commissioner, actual NOx emissions from the auxiliary boiler, and the amount of all DERCs used (including serial numbers (if assigned) and approved DERCs purchased from other facilities) for the previous calendar year. These reports shall be on a form prescribed by the Commissioner. This reporting shall be consistent with the records produced in accordance with paragraph C.2. of this Consent Order. This reporting may cease if a central registry is approved by the Commissioner.
9. Respondent shall retain records and supporting documentation as described in this Consent Order for a minimum of five years, commencing on the date such records were created. Respondent shall provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
10. Full compliance. Respondent shall not be considered in full compliance with this consent order until all actions required by this consent order have been completed as approved and to the Commissioner's satisfaction.
11. Civil penalty. On or before fourteen (14) days after issuance of this Consent Order, Respondent shall pay a penalty of \$12,480 as the total civil penalty to be sought by the Commissioner for those, and only those, violation(s) described in paragraphs A.6 and A.7. of this Consent Order.
12. Payment of penalties. Payment of penalties under this Consent Order shall be mailed or personally delivered to Dennise Goulbourne, Bureau of Air Management, Department of Environmental Protection, 79 Elm Street, Hartford, CT 06106-5127, and shall be by certified or bank check payable to the

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Connecticut Department of Environmental Protection. The check shall state on its face, "Bureau of Air Management, civil penalty, Consent Order #8227."

13. Approvals. Respondent shall use best efforts to submit to the Commissioner all documents required by this Consent Order in a complete and approvable form. If the Commissioner notifies Respondent that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and Respondent shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Consent Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Consent Order. Nothing in this paragraph shall excuse noncompliance or delay.
14. Definitions. As used in this Consent Order, "Approved DERCS" are those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations; "Commissioner" means the Commissioner or a representative of the Commissioner; "Ozone season" means the period from May 1 through September 30 in any given calendar year. The date of "issuance" of this Consent Order is the date the Consent Order is deposited in the U.S. mail or personally delivered, whichever is earlier.
15. Dates. The date of submission to the Commissioner of any document required by this Consent Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Consent Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Consent Order, the word "day" as used in this Consent Order means calendar day. Any document or action which is required by this Consent Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.

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16. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Consent Order shall be signed by Respondent or, if Respondent is not an individual, by Respondent's chief executive officer or a duly authorized representative of such officer, as those terms are defined in §22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such document, and Respondent or Respondent's chief executive officer and each such individual shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law."
17. Noncompliance. This Consent Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Consent Order may subject Respondent to an injunction and penalties.
18. False statements. Any false statement in any information submitted pursuant to this Consent Order is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.
19. Notice of transfer; liability of Respondent. Until Respondent has fully complied with this Consent Order, Respondent shall notify the Commissioner in writing no later than 15 days after transferring all or any portion of the facility, the operations, the site or the business which is the subject of this Consent Order or after obtaining a new mailing or location address. Respondent's obligations under this Consent Order shall not be affected by the passage of title to any property to any other person or municipality.
20. Commissioner's powers. Nothing in this Consent Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate

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violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by Respondent pursuant to this Consent Order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require Respondent to undertake further investigation or further action to prevent or abate violations or pollution.

21. Respondent's obligations under law. Nothing in this Consent Order shall relieve Respondent of other obligations under applicable federal, state and local law.
22. No assurance by Commissioner. No provision of this Consent Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by Respondent pursuant to this Consent Order will result in compliance or prevent or abate pollution.
23. Access to facility. Any representative of the Department of Environmental Protection may enter the facility without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Consent Order.
24. No effect on rights of other persons. This Consent Order neither creates nor affects any rights of persons or municipalities that are not parties to this Consent Order.
25. No Creation of Property Rights. This Consent Order does not create any property rights with respect to these DERCS.
26. Notice to Commissioner of changes. Within 15 days of the date Respondent becomes aware of a change in any information submitted to the Commissioner under this Consent Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, Respondent shall submit the correct or omitted information to the Commissioner.
27. Notification of noncompliance. In the event that Respondent becomes aware that it did not or may not comply, or did not

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or may not comply on time, with any requirement of this Consent Order or of any document required hereunder, Respondent shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice, Respondent shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and Respondent shall comply with any dates which may be approved in writing by the Commissioner. Notification by Respondent shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.

28. Submission of documents. Any document required to be submitted to the Commissioner under this Consent Order shall, unless otherwise specified in this Consent Order or in writing by the Commissioner, be directed to:

Elizabeth McAuliffe  
Department of Environmental Protection  
Bureau of Air Management  
Compliance and Field Operations Division  
79 Elm Street  
Hartford, Connecticut 06106-5127

Middletown Power LLC

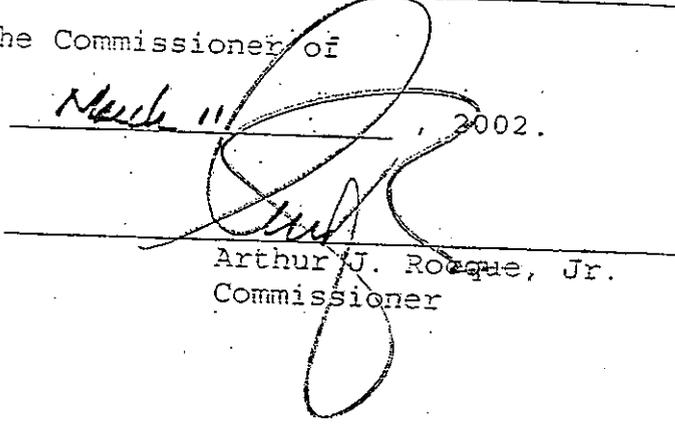
Consent Order No. 8227

Respondent consents to the issuance of this Consent Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Consent Order and to legally bind Respondent to the terms and conditions of the Consent Order.

Middletown Power LLC

Signature: Bryan K. Riley  
Type Name: Bryan K. Riley  
Type Title: Vice President  
Date: 2/20/2002

Issued as a final order of the Commissioner of  
Environmental Protection on March 11, 2002.

  
Arthur J. Roague, Jr.  
Commissioner

Town of Middletown  
LAND RECORDS  
MAILED CERTIFIED MAIL, RETURN RECEIPT REQUESTED  
Certified Document No.

**PROPOSED REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22  
THROUGH USE OF  
DISCRETE EMISSION REDUCTION CREDITS (DERC's)**

**MONTVILLE POWER LLC  
Trading Agreement and Order No. 8216**

**August, 2002**

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**PART 2. DESCRIPTION OF DERC CREATION AND USE  
By Trading Agreement and Order**

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreements and Orders to Create and Use DERCS
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in Economic Incentive Program (EIP) guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from NOx control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program is to approve creation of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of nitrogen oxides (NOx). Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving these emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for timelier rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of inter-temporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCs may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of these DERCs will not jeopardize RFP since the state's NOx rule emission limits for the source creating the DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources, the baseline will be the lower of actual or allowable emissions.

### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the trading agreement and order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the overall performance of the program is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION & USE**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source and Identifier:**

Montville Power LLC  
74 Lathrop Road  
Montville, CT  
Unit 5      82 megawatt tangentially-fired boiler R-107-0017

**D. Designated Representative:**

Ms. Cynthia Karlic  
Regional Manager  
Telephone No. (860) 638-3170

**E. CT Nonattainment Area Classification: Serious**

**F. Summary of Compliance:**

**Time Period:** December 15, 1999-May 1, 2003  
**Method:** Modifications to burners, combustion controls and operating conditions.

**Max. Daily Emission Rate**  
pursuant to Section 22a-174-22

**Baseline:** 0.25 lb/MMBTU of heat input (24 hour average consuming No. 6  
0.20 lb/MMBTU of heat input (24 hour average consuming natural gas)

**Monitoring:** Continuous Emission Monitoring, (CEM) certified NOx mass rate  
**Discrete tons:** 7 tons ozone season, 21 non-ozone season between December 16, 1999  
and June 30, 2000

**Rate of Creation:** determined by CEM

**Discounts: Creation:** 10 percent to benefit the environment.

**G. Description of Compliance:**

Creator: Montville Power LLC  
Registration Numbers R107-0017

Montville Power LLC ("MPLLC") is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 MPLLC purchased from The Connecticut Light and Power Company ("CL&P") four fossil fuel-fired electric generating stations. One of the four fossil fuel-fired electric generating stations is Montville Station, at 74 Lathrop Road in Montville, Connecticut ("facility"). At the facility, NRG Montville Operations Inc. operates Unit 5, Connecticut Registration Number 107-0017, a 82 megawatt tangentially-fired boiler ("boiler") on No. 6 fuel oil and natural gas. The boiler is subject to the requirements of Section 22a-174-22 Reasonably Available Control of nitrogen oxide emissions and 22a-174-22a and 22b The NOx Budget Program. The boilers required modifications to the burners, combustion controls and operating conditions to meet the standard. CL&P modified the boilers prior to the May 31, 1995 effective date of the NOx RACT rule. Trading Agreement and Order 8161 was issued to CL&P as a mechanism for meeting the NOx RACT requirements. Trading Agreement and Order 8216 has been issued to MPLLC because CL&P no longer owns the facility. The boiler has a dedicated CEM system, certified to 40 Code of Federal Regulations Part 75. The NOx CEM probes are located in the stack outlet of the boiler. The daily NOx emission rates will be monitored, calculated, and recorded using CEM 24-hour averages. A monthly summation of all NOx over-control may be submitted to DEP for the purpose of obtaining certified NOx DERCS. MPLLC shall use 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.20 lbs/MMBtu of heat input when operating on natural gas, or the proportioned baseline emission rate.

**H. Source of DERCS**

**Equation for the calculation of DERCS**

For the boilers with daily NOx emissions below the applicable baseline emission rate, MPLLC shall calculate the amount of DERCS *generated* as follows:

$$\text{DERCS (tons)} = [\text{Total heat input}^1 \text{ of all fuels in MMBTU} \times (\text{proportioned RACT emission rate}^2 - \text{the CEM recorded NOx emission rate}^3) \div 2000 \text{ lbs/ton}] \times (0.90).^4$$

For the boilers with daily NOx emissions above the applicable baseline emission rate, MPLLC

shall calculate the amount of DERCs *used* as follows:

DERCs (tons) = [Total heat input of all fuels in MMBTU x (the CEM recorded NOx emission rate - ((.95) x proportioned RACT emission rate)) ] ÷ 2000 pounds.

where:

<sup>1</sup> Heat input shall be calculated using the lower of CEM recorded data or actual fuel usage data in MMBTU per unit of fuel combusted.

<sup>2</sup>calculated pursuant to Section 22a-174-22 (f)(2)(A) of the Regulations.

<sup>3</sup> This rate shall be calculated pursuant to the methodology described in 40 Code of Federal Regulations Part 75.

<sup>4</sup> Ten (10) percent of all DERCs (tons) created shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

**Estimated emission reduction credits generated.**

Sample calculation for May 1, 2001

DERCs (tons) = [17176 MMBTU x ( 0.25 lb/MMBTU - 0.226 lb/MMBTU) ÷ 2000 lbs/ton]  
= 0.21 tons of DERCs.

Less 10% for environmental benefit, .21 x .90 = .19 tons created

Attachment 1 of Trading Agreement and Order No. 8216 shows a summary of the proposed annual emission reductions and contains supporting data. Attachment 1 also includes spreadsheets of the monthly calculations and tables which will show the full set of 24-hour NOx emission data and operating hours used in these calculations.

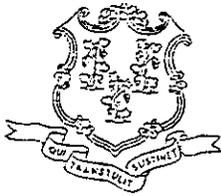
An accounting of all tons of NOx DERCs created by MPLLC will be provided to the Commissioner on March 1 of every year until all tons are used. (If an approved DERC registry is available, this requirement may be waived by the Commissioner upon request.) This reporting will be included as part of the annual Emission Statement. This report will include all DERCs created by MPLLC and used by others, and will provide the state with information to be used in

auditing the program as described in Part 1. M PLLC may submit reports on a quarterly or semi-annual basis to document the creation of NOx DERCs. DERCs generated in the ozone season will be distinguished from DERCs generated in the non-ozone season. M PLLC will include a summary of all NOx DERCs generated and/or used for the preceding year with the Facility's Annual Emission Statement, including approved DERCs generated and/or purchased from other facilities. Should M PLLC choose not to generate DERCs, M PLLC is expected to notify the Department in order to assist in DERC program planning. Calculations and reports will be in a form similar to that shown in Attachment 1. Following review and written prior approval by the Department, these DERCs will be available for use by approved sources for purposes of compliance with Section 22a-174-22 of the Regulations. Approval in this manner may continue until there are regulatory changes to the NOx rule that affect NOx limitations at the source or until May 1, 2003, whichever comes first.

#### **Restrictions on use**

M PLLC proposes to reconcile DERCs generated on a monthly basis. Several restrictions are placed upon the use of DERCs:

- These DERCs may not be used prior to approval by the DEP.
- On average, these DERCs may not be used at a rate greater than that at which they were created.
- DERCs generated during non-ozone season months may not be used during the ozone season.
- Ozone Season Restrictions. The boiler is subject to Section 22a-174-22a of the Regulations (NOx Budget Program) in 1999 and every year thereafter. The boiler may generate ozone season BDERCs to comply with Section 22a-174-22 of the Regulations. :  
1) BDERCs shall only be generated by the boiler from May 1 through September 30 of a given year, 2) BDERCs shall only be used by other NOx Budget Program sources located in Connecticut, 3) BDERCs shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BDERCs generated during a given year shall only be used during the following ozone season, with the exception of BDERCs generated during 1999, which may be used in the 2001 ozone season. BDERCs may be generated until May 1, 2003. BDERCs are subject to all DERC requirements set forth in the Trading Agreement and Order except for those requirements pertaining solely to non-ozone season DERCs and as otherwise may be provided.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of

The State of Connecticut and )  
Montville Power LLC )

Trading Agreement  
and Order No. 8216

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Montville Power LLC ("MPLLC") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of emission reduction trading will achieve this result in a timely and cost-effective manner:

A. At the request and with the agreement of MPLLC, the Commissioner finds the following:

1. MPLLC is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 MPLLC purchased from The Connecticut Light and Power Company and now owns one fossil fuel-fired electric generating station, Montville Station, at 74 Lathrop Road in Montville, Connecticut ("facility").
2. At the facility, NRG Montville Operations Inc. operates Montville Station Unit 5, an 82 megawatt tangentially-fired boiler on No. 6 fuel oil and/or natural gas, Connecticut Registration Number 107-0017, ("boiler"). A continuous emissions monitor ("CEM"), certified to 40 Code of Federal Regulations ("CFR") Part 75, measures nitrogen oxide ("NOx") emissions from the boiler.
3. During the year 1995, prior to modifications of the boiler's burner, combustion controls, operating conditions and based on CEM data certified to 40 Code of Federal Regulations Part 75, the average annual NOx emission rate for Montville Station Unit 5 was 0.245 pounds per million British thermal units ("lbs/MMBtu")

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Date: / /

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of heat input when operating on No. 6 fuel oil and 0.211 lbs/MMBtu of heat input when operating on natural gas. On and after May 31, 1995, the Regulations of Connecticut State Agencies ("Regulations") require that the boiler emit NOx at a rate no greater than 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.20 lbs/MMBtu of heat input when operating on natural gas.

4. In 1995, The Connecticut Light and Power Company completed modifications of the boiler's burner and combustion controls, and began to test and adjust operating conditions, thereby reducing the boiler's NOx emission rates below its allowed and actual baseline emissions rates. Such modifications enabled MPLLC's boiler to frequently meet and operate below the emission limitation specified in Section 22a-174-22(e) of the Regulations.
5. After December 15, 1999, MPLLC may obtain approval of actual reductions in NOx emissions, generated by operating the boiler at a rate which is below 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.20 lbs/MMBtu of heat input when operating on natural gas for use as discrete emission reduction credits ("DERCs"). If DERCs are created during the ozone season, MPLLC may obtain approval for such reductions for use as Budget discrete emission reduction credits ("BDERCs").
6. Pursuant to Section 22a-174-22(j) of the Regulations, MPLLC intends to acquire and generate approved DERCs until May 1, 2003 at the facility. Approved DERCs are defined for purposes of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations. MPLLC will acquire approved DERCs monthly on an as-needed basis, as determined by actual NOx emissions in the event that the 24-hour average of actual NOx emissions exceeds the NOx emission limitations of Section 22a-174-22(e) of the Regulations.
7. When properly documented by MPLLC, and approved by the

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Commissioner, the reductions in NOx emissions identified above, and as computed in accordance with the terms of this Trading Agreement and Order, will conform to the requirements of Section 22a-174-22(j)(3) of the Regulations. Specifically, the reductions will be:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on continuous emission monitoring data as applied in an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut statute or regulation mandated by a current State Implementation Plan ("SIP"), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control system is in place and operating, and an appropriate tracking system is in place to monitor all data required to verify and quantify the creation of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively after the submission by MPLLC of the seasonal or annual reports that will document their creation.

8. As documented in Attachment 1, attached to and incorporated by reference into this Trading Agreement and Order, 8.5 tons of ozone season NOx BDERCs and 24.1 tons of non-ozone season NOx DERCs were generated by the boiler between December 16, 1999 and June 30, 2000.
9. Ten (10) percent of these DERCs (0.9 ton ozone season, 2.4 tons non-ozone season) are retired and permanently

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removed from all calculations to assure a benefit to the environment. The total available for use, after rounding down to the nearest whole number for annual serial assignment purposes, is 28 DERCS (7 ozone season, 21 non-ozone season).

- B. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, will allow M PLLC and approved sources within Connecticut to use 7 tons of ozone season NOx BDERCs and 21 tons of non-ozone season NOx DERCS referenced in paragraph A.9. of this Trading Agreement and Order for purposes of compliance under Section 22a-174-22(j) of the Regulations to achieve a portion of the nitrogen oxide emission reductions required by Section 22a-174-22 of the Regulations. DERC creation serial numbers assigned by the Department of Environmental Protection ("Department") to these approved reductions of NOx emissions are provided in Table 1 of this Trading Agreement and Order:

TABLE 1

	1999	2000
Ozone season NOx BDERC serial numbers	N/A	CT00/8216(BDC)R-17NOxoz1-7
Non-ozone season NOx DERC serial numbers	CT99/8216(DC)R-17NOxnoz1	CT00/8216(DC)R-17NOxnoz1-20

- B.2. Ozone season BDERCs may be generated and used in accordance with this Trading Agreement and Order.
- B.3. Upon sufficient documentation as prescribed below, the Commissioner may provide written approval of the generation of additional DERCS by M PLLC retrospectively. Approved DERCS and BDERCs generated by M PLLC may be held by M PLLC or transferred to other persons in accordance with this Trading Agreement and Order.
- B.4. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, hereby allows M PLLC to comply with Section 22a-174-22(d)(1) of the Regulations through use of DERC trading.

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C. With the agreement of MPLLC, the Commissioner, acting under Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes, orders MPLLC as follows:

1. DERC generation.

a. For purposes of generating DERCS from the boiler at the facility, MPLLC shall use 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.20 lbs/MMBtu of heat input when operating on natural gas as the baseline emission rates for the boiler, or the proportioned baseline emission rate set forth in footnote 2 of paragraph C.11. of this Trading Agreement and Order, when simultaneously operating on more than one fuel. MPLLC shall use the above referenced baseline emission rate(s) when calculating the proportioned baseline emission rate. When calculating DERCS, MPLLC shall use the lower of daily total CEM-calculated MMBtu value or actual fuel usage data for the boiler in MMBtu/day, when determining heat input. Ten (10) percent of all DERCS (tons) generated by the boiler shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

b. Non-ozone Season Restrictions. Non-ozone season NOx DERCS generated by MP shall be created and approved in accordance with this Trading Agreement and Order, and shall remain valid until they are used or until May 1, 2003, whichever occurs first.

c. Ozone Season Restrictions. The boiler is subject to Section 22a-174-22a of the Regulations ("NOx Budget Program") in 1999 and every year thereafter. The boiler may generate ozone season BDERCS to comply with Section 22a-174-22 of the Regulations in accordance with paragraph C.1.a. of this Trading Agreement and Order and the following conditions and restrictions: 1) BDERCS shall only be generated by the boiler from May 1 through September 30 of a given year, 2) BDERCS shall only

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be used by other NOx Budget Program sources located in Connecticut, 3) BDERCs shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BDERCs generated during a given year shall only be used during the following ozone season, with the exception of BDERCs generated during 1999, which may be used in the 2001 ozone season. For example, BDERCs generated during the 1999 ozone season may be used during the 2001 ozone season. However, BDERCs generated during the 2000 ozone season may only be used during the 2001 ozone season. BDERCs may be generated until May 1, 2003. BDERCs are subject to all DERC requirements set forth in this Trading Agreement and Order except for those requirements pertaining solely to non-ozone season DERCs and as otherwise may be provided.

2. DERC Use. Approved DERCs shall be acquired for compliance with the emission standards in Section 22a-174-22 of the Regulations for the period beginning December 15, 1999 and continuing until M PLLC achieves permanent compliance for the boiler with the emission standards in Section 22a-174-22(e) of the Regulations or until May 1, 2003, whichever occurs first. M PLLC shall acquire approved DERCs, and document and record the amounts of NOx emissions and DERCs used by serial number (if assigned) by the boiler each day, and shall maintain and provide such records in accordance with the following and Section 22a-174-4 of the Regulations, until May 1, 2003:

- a. Before the first day of each month, calculate projected worst case DERCs required for that calendar month as follows:

DERCs (tons) = {[estimated worst case NOx emission rate in lbs/MMBtu - ((0.95) x (NOx RACT limit or proportioned emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in lbs/MMBtu))] x (Estimated fuel use in MMBtu)} +

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2000 pounds.

b. Acquire sufficient approved DERCs no later than the first day of each month to assure compliance with the emission standards in Section 22a-174-22 of the Regulations for, at a minimum, that calendar month. With the exception of BDERCs, excess DERCs from previous months can be applied to subsequent months. BDERCs are subject to the limitations set forth in paragraph C.1.c. of this Trading Agreement and Order. At a minimum, DERCs required shall be adjusted upwards by 100% if DERCs are not in MPLLC's possession prior to the first day of each month.

c. No later than the twentieth day of each month, calculate DERCs used in the preceding calendar month, as follows:

- (1) For the boiler on each day, determine whether the 24-hour average NOx emission rate\* is less than the baseline emission rate or greater than the NOx RACT limit.
- (2) When the boiler has a daily NOx emission rate (24-hour average) exceeding the NOx RACT limit, calculate the amount of DERCs used, as follows:

$$\text{DERCs (tons)} = \{[(\text{CEM-recorded NOx daily average emission rate in lbs/MMBtu}) - ((0.95) \times (\text{NOx RACT limit or proportioned emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in lbs/MMBtu}))] \times (\text{actual fuel use in MMBtu})\} + 2000 \text{ pounds.}$$

\*This rate shall be calculated pursuant to the methodology described in 40 CFR Part 75.

d. Maintain documentation to attest to the fact that DERCs used during the ozone season were generated

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during the ozone season. Generator certification of this fact shall be sufficient.

- e. After full program review, and if the Commissioner deems it appropriate, the Commissioner may allow the survival and use of approved DERCs beyond April 30, 2003, subject to the limitations set forth in paragraph C.1.c. of this Trading Agreement and Order.
  - f. Pursuant to Section 22a-174-22(d)(3) of the Regulations, MPLLC may use NOx allowances, pursuant to Section 22a-174-22(j) of the Regulations to achieve all or a portion of the reductions required by Section 22a-174-22 of the Regulations. Any allowance used for compliance with Section 22a-174-22(e) of the Regulations shall be subject to all restrictions and/or requirements applicable to DERCs contained in this Trading Agreement and Order.
3. MPLLC shall maintain records for the boiler showing daily NOx mass emissions, and actual NOx emission rates (24-hour average). MPLLC shall also maintain records showing a daily total of all DERCs generated net of the ten (10) percent environmental discount.
4. In requesting approval of DERCs generated by the boiler, MPLLC shall provide documentation containing a sample spreadsheet with calculation formulas used to determine reported numbers; monthly operating reports of actual fuel usage including the fuel BTU content, number of barrels, gallons, and cubic feet used for each fuel type; daily MMBtu for each fuel type and actual heat input based upon CEM-recorded data; daily weighted and unweighted actual NOx emission rates (24-hour average); and DERCs generated using the baseline emission rate(s), or the proportioned baseline emission rate referenced in paragraph C.1. of this Trading Agreement and Order, net of the ten (10) percent environmental discount.
5. When the daily CEM-recorded NOx emission rate is used

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to calculate DERCs generated by the boiler, MPLLC shall not include missing data calculated in accordance with any missing data substitution procedures, including those allowed under 40 CFR Part 75. When the daily CEM-recorded NOx emission rate is used to calculate DERCs used by the boiler, MPLLC shall include missing data calculated in accordance with missing data substitution procedures under 40 CFR Part 75.

6. No later than March 1 of every year after issuance of this Trading Agreement and Order, MPLLC shall include with the Annual Emission Statement provided to the Commissioner, a record of each sale or other transfer, and use of any and all of the DERCs approved within and subsequent to issuance of this Trading Agreement and Order until all such DERCs have been used. MPLLC shall also include actual NOx emissions from the boiler, and the amount of all DERCs used (including serial numbers (if assigned) and approved DERCs generated and/or purchased from other facilities), generated and/or approved for the previous calendar year. These reports shall be on a form prescribed by the Commissioner. This reporting may cease if a central registry is approved by the Commissioner. Should MPLLC choose to discontinue the generation of DERCs, MPLLC shall notify the Commissioner in writing upon discontinuance.
7. In order to consider CEM-recorded NOx emission rates valid for DERC approval, all NOx and CO<sub>2</sub>/O<sub>2</sub> CEMS must comply with 40 Code of Federal Regulations Part 75.
8. MPLLC shall retain records and supporting documentation as described in this Trading Agreement and Order for a minimum of five years, commencing on the date such records were created. MPLLC shall provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
9. Upon sufficient documentation, as determined by the Commissioner that MPLLC has met the requirements of paragraphs C.1., C.2., C.3, C.4., C.5., C.7., C.10., and C.11., of this Trading Agreement and Order, the

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Commissioner may provide written approval of DERCs generated by MPLLC retrospectively, in addition to those approved in paragraph B. of this Trading Agreement and Order. Requests for approval of all subsequent DERCs generated shall be submitted in writing to the Commissioner. Approved DERCs generated by MPLLC may be held or transferred to other persons. Such DERCs shall remain valid until they are used or until May 1, 2003, whichever occurs first.

10. Should MPLLC choose to generate additional DERCs, reports documenting these DERCs shall be submitted to the Commissioner on an ozone season, non-ozone season (January through April and/or October through December), or annual basis. Such reports shall be compiled on a monthly basis and shall be submitted at least on an annual basis.
11. When the boiler has daily NOx emissions below the applicable baseline emission rate(s), or the proportioned baseline emission rate, MPLLC shall calculate the amount of DERCs generated as follows:

DERCs (tons) = {[Total heat input<sup>1</sup> of all fuels in MMBtu x ((proportioned baseline emission rate<sup>2</sup>) - (the CEM-recorded NOx emission rate<sup>3</sup>))] + 2000 lbs/ton} x (0.90).<sup>4</sup>

<sup>1</sup> Heat input shall be calculated using the lower of CEM-recorded data or actual fuel usage data in MMBtu per unit of fuel combusted.

<sup>2</sup> This rate shall be calculated by 1) multiplying the heat input of each fuel combusted by the baseline emission rate(s) for such fuel; 2) summing those products; and 3) dividing the sum by the total heat input. If the boiler is operating exclusively on one fuel, MPLLC may replace the proportioned baseline emission rate with the applicable baseline emission rate, for that fuel.

<sup>3</sup> This rate shall be calculated pursuant to the

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methodology described in 40 Code of Federal Regulations Part 75 and weighted pursuant to the Department of Environmental Protection's policy statement entitled "Guidance for Calculation of Emission Reduction Credits and Determination of Compliance with NOx RACT for Sources Subject to 40 CFR (Acid Rain Sources)" dated 12/18/98 which is attached to and incorporated by reference into this Trading Agreement and Order as part of Attachment 1.

<sup>4</sup> Ten (10) percent of all DERCs (tons) generated by the boiler shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

12. Each allowance used for compliance with Section 22a-174-22 of the Regulations shall be equivalent to one discrete emission reduction credit and shall be deducted from MPLLC's NOx Budget Program compliance account upon such use. Allowances shall be considered used for compliance with Section 22a-174-22 of the Regulations when they are transferred from the facility's compliance account or overdraft account to a State of Connecticut NOx allowance retirement account.
13. Approvals. MPLLC shall use best efforts to submit to the Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form. If the Commissioner notifies MPLLC that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and MPLLC shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.
14. Definitions. As used in this Trading Agreement and Order, "Commissioner" means the Commissioner or a representative of the Commissioner; "Ozone season" means the period from May 1 through September 30 in any

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given calendar year; "NOx RACT" means NOx Reasonably Available Control Technology. The date of "issuance" of this Trading Agreement and Order is the date the Trading Agreement and Order is deposited in the U.S. mail or personally delivered, whichever is earlier.

15. Dates. The date of submission to the Commissioner of any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Trading Agreement and Order, the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.
16. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by M PLLC or, if M PLLC is not an individual, by M PLLC's chief executive officer or a duly authorized representative of such officer, as those terms are defined in §22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such document, and M PLLC or M PLLC's chief executive officer and each such individual shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law."
17. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject M PLLC to an

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injunction and penalties.

18. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.
19. Notice of transfer; liability of MPLLC. Until MPLLC has fully complied with this Trading Agreement and Order, MPLLC shall notify the Commissioner in writing no later than 15 days after transferring all or any portion of the facility, the operations, the site or the business which is the subject of this Trading Agreement and Order or after obtaining a new mailing or location address. MPLLC's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
20. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by MPLLC pursuant to this Trading Agreement and Order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require MPLLC to undertake further investigation or further action to prevent or abate violations or pollution.
21. MPLLC's obligations under law. Nothing in this Trading Agreement and Order shall relieve MPLLC of other obligations under applicable federal, state and local law.
22. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by MPLLC pursuant to this Trading Agreement and Order will result in compliance or prevent or abate pollution.
23. Access to facility. Any representative of the Department of Environmental Protection may enter the facility without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.

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24. No effect on rights of other persons. This Trading Agreement and Order neither creates nor affects any rights of persons or municipalities that are not parties to this Trading Agreement and Order.
25. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these DERs.
26. Notice to Commissioner of changes. Within 15 days of the date MPLLC becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, MPLLC shall submit the correct or omitted information to the Commissioner.
27. Notification of noncompliance. In the event that MPLLC becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, MPLLC shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice, MPLLC shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and MPLLC shall comply with any dates which may be approved in writing by the Commissioner. Notification by MPLLC shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.
28. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in this Trading Agreement and Order or in writing by the Commissioner, be directed to:

Wendy Jacobs  
Department of Environmental Protection  
Bureau of Air Management  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106-5127

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Date:

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Montville Power LLC

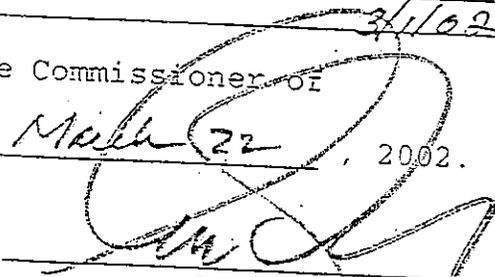
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and Order No. 3216

MPLLC consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind MPLLC to the terms and conditions of the Trading Agreement and Order.

Montville Power LLC

Signature: Bryan K. Riley  
Type Name: Bryan K. Riley  
Type Title: VICE President  
Date: 3/1/02

Issued as a final order of the Commissioner of  
Environmental Protection on March 22, 2002.

  
Arthur J. Rocque, Jr.  
Commissioner

TOWN OF MONTVILLE LAND RECORDS  
MAILED CERTIFIED MAIL, RETURN RECEIPT REQUESTED  
Certified Document No.:

**PROPOSED REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22  
THROUGH USE OF  
DISCRETE EMISSION REDUCTION CREDITS (DERC's)**

**MONTVILLE POWER LLC  
Trading Agreement and Order No. 8217**

**August, 2002**

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreements and Orders to Create and Use DERCS
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in Economic Incentive Program (EIP) guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from NOx control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program is to approve creation of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of nitrogen oxides (NOx). Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving these emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for timelier rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of inter-temporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCs may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of these DERCs will not jeopardize RFP since the state's NOx rule emission limits for the source creating the DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources, the baseline will be the lower of actual or allowable emissions.

### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the trading agreement and order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the overall performance of the program is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION & USE**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source and Identifier:**

Montville Power LLC  
74 Lathrop Road  
Montville, CT

Unit 6, 410 megawatt tangentially-fired boiler, R-107-0020

**D. Designated Representative:**

Ms. Cynthia Karlic  
Regional Manager  
Telephone No. (860) 638-3170

**E. CT Nonattainment Area Classification: Serious**

**F. Summary of Compliance:**

**Time Period:** December 15, 1999- May 1, 2003  
**Method:** Modifications to burners, combustion controls and operating conditions.

Max. Daily Emission Rate  
pursuant to Section 22a-174-22

Baseline: 0.25 lb/MMBTU of heat input (24 hour average consuming No. 6)  
0.17 lb/MMBTU of heat input (24 hour average consuming No. 2)

Monitoring: Continuous Emission Monitoring, (CEM) certified NOx mass rate  
Discrete tons: 55 ozone season and, 44 non-ozone season between December 16, 1999  
and June 30, 2000

Rate of Creation: determined by CEM

Discounts: Creation: 10 percent to benefit the environment.

**G. Description of Compliance:**

Creator: The Connecticut Light and Power Company  
Registration Numbers R107-0020

Montville Power LLC ("MPLLC") is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 MPLLC purchased from The Connecticut Light and Power Company ("CL&P") four fossil fuel-fired electric generating stations. One of the four fossil fuel-fired electric generating stations is Montville Station, at 74 Lathrop Road in Montville, Connecticut ("facility"). At the facility, NRG Montville Operations Inc. operates Unit 6, Connecticut Registration Number 107-0020, a 410 megawatt tangentially-fired boiler ("boiler") on No. 6 fuel oil and No. 2 fuel oil. The boiler is subject to the requirements of Section 22a-174-22 Reasonably Available Control of nitrogen oxide emissions and 22a-174-22a and 22b The NOx Budget Program. The boilers required modifications to the burners, combustion controls and operating conditions to meet the standard. CL&P modified the boilers prior to the May 31, 1995 effective date of the NOx RACT rule. Trading Agreement and Order 8156 was issued to CL&P as a mechanism for meeting the NOx RACT requirements. Trading Agreement and Order 8217 has been issued to MPLLC because CL&P no longer owns the facility. The boiler has a dedicated CEM system, certified to 40 Code of Federal Regulations Part 75. The NOx CEM probes are located in the stack outlet of the boiler. The daily NOx emission rates will be monitored, calculated, and recorded using CEM 24-hour averages. A monthly summation of all NOx over-control may be submitted to DEP for the purpose of obtaining certified NOx DERCs. MPLLC shall use 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil, or the proportioned baseline emission rate.

**H. Source of DERCs**

**Equation for the calculation of DERCs**

For the boilers with daily NOx emissions below the applicable baseline emission rate, MP shall calculate the amount of DERCs *generated* as follows:

$$\text{DERCs (tons)} = [\text{Total heat input}^1 \text{ of all fuels in MMBTU} \times (\text{proportioned RACT emission rate}^2 - \text{the CEM recorded NOx emission rate}^3) \div 2000 \text{ lbs/ton}] \times (0.90).^4$$

Montville Power LLC

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For the boilers with daily NOx emissions above the applicable baseline emission rate, MP shall calculate the amount of DERCS *used* as follows:

DERCS (tons) = [Total heat input of all fuels in MMBTU x (the CEM recorded NOx emission rate - ((.95) x proportioned RACT emission rate)) ] ÷ 2000 pounds.

where:

<sup>1</sup> Heat input shall be calculated using the lower of CEM recorded data or actual fuel usage data in MMBTU per unit of fuel combusted.

<sup>2</sup>calculated pursuant to Section 22a-174-22 (f)(2)(A) of the Regulations.

<sup>3</sup> This rate shall be calculated pursuant to the methodology described in 40 Code of Federal Regulations Part 75. A ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boiler is operating on No. 2 fuel oil.

<sup>4</sup> Ten (10) percent of all DERCS (tons) created shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

**Estimated emission reduction credits generated.**

Sample calculation for May 15, 2001

DERCS (tons) = [50403 MMBTU x ( 0.25 lb/MMBTU - 0.18 lb/MMBTU) ÷ 2000 lbs/ton]  
= 1.77 tons of DERCS.

Less 10% for environmental benefit, 1.77 x .9 = 1.6 tons created.

Attachment 1 of Trading Agreement and Order No. 8213 shows a summary of the proposed annual emission reductions and contains supporting data. Attachment 1 also includes spreadsheets of the monthly calculations and tables which will show the full set of 24-hour NOx emission data and operating hours used in these calculations.

An accounting of all tons of NOx DERCS created by MP will be provided to the Commissioner on March 1 of every year until all tons are used. (If an approved DERC registry is available, this

requirement may be waived by the Commissioner upon request.) This reporting will be included as part of the annual Emission Statement. This report will include all DERCs created by MP and used by others, and will provide the state with information to be used in auditing the program as described in Part 1. MP may submit reports on a quarterly or semi-annual basis to document the creation of NOx DERCs. DERCs generated in the ozone season will be distinguished from DERCs generated in the non-ozone season. MP will include a summary of all NOx DERCs generated and/or used for the preceding year with the Facility's Annual Emission Statement, including approved DERCs generated and/or purchased from other facilities. Should MP choose not to generate DERCs, MP is expected to notify the Department in order to assist in DERC program planning. Calculations and reports will be in a form similar to that shown in Attachment 1. Following review and written prior approval by the Department, these DERCs will be available for use by approved sources for purposes of compliance with Section 22a-174-22 of the Regulations. Approval in this manner may continue until there are regulatory changes to the NOx rule that affect NOx limitations at the source or until May 1, 2003, whichever comes first.

#### Restrictions on use

MP proposes to reconcile DERCs generated on a monthly basis. Several restrictions are placed upon the use of DERCs:

- These DERCs may not be used prior to approval by the DEP.
- On average, these DERCs may not be used at a rate greater than that at which they were created.
- DERCs generated during non-ozone season months may not be used during the ozone season.
- Ozone Season Restrictions. The boiler is subject to Section 22a-174-22a of the Regulations (NOx Budget Program) in 1999 and every year thereafter. The boiler may generate ozone season BDERCs to comply with Section 22a-174-22 of the Regulations. 1) BDERCs shall only be generated by the boiler from January 1 through December 31 of a given year, 2) BDERCs shall only be used by other ozone season sources located in Connecticut, 3) BDERCs shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BDERCs generated during a given year shall only be used during the following ozone season, with the exception of BDERCs generated during 1999, which may be used in the 2001 ozone season. BDERCs may be generated until May 1, 2003. BDERCs are subject to all DERC requirements set forth in the Trading Agreement and Order except for those requirements pertaining solely to non-ozone season DERCs and as otherwise may be provided.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of  
 The State of Connecticut and )  
 Montville Power LLC )  
 )  
 )  
 )  
 )  
 Trading Agreement  
 and Order No. 8217

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Montville Power LLC ("MPLLC") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of emission reduction trading will achieve this result in a timely and cost-effective manner:

A. At the request and with the agreement of MPLLC, the Commissioner finds the following:

1. MPLLC is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 MPLLC purchased from The Connecticut Light and Power Company and now owns one fossil fuel-fired electric generating station, Montville Station, at 74 Lathrop Road, Montville, Connecticut ("facility").
2. At the facility, NRG Montville Operations Inc. operates Montville Station Unit 6, Connecticut Registration Number 107-0020, a 410 megawatt tangentially-fired boiler ("boiler"). The boiler has the dual capacity to operate on fuel oil (No. 6 or No. 2). No. 2 fuel oil is used primarily as an ignition fuel as part of the start-up procedure. A continuous emissions monitor ("CEM"), certified to 40 Code of Federal Regulations ("CFR") Part 75, measures nitrogen oxide ("NOx") emissions from the boiler.
3. During the year 1979, prior to modifications of the boiler's burner, combustion controls and operating conditions, and based on Department of Environmental

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Protection ("Department") approved stack test data and AP-42 emission factor data, the average annual NOx emission rate for Montville Station Unit 6 was 0.268 pounds per million British thermal units ("lbs/MMBtu") of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil. On and after May 31, 1995, the Regulations of Connecticut State Agencies ("Regulations") require that the boiler emit NOx at a rate no greater than 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.20 lbs/MMBtu of heat input when operating on No. 2 fuel oil.

4. In January 1994, The Connecticut Light and Power Company completed modifications of the boiler's burner and combustion controls, and began to test and adjust operating conditions, thereby reducing the boiler's NOx emission rate below its allowed and actual baseline emissions rate. Such modifications enabled M PLLC's boiler to frequently meet and operate below the emission limitation specified in Section 22a-174-22(e) of the Regulations.
5. After December 15, 1999, M PLLC may obtain approval of actual reductions in NOx emissions, generated by operating the boiler at a rate which is below 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil for use as discrete emission reduction credits ("DERCs"). If DERCs are created during the ozone season, M PLLC may obtain approval for such reductions for use as Budget discrete emission reduction credits ("BDERCs").
6. Pursuant to Section 22a-174-22(j) of the Regulations, M PLLC intends to acquire and generate approved DERCs until May 1, 2003 at the facility. Approved DERCs are defined for purposes of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations. M PLLC will acquire approved DERCs monthly on an as-needed basis, as determined by actual NOx emissions in the event

Montville Power LLC

Trading Agreement and  
Order No. 8217

that the 24-hour average of actual NOx emissions exceeds the NOx emission limitations of Section 22a-174-22(e) of the Regulations.

7. When properly documented by MPLLC, and approved by the Commissioner, the reductions in NOx emissions identified above, and as computed in accordance with the terms of this Trading Agreement and Order, will conform to the requirements of Section 22a-174-22(j)(3) of the Regulations. Specifically, the reductions will be:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on continuous emission monitoring data as applied in an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut statute or regulation mandated by a current State Implementation Plan ("SIP"), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control system is in place and operating, and an appropriate tracking system is in place to monitor all data required to verify and quantify the creation of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively after the submission by MPLLC of the seasonal or annual reports that will document their creation.

8. As documented in Attachment 1, attached to and incorporated by reference into this Trading Agreement and Order, 61.6 tons of ozone season NOx BDERCs and 49.4 tons of non-ozone season NOx DERCs were generated

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by the boiler between December 16, 1999 and June 30, 2000.

9. Ten (10) percent of these DERCs (6.2 tons ozone season, 4.9 tons non-ozone season) are retired and permanently removed from all calculations to assure a benefit to the environment. The total available for use, after rounding down to the nearest whole number for annual serial assignment purposes, is 99 DERCs (55 tons ozone season, 44 tons non-ozone season).

B. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, will allow MPLLC and approved sources within Connecticut to use 55 tons of ozone season NOx BDERCs and 44 tons of non-ozone season NOx DERCs referenced in paragraph A.9. of this Trading Agreement and Order for purposes of compliance under Section 22a-174-22(j) of the Regulations to achieve a portion of the nitrogen oxide emission reductions required by Section 22a-174-22 of the Regulations. DERC creation serial numbers assigned by the Department to these approved reductions of NOx emissions are provided in Table 1 of this Trading Agreement and Order:

TABLE 1

MPLLC DERC Serial Numbers				
Year	Tons	Ozone season	Tons	Non-ozone season
1999	0	N/A	12	CT99/8217(DC)NOxnoz1-12
2000	55	CT00/8217(BDC)NOxoz1-55	32	CT00/8217(DC)NOxnoz1-32

B.2. Ozone season BDERCs may be generated and used in accordance with this Trading Agreement and Order.

B.3. Upon sufficient documentation as prescribed below, the Commissioner may provide written approval of the generation of additional DERCs by MPLLC retrospectively. Approved DERCs and BDERCs generated by MPLLC may be held by MPLLC or transferred to other persons in accordance with this Trading Agreement and Order.

B.4. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, hereby allows MPLLC to comply with Section 22a-174-22(d)(1) of the Regulations through use of DERC trading.

C. With the agreement of MPLLC, the Commissioner, acting under Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes, orders MPLLC as follows:

1. DERC generation.

a. For purposes of generating DERCs from the boiler at the facility, MPLLC shall use 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil as the baseline emission rate for the boiler, or the proportioned baseline emission rate set forth in footnote 2 of paragraph C.11. of this Trading Agreement and Order, when simultaneously operating on more than one fuel. MPLLC shall use the above referenced baseline emission rate(s) when calculating the proportioned baseline emission rate. When calculating DERCs, MPLLC shall use the lower of daily total CEM-calculated MMBtu value or actual fuel usage data for the boiler in MMBtu/day, when determining heat input. The ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boiler is operating on No. 2 fuel oil as referenced in C.11. of this Trading Agreement and Order and shall be retired by the facility and permanently removed from all calculations on a daily basis. An additional ten (10) percent of all DERCs (tons) generated by the boiler shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

b. Non-ozone Season Restrictions. Non-ozone season NOx DERCs generated by MP shall be created and

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approved in accordance with this Trading Agreement and Order, and shall remain valid until they are used or until May 1, 2003, whichever occurs first.

- c. Ozone Season Restrictions. The boiler is subject to Section 22a-174-22a of the Regulations ("NOx Budget Program") in 1999 and every year thereafter. The boiler may generate ozone season BDERCs to comply with Section 22a-174-22 of the Regulations in accordance with paragraph C.1.a. of this Trading Agreement and Order and the following conditions and restrictions: 1) BDERCs shall only be generated by the boiler from May 1 through September 30 of a given year, 2) BDERCs shall only be used by other NOx Budget Program sources located in Connecticut, 3) BDERCs shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BDERCs generated during a given year shall only be used during the following ozone season, with the exception of BDERCs generated during 1999, which may be used in the 2001 ozone season. For example, BDERCs generated during the 1999 ozone season may be used during the 2001 ozone season. However, BDERCs generated during the 2000 ozone season may only be used during the 2001 ozone season. BDERCs may be generated until May 1, 2003. BDERCs are subject to all DERC requirements set forth in this Trading Agreement and Order except for those requirements pertaining solely to non-ozone season DERCs and as otherwise may be provided.

2. DERC Use. Approved DERCs shall be acquired for compliance with the emission standards in Section 22a-174-22 of the Regulations for the period beginning December 15, 1999 and continuing until M PLLC achieves permanent compliance for the boiler with the emission standards in Section 22a-174-22(e) of the Regulations or until May 1, 2003, whichever occurs first. M PLLC shall acquire approved DERCs, and document and record the amounts of NOx emissions and DERCs used by serial number (if assigned) by the boiler each day, and shall maintain and provide such records in accordance with

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the following and Section 22a-174-4 of the  
Regulations, until May 1, 2003:

- a. Before the first day of each month, calculate projected worst case DERCs required for that calendar month as follows:

DERCs (tons) = {[estimated worst case NOx emission rate in lbs/MMBtu - ((0.95) x (NOx RACT limit or proportioned emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in lbs/MMBtu)] x (Estimated fuel use in MMBtu)} + 2000 pounds.

- b. Acquire sufficient approved DERCs no later than the first day of each month to assure compliance with the emission standards in Section 22a-174-22 of the Regulations for, at a minimum, that calendar month. With the exception of BDERCs, excess DERCs from previous months can be applied to subsequent months. BDERCs are subject to the limitations set forth in paragraph C.1.c. of this Trading Agreement and Order. At a minimum, DERCs required shall be adjusted upwards by 100% if DERCs are not in MPLLC's possession prior to the first day of each month.

- c. No later than the twentieth day of each month, calculate DERCs used in the preceding calendar month, as follows:

- (1) For the boiler on each day, determine whether the 24-hour average NOx emission rate\* is less than the baseline emission rate or greater than the NOx RACT limit.
- (2) When the boiler has a daily NOx emission rate (24-hour average) exceeding the NOx RACT limit, calculate the amount of DERCs used, as follows:

DERCs (tons) = {[CEM-recorded NOx daily average emission rate in lbs/MMBtu\*] - ((0.95) x (NOx RACT limit or proportioned

emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in lbs/MMBtu))) x (actual fuel use in MMBtu); + 2000 pounds.

\*This rate shall be calculated pursuant to the methodology described in 40 CFR Part 75.

- d. Maintain documentation to attest to the fact that DERCs used during the ozone season were generated during the ozone season. Generator certification of this fact shall be sufficient.
  - e. After full program review, and if the Commissioner deems it appropriate, the Commissioner may allow the survival and use of approved DERCs beyond April 30, 2003, subject to the limitations set forth in paragraph C.1.c. of this Trading Agreement and Order.
  - f. Pursuant to Section 22a-174-22(d)(3) of the Regulations, MPLLC may use NOx allowances, pursuant to Section 22a-174-22(j) of the Regulations to achieve all or a portion of the reductions required by Section 22a-174-22 of the Regulations. Any allowance used for compliance with Section 22a-174-22(e) of the Regulations shall be subject to all restrictions and/or requirements applicable to DERCs contained in this Trading Agreement and Order.
3. MPLLC shall maintain records for the boiler showing daily NOx mass emissions, and actual NOx emission rates (24-hour average). MPLLC shall also maintain records showing a daily total of all DERCs generated net of the applicable uncertainty and environmental discounts.
4. In requesting approval of DERCs generated by the boiler, MPLLC shall provide documentation containing a sample spreadsheet with calculation formulas used to determine reported numbers; monthly operating reports of actual fuel usage including the fuel BTU content, number of barrels, gallons, and cubic feet used for each fuel type; daily MMBtu for each fuel type and

actual heat input based upon CEM-recorded data; daily weighted and unweighted actual NOx emission rates (24-hour average); and DERCs generated using the baseline emission rate, net of the applicable uncertainty and environmental discounts.

5. When the daily CEM-recorded NOx emission rate is used to calculate DERCs generated by the boiler, MPLLC shall not include missing data calculated in accordance with any missing data substitution procedures, including those allowed under 40 CFR Part 75. When the daily CEM-recorded NOx emission rate is used to calculate DERCs used by the boiler, MPLLC shall include missing data calculated in accordance with missing data substitution procedures under 40 CFR Part 75.
6. No later than March 1 of every year after issuance of this Trading Agreement and Order, MPLLC shall include with the Annual Emission Statement provided to the Commissioner, a record of each sale or other transfer, and use of any and all of the DERCs approved within and subsequent to issuance of this Trading Agreement and Order until all such DERCs have been used. MPLLC shall also include actual NOx emissions from the boiler, and the amount of all DERCs used (including serial numbers (if assigned) and approved DERCs generated and/or purchased from other facilities), generated and/or approved for the previous calendar year. These reports shall be on a form prescribed by the Commissioner. This reporting may cease if a central registry is approved by the Commissioner. Should MPLLC choose to discontinue the generation of DERCs, MPLLC shall notify the Commissioner in writing upon discontinuance.
7. In order to consider CEM-recorded NOx emission rates valid for DERC approval, all NOx and CO<sub>2</sub>/O<sub>2</sub> CEMs must comply with 40 Code of Federal Regulations Part 75.
8. MPLLC shall retain records and supporting documentation as described in this Trading Agreement and Order for a minimum of five years, commencing on the date such records were created. MPLLC shall provide the records specified above to the

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Commissioner within thirty (30) days of receipt of a written request from the Commissioner.

9. Upon sufficient documentation, as determined by the Commissioner, that MPLLC has met the requirements of paragraphs C.1., C.2., C.3, C.4., C.5., C.7., C.10., and C.11., of this Trading Agreement and Order, the Commissioner may provide written approval of DERCs generated by MPLLC retrospectively, in addition to those approved in paragraph B. of this Trading Agreement and Order. Requests for approval of all subsequent DERCs generated shall be submitted in writing to the Commissioner. Approved DERCs generated by MPLLC may be held or transferred to other persons. Such DERCs shall remain valid until they are used or until May 1, 2003, whichever occurs first.
10. Should MPLLC choose to generate additional DERCs, reports documenting these DERCs shall be submitted to the Commissioner on an ozone season, non-ozone season (January through April and/or October through December), or annual basis. Such reports shall be compiled on a monthly basis and shall be submitted at least on an annual basis.
11. When the boiler has daily NOx emissions below the applicable baseline emission rate(s), or the proportioned baseline emission rate, MPLLC shall calculate the amount of DERCs generated as follows:

$$\text{DERCs (tons)} = \{[\text{Total heat input}^1 \text{ of all fuels in MMBtu} \times ((\text{proportioned baseline emission rate}^2) - (\text{the CEM-recorded NOx emission rate}^3))]\} + 2000 \text{ lbs/ton} \} \times (0.90).^4$$

where:

<sup>1</sup> Heat input shall be calculated using the lower of CEM-recorded data or actual fuel usage data in MMBtu per unit of fuel combusted.

<sup>2</sup> This rate shall be calculated by 1) multiplying the heat input of each fuel combusted by the baseline emission rate(s) for such fuel; 2) summing those products; and 3) dividing the sum by the total heat

input. If the boiler is operating exclusively on one fuel, MPLLC may replace the proportioned baseline emission rate with the applicable baseline emission rate, for that fuel. The ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boiler is operating on No. 2 fuel oil.

<sup>3</sup> This rate shall be calculated pursuant to the methodology described in 40 Code of Federal Regulations Part 75 and weighted pursuant to the Department of Environmental Protection's policy statement entitled "Guidance for Calculation of Emission Reduction Credits and Determination of Compliance with NOx RACT for Sources Subject to 40 CFR (Acid Rain Sources)" dated 12/18/98 which is attached to and incorporated by reference into this Trading Agreement and Order as part of Attachment 1.

<sup>4</sup> An additional ten (10) percent of all DERCS (tons) generated by the boiler shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

- 12: Each allowance used for compliance with Section 22a-174-22 of the Regulations shall be equivalent to one discrete emission reduction credit and shall be deducted from MPLLC's NOx Budget Program compliance account upon such use. Allowances shall be considered used for compliance with Section 22a-174-22 of the Regulations when they are transferred from the facility's compliance account or overdraft account to a State of Connecticut NOx allowance retirement account.
13. Approvals. MPLLC shall use best efforts to submit to the Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form. If the Commissioner notifies MPLLC that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and MPLLC shall correct the deficiencies and resubmit it within the time specified

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by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.

14. Definitions. As used in this Trading Agreement and Order, "Commissioner" means the Commissioner or a representative of the Commissioner; "Ozone season" means the period from May 1 through September 30 in any given calendar year; "NOx RACT" means NOx Reasonably Available Control Technology. The date of "issuance" of this Trading Agreement and Order is the date the Trading Agreement and Order is deposited in the U.S. mail or personally delivered, whichever is earlier.
15. Dates. The date of submission to the Commissioner of any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Trading Agreement and Order, the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.
16. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by MPLLC or, if MPLLC is not an individual, by MPLLC's chief executive officer or a duly authorized representative of such officer, as those terms are defined in §22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such document, and MPLLC or MPLLC's chief executive officer and each such individual shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments

thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law."

17. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject MPLLC to an injunction and penalties.
18. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.
19. Notice of transfer; liability of MPLLC. Until MPLLC has fully complied with this Trading Agreement and Order, MPLLC shall notify the Commissioner in writing no later than 15 days after transferring all or any portion of the facility, the operations, the site or the business which is the subject of this Trading Agreement and Order or after obtaining a new mailing or location address. MPLLC's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
20. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by MPLLC pursuant to this Trading Agreement and Order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require MPLLC to undertake further investigation or further action to prevent or abate violations or pollution.
21. MPLLC's obligations under law. Nothing in this Trading Agreement and Order shall relieve MPLLC of other obligations under applicable federal, state and local law.

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22. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by MPLLC pursuant to this Trading Agreement and Order will result in compliance or prevent or abate pollution.
23. Access to facility. Any representative of the Department of Environmental Protection may enter the facility without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
24. No effect on rights of other persons. This Trading Agreement and Order neither creates nor affects any rights of persons or municipalities that are not parties to this Trading Agreement and Order.
25. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these DERCS.
26. Notice to Commissioner of changes. Within 15 days of the date MPLLC becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, MPLLC shall submit the correct or omitted information to the Commissioner.
27. Notification of noncompliance. In the event that MPLLC becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, MPLLC shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice, MPLLC shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and MPLLC shall comply with any dates which may be approved in writing by the Commissioner. Notification by MPLLC shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.

Montville Power LLC

Trading Agreement  
and Order No. 8217

28. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in this Trading Agreement and Order or in writing by the Commissioner, be directed to:

Wendy Jacobs  
Department of Environmental Protection  
Bureau of Air Management  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106-5127

Initials: BKR

Montville Power LLC

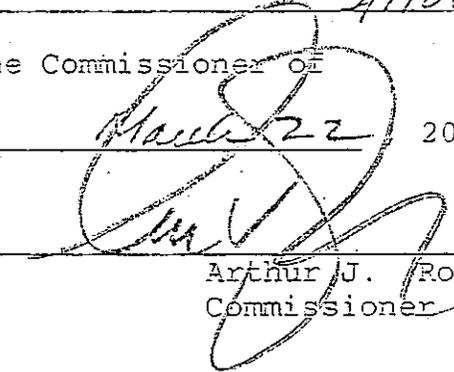
Trading Agreement  
and Order No. 8217

MPLLC consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind MPLLC to the terms and conditions of the Trading Agreement and Order.

Montville Power LLC

Signature: Bryan K. Riley  
Type Name: Bryan K. Riley  
Type Title: Vice President  
Date: 3/1/02

Issued as a final order of the Commissioner of  
Environmental Protection on March 22 2002.

  
Arthur J. Rocque, Jr.  
Commissioner

TOWN OF MONTVILLE LAND RECORDS

MAILED CERTIFIED MAIL, RETURN RECEIPT REQUESTED  
Certified Document No.

**PROPOSED REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22  
THROUGH USE OF  
DISCRETE EMISSION REDUCTION CREDITS (DERC's)**

**MONTVILLE POWER LLC  
Trading Agreement and Order No. 8183**

**August, 2002**

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**PART 2. DESCRIPTION OF DERC CREATION AND USE**

**By Trading Agreement and Order**

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in Economic Incentive Program (EIP) guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from NOx control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program is to approve creation of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of nitrogen oxides (NOx). Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving these emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for timelier rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of inter-temporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCs may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of these DERCs will not jeopardize RFP since the state's NOx rule emission limits for the source creating the DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### C. BASELINE

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources, the baseline will be the lower of actual or allowable emissions.

### D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the trading agreement and order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the overall performance of the program is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION & USE**

**A. Administering Agency:**

The State of Connecticut  
 Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source and Identifier:**

Montville Power LLC  
 74 Lathrop Road  
 Montville, CT  
 Units 10 and 11-Diesel Generators

**D. Designated Representative:**

Ms. Cynthia Karlic  
 Regional Manager  
 Telephone No. (860) 638-3170

**E. CT Nonattainment Area Classification: Serious**

**F. Summary of Compliance**

**Time Period:** On and after December 15, 1999 - prior to May 1, 2003.

**Purpose:** NOx emission reduction compliance for the peaking units in Table 1:

**Annual DERCs needed:** Estimated 20 DERCs.

**Max. Emission Rate:** Full load emission rates (FLERs) (see Table 1 below):

Table 1 MPLLC - NOx EMISSION RATES AND RACT LIMITS (lbs/MMBtu)					
Peaking Unit	FUEL	FLER (lbs/MMBtu)	NOx RACT Rate (lbs/MMBtu)	Stack Test Rate (lbs/MMBtu)	Date of Stack Test
Montville 10	other oil	3.11	2.350	2.83*	5/24/96
Montville 11	other oil	2.96	2.350	2.69*	5/24/96

(\* ) Indicates exceedance of the RACT rate limit for that fuel.

## G. DESCRIPTION OF COMPLIANCE

Montville Power LLC (MPLLC) is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 MPLLC purchased from The Connecticut Light and Power Company and now owns two (2) pieces of fuel-burning equipment ("peaking units") identified in Table 1 of Trading Agreement and Order No. 8183. Both of these peaking units are diesel generators. On and after December 15, 1999 NRG Montville Operations Inc. will operate both peaking units identified in Table 1 of Trading Agreement and Order No. 8183 at MPLLC's facility. Pursuant to Section 22a-174-22 of the Regulations, The Connecticut Light and Power Company filed a NOx compliance plan dated September 1, 1994. In this plan, The Connecticut Light and Power Company indicated that the peaking units were not able to meet the NOx RACT limit of 2.35 lbs/MMBtu. The peaking units are registered and both operate subject to the requirements of Section 22a-174-22 of the Regulations. After May 31, 1995 the peaking units are required to have a NOx emission rate limitation of 2.35 lbs/MMBtu, averaged over 3 hours. In order to achieve compliance, MPLLC proposes to acquire emission reduction credits for the amount of NOx emissions that exceed the standards between December 15, 1999 and May 1, 2003 or until it achieves compliance through NOx controls or other approved means. Pursuant to Section 22a-174-22(j) of the Regulations, MPLLC proposes to acquire sufficient quantities of approved DERCs in advance of each month to offset excess NOx emissions on a monthly basis from the peaking units in accordance with the protocol of the Department's "*Credit Trading for Sources with Irregular NOx Emissions*", dated November 5, 1997.

In accordance with Section 22a-174-22(j) of the Regulations, MPLLC proposes to use DERCs for compliance when operating the peaking units. Each month, the quantity of DERCs required to offset the excess emissions generated during that month by the peaking units above the RACT limit will be determined. DERCs previously purchased and/or acquired and on-hand will be used to offset any remaining balance of excess emissions (debits) for that month. Design margins will be applied to the RACT emission rates for the peaking units to ensure an environmental benefit.

On December 15, 1999, MPLLC initially acquired from The Connecticut Light and Power Company, sufficient approved ozone season DERCs and non-ozone season DERCs to offset excess NOx emissions. MPLLC will use (retire) approximately 12.8 tons of DERCs to offset excess emissions annually. The DERCs will be used thereafter in accordance with the requirements in this SIP and attached Trading Agreement and Order No. 8183. Additional DERCs will be purchased or acquired as needed prior to use based on anticipated future fuel use through May 1, 2003. The number of DERCs initially acquired were calculated based on the estimated fuel usage for the peaking units and the FLERs listed in Table 1 of Trading Agreement and Order No. 8183.

The NOx emission test rates are those determined during the official testing program (approved stack testing) conducted on May 24, 1996. Each FLER, as shown in Table 1, is used to calculate actual emissions for each peaking unit and is an enforceable limit for each peaking unit. Prior to May 1, 2003, MPLLC will comply during operation of each peaking unit with each FLER, the 5 percent design margin and the NOx emission limits shown in Table 1 of Trading Agreement and Order No. 8183.

Starting December 15, 1999 and no later than the tenth day of each month, beginning the month

after execution of Trading Agreement and Order No. 8183, MPLLC will calculate actual DERCs used in the preceding calendar month, in accordance with the following:

**At all times (mass calculation):**

$$\text{ERCs (in tons)} = [((\text{FLER in lbs/MMBtu}) - (0.95 \times \text{NOx RACT in lbs/MMBtu})) \times (\text{actual fuel use in MMBtu})] \div 2000 \text{ pounds/ton}$$

**During the ozone season only (peak day calculation):**

the maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthful," "unhealthful," or "very unhealthful," divided by 3 and then divided by 13 (with the result in tons):

$$\text{ERCs (in tons)} = [(\text{Maximum excess NOx in lbs} \div 3)] \div [13 \text{ lbs/day/ton}]$$

Where:

- FLER = full load emission rate presented in Table 1;
- RACT rate = RACT rate presented in Table 1;
- Discount = 5% design margin applied to the RACT rate.

As described in Exhibit 1 of Trading Agreement and Order No. 8183, to the extent that DERCs used to offset on a peak day basis during the ozone season exceed the total mass excess emissions, remaining DERCs may be used in the non-ozone season in the same or subsequent years until May 1, 2003. However, non-ozone season DERCs may only be used during the non-ozone season until May 1, 2003.

#### **H. SOURCE OF DERCS**

On December 15, 1999, MPLLC has initially acquired approved ozone season DERCs and non-ozone season DERCs from The Connecticut Light and Power Company, approved by the Department on April 29, 1999 and other dates in 1999.

MPLLC may use or consume fewer DERCs than it intends to purchase because of a lower operating rate or upon early establishment of controls or other emission limitation strategies which result in attainment of NOx limitations applicable to the emitting peaking units. Such residual DERCs may not be used for any purpose other than that described in Trading Agreement and Order No. 8183, contained in Exhibit 3, without the written approval of the Commissioner.

Pursuant to the intent of Section 22a-174-22a(f)(4) of the Regulations, MPLLC may use allowances acquired pursuant to the provisions of Section 22a-174-22a of the Regulations to comply with subsection (e) of Section 22a-174-22 of the Regulations pursuant to the provisions of subsection (j) of Section 22a-174-22 of the Regulations as long as MPLLC remains an owner or operator of a budget source, for purposes of this Trading Agreement and Order. Any

allowance used for compliance with subsection (e) of Section 22a-174-22 of the Regulations shall be subject to all restrictions and/or requirements applicable to DERs contained in this Trading Agreement and Order and/or Section 22a-174-22a of the Regulations.

MPLLC may acquire additional approved DERs at any time prior to the need to use such DERs. MPLLC will at all times maintain a balance of approved DERs sufficient to allow operation for the current month. If, upon audit or inspection, MPLLC fails to demonstrate possession of an adequate amount of DERs to cover the current month, it will be subject to violation as prescribed in Sections 22a-174-12 and 22a-174-22 of the Regulations.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of  
The State of Connecticut  
and  
Montville Power LLC

Trading Agreement  
and Order No. 3183

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Montville Power LLC ("MPLLC") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of emission reduction credit ("ERC") trading to reduce nitrogen oxide ("NOx") emissions will achieve this result in a timely and cost-effective manner:

- A. At the request and with the agreement of MPLLC, the Commissioner finds the following:
- MPLLC is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On or before December 31, 1999 MPLLC will purchase from The Connecticut Light and Power Company and then own two (2) pieces of fuel-burning equipment ("peaking units") identified in Table 1 of this Trading Agreement and Order. These peaking units are diesel generators.
  - On or before December 31, 1999 NRG Montville Operations Inc. will operate both peaking units identified in Table 1 of this Trading Agreement and Order at MPLLC's facility.
  - Official U.S. Environmental Protection Agency ("EPA") Reference Method 7E stack testing performed on the date indicated in Table 1, resulted in NOx emission rates set forth in Table 1.

Peaking Unit	FUEL	FLER (lbs/MMBtu)	NOx RACT Rate (lbs/MMBtu)	Stack Test Rate (lbs/MMBtu)	Date of Stack Test
Montville 10	other oil	3.11	2.35	2.83	5/24/96
Montville 11	other oil	2.96	2.35	2.69	5/24/96

- The emission rates for the peaking units and fuel specified in Table 1 are in excess of Section 22a-174-22, Table 22-2, of the Regulations of Connecticut State Agencies ("Regulations"), NOx emission rate limits (Reasonably Available Control Technology "RACT").
- Pursuant to Section 22a-174-22(b) of the Regulations, both of the peaking units are subject to Sections 22a-174-22(d) through (k) of the Regulations, pertaining to the control of NOx emissions.

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79 Elm Street • Hartford, CT 06106-5127

Date 12/29/00

6. In accordance with Section 22a-174-22(j) of the Regulations, MPLLC proposes that for both peaking units identified in Table 1, MPLLC shall use ERC trading when burning "other oil", as that term is defined in Section 22a-174-22 of the Regulations.
  7. Pursuant to the Department of Environmental Protection's "Credit Trading for Sources with Irregular NOx Emissions" policy, with a revised date of November 5, 1997, attached hereto and incorporated by reference into this Trading Agreement and Order as Exhibit 1, both peaking units have peak daily NOx emissions greater than three times the average daily emissions during the ozone season and are therefore considered sources with irregular NOx emissions.
  8. Based on DEP approved stack test data, it has been determined that both of the peaking units' emissions will not meet the applicable requirements of RACT contained in Section 22a-174-22 of the Regulations. MPLLC proposes to use Full Load Emission Rates ("FLERs") identified in Table 1 for the purposes of calculating ERCs required.
  9. MPLLC intends to continue acquiring approved ERCs as needed.
  10. Approved ERCs are defined for the purpose of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations.
- B. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, and pursuant to Section 22a-174-22 (j) of the Regulations hereby allows MPLLC to comply with Section 22a-174-22 of the Regulations through use of ERC trading referenced in Section A, herein, to achieve the nitrogen oxide emission reduction required by Section 22a-174-22(d) (2) of the Regulations.
- C. With the agreement of MPLLC, the Commissioner, acting under Connecticut General Statutes Sections 22a-6, 22a-171, 22a-174, 22a-175, and 22a-177, orders MPLLC as follows:
1. Upon issuance of this Trading Agreement and Order MPLLC shall comply during operation of each peaking unit with the FLERs shown in Table 1 above.
  2. On and after the date which MPLLC purchases both peaking units identified in Table 1 of this Trading Agreement and Order, MPLLC shall have in its possession sufficient approved ERCs to meet applicable RACT requirements and the requirements of this Trading Agreement and Order.
  3. On and after the date which MPLLC purchases both peaking units identified in Table 1 of this Trading Agreement and Order, MPLLC shall, on a daily basis, document and record the amounts of all fuel used by each peaking unit each day and the number of ERCs used for the ozone season (from May 1 through September 30 of each year) and non-ozone season (the remainder of the year).
  4. On and after the date which MPLLC purchases both peaking units identified in Table 1 of this Trading Agreement and Order, pursuant to Section 22a-174-22(j) of the Regulations, MPLLC shall acquire from The Connecticut Light and Power Company sufficient approved non-ozone season ERCs in order to meet applicable RACT requirements and the requirements of this Trading Agreement and Order for the operation of both peaking units identified in Table 1 of this Trading Agreement and Order during the month of December, 1999.
  5. Except as provided in paragraph C.4. of this Trading Agreement and Order, on and after the date which MPLLC purchases both peaking units identified in Table 1 of this Trading Agreement and Order, pursuant to Section 22a-174-22(j) of the Regulations, MPLLC will acquire from The Connecticut Light and Power Company sufficient approved ozone and non-

ozone season ERCs in order to meet applicable RACT requirements and the requirements of this Trading Agreement and Order for the following month's operation.

6. In accordance with Exhibit 1 of this Trading Agreement and Order, ozone season ERCs for use during the ozone season shall be purchased by CJP prior to the beginning of the ozone season.
7. On and after the date which MPLLC purchases both peaking units identified in Table 1 of this Trading Agreement and Order, MPLLC shall maintain and provide the records required by paragraph C.3. of this Trading Agreement and Order in accordance with the following and Section 22a-174-4 of the Regulations, and shall:
  - a. Have in its possession sufficient approved ERCs for the current day, based on the following calculations (described also in Exhibit 1);  
At all times (mass calculation):  
$$\text{ERCs (in tons)} = [((\text{FLER in lbs/MMBtu}) - (0.95 \times \text{NOx RACT in lbs/MMBtu})) \times (\text{actual fuel use in lbs/MMBtu})] + 2000 \text{ pounds/ton}$$
  
During the ozone season only (peak day calculation):  
the maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthful," "unhealthful," or "very unhealthful," divided by 3 and then divided by 13 (with the result in tons):  
$$\text{ERCs (in tons)} = [(\text{Maximum excess NOx in lbs}) \div 3] \div 13$$
  
[lbs/day/ton];
  - b. At a minimum, adjust upwards by 100% the ERCs required if ERCs are not in MPLLC's possession prior to use;
  - c. As described in Exhibit 1 of this Trading Agreement and Order, to the extent that ERCs used to offset on a peak day basis during the ozone season exceed the total mass excess emissions, remaining ERCs may be used in the non-ozone season in the same or subsequent years until May 1, 2003;
  - d. Document and record daily fuel use, excess NOx emissions and, during the ozone season, the ozone classification as forecasted by the Commissioner on the previous day;
  - e. No later than March 1, 2000, 2001, 2002, 2003 and 2004, include with its annual emissions report to the Commissioner, ERCs used (calculated as described in section C.7.a. above), by ozone and non-ozone seasons, for the previous calendar year;
  - f. Retain the records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records are created;
  - g. Maintain documentation to attest to the fact that ERCs used during the ozone season were generated during the ozone season. The ozone season is from May 1 through September 30 in any calendar year. Generator certification of this fact shall be sufficient; and
  - h. Provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
8. The terms and conditions established by this Trading Agreement and Order shall become effective on the date MPLLC purchases both peaking

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units identified in Table 1 of this Trading Agreement and Order, and upon issuance of this Trading Agreement and Order.

9. No later than May 1, 2003, MPLLC shall comply with the requirements of Section 22a-174-22(d)(2) of the Regulations. However, after full program review of this and other Trading Agreements and Orders and, if determined to be appropriate, the Commissioner may grant a written extension of this Trading Agreement and Order.
10. Definitions. As used in this order, "Commissioner" means the Commissioner of Environmental Protection or an agent of the Commissioner. "Other oil" means a fuel that is liquid at standard conditions and is not residual oil. "Residual oil" means any fuel oil of No. 4, No. 5, or No. 6 grades, as defined by Commercial Standard C.S. 12-48. "Ozone season" means the period from May 1 through September 30 in any given calendar year. "Issuance" means the date this Trading Agreement and Order is deposited in the U.S. Mail or the date it is personally delivered, whichever is earlier.
11. Notification of noncompliance. In the event that MPLLC becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, MPLLC shall by telephone immediately notify the Bureau of Air Management and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. MPLLC shall also notify the Commissioner in writing within ten days of becoming aware of the noncompliance or potential noncompliance stating the date, time, and duration of the noncompliance, the reasons for the noncompliance or delay and all activities which MPLLC and its agents, employees and representatives took to avoid or repair the results of the noncompliance and prevent the noncompliance, and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved. MPLLC shall comply with any dates which may be approved in writing by the Commissioner. Notification by MPLLC shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing. Nothing herein shall negate MPLLC's obligation to comply with Section 22a-174-7 of the Regulations. To the extent that the provisions of Section 22a-174-7 are inconsistent with the provisions of this Trading Agreement and Order, the more stringent of the provisions in the Trading Agreement and Order or Section 22a-174-7 shall control.
12. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by the responsible corporate officer of MPLLC or a duly authorized representative of such officer, as those terms are defined in Section 22a-430-3(b)(2) of the Regulations, and by the individual or individuals responsible for actually preparing such document, each of whom shall examine and be familiar with the information submitted in the document and all attachments thereto, and shall make inquiry of those individuals responsible for obtaining the information to determine that the information is true, accurate, and complete, and each of whom shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes or, in accordance with Section 22a-6 of the Connecticut General Statutes, under Section

53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

13. Final Agreement and Order. This Trading Agreement and Order is the final agreement and order by and between the Commissioner and MPLLC with respect to the matters addressed herein, and shall not be modified without the written agreement of both parties.
14. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes or, in accordance with Section 22a-6, under Section 53a-157b of the Connecticut General Statutes.
15. Notice of transfer; liability of MPLLC and others. Until MPLLC has fully complied with this Trading Agreement and Order, MPLLC shall notify the Commissioner in writing no later than fifteen (15) days after transferring all or any portion of the facility, the operations, the site or the business which are the subject of this Trading Agreement and Order, or obtaining a new mailing or location address. Any license transfer shall be conducted in accordance with Section 22a-60 of the Connecticut General Statutes. MPLLC's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
16. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law which are willful or criminally negligent or for which penalties have not been specifically provided in this Trading Agreement and Order, including but not limited to violations of any permit issued by the Commissioner. If at any time the Commissioner determines that the actions taken by MPLLC pursuant to this Trading Agreement and Order have not fully achieved compliance with Section 22a-174-22 of the Regulations, the Commissioner may institute any proceeding against MPLLC and/or require MPLLC to undertake further investigation or further action.
17. MPLLC's obligations under law. Nothing in this Trading Agreement and Order shall relieve MPLLC of other obligations under applicable federal, state and local law.
18. Access to records and facility. Any representative of the Department of Environmental Protection may enter and inspect the facility and inspect and copy records within normal business hours without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
19. No effect on rights of other persons. This Trading Agreement and Order shall neither create nor affect any rights of persons who or municipalities which are not parties to this Trading Agreement and Order.
20. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these ERCs.
21. Notice to Commissioner of changes. Within fifteen (15) days of the date MPLLC becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, MPLLC shall submit the correct or omitted information to the Commissioner.
22. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in writing by the Commissioner, be directed to:

Mr. David Jawin  
Department of Environmental Protection  
Bureau of Air Management  
Compliance and Field Operations Division  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106

Initials



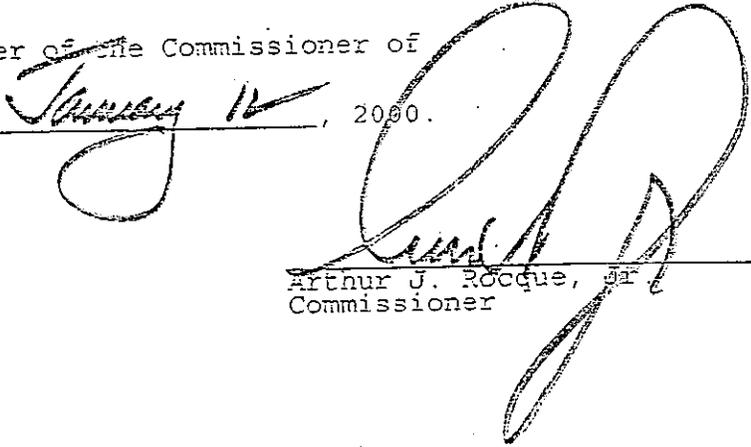
Montville Power LLC

Trading Agreement  
and Order No. 8183

MPLLC consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind MPLLC to the terms and conditions of the Trading Agreement and Order.

Signature: Robert S. Evans II <sup>Montville Power LLC</sup>  
Type Name: Robert S. Evans II  
Type Title: Executive Director, Environmental Services  
NRG Energy, Inc.  
Date: 12/29/99

Issued as a final consent order of the Commissioner of  
Environmental Protection on January 12, 2000.

  
Arthur J. Rocque, Jr.  
Commissioner

TOWN OF MONTVILLE  
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Exhibit 1  
Trading Agreement and Order No. 8183



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



REVISED 11/5/97

Credit Trading for Sources with Irregular NOx Emissions

The following outlines the Department's concerns and methodology for dealing with NOx compliance pursuant to §22a-174-22(j), Regulations of Connecticut State Agencies ("Regulations"), emission trading for "peakers" and other sources that have peak emissions that are substantially higher than their average daily emissions. For purposes of this protocol, peaking units are defined as sources with peak daily NOx emissions greater than three times their average daily emissions during the ozone season.

The basic concept of the trading program is that sources with excess NOx emissions (a rate that exceeds the rate limits in the Regulations) may obtain NOx emission reduction credits ("ERCs") from sources that have "over-controlled" their NOx emissions. Although typical sources can obtain credits on a mass basis (one ton of ERCs to offset one ton of excess emissions) with an acceptable environmental outcome, sources with large variations in emissions from day to day pose an additional problem for ozone attainment planning.

The most common peaking units or "peakers" are electricity generating units that run during times of high electricity consumption. Electricity demand is often the highest during hot, humid days of the summer when the potential for ozone formation is also high. Peakers frequently have high emission rates. To the extent that these units produce emissions at exactly the time when emissions need to be reduced to limit ozone formation, allowing peakers to continue to comply with new rate limits through the use of ERCs on a ton-for-ton basis will exacerbate this effect. On the other hand, if it can be demonstrated that the ERCs being used by peakers were generated on a comparable basis (i.e., during days of high ozone potential), then ton-for-ton use by peakers would be appropriate.

The full impact of the NOx emissions from these types of facilities during summer operation must consider temporal variability as well as mass of excess emissions. Any ERC trade must consider equivalency to the NOx reductions that control equipment would produce on an ozone day on both a temporal and a mass basis. The protocol below places appropriate requirements on peaking units to reflect the greater impact of NOx emitted under this type of usage pattern. Attachment 1 provides a detailed example of this issue.

*NOx Emissions Reduction Credit Use Computation For Peakers*

- Peaking units are only considered to be a temporal issue for the ozone season months.
- All excess NOx emissions during the winter (non-ozone season) need only be offset by ERCs on a mass basis.
- Prior to each ozone season there will be a prospective calculation to determine how many tons of ERCs must be "on hand" during the ozone season. A retrospective calculation will determine how many ERCs were actually "used" during the ozone season.

For ERC use during the ozone season:

1. Prospective calculation determines the number of ERCs that must be provided for the ozone season. (Beginning in 1996, the ERCs must be in place no later than May 1.)

ERCs required for the ozone season shall be calculated based on: (a) a mass basis (total anticipated excess NOx emissions over the ozone season) and (b) a peak-day basis (maximum excess emissions for any day during the ozone season). Sources will be required to provide credits equal to the greater of the amount calculated on a mass or peak-day basis. The timing of actual credit provision will be governed by the terms of the specific trading order issued for that source.

- (a) Mass basis: ERCs required will be equal to the total number of tons of anticipated excess NOx emissions over the entire ozone season, calculated in the same manner used for other sources using ERCs (i.e., including any discounts).
- (b) Peak (daily rate) basis: ERCs (in tons) required will be calculated by dividing one-third of the maximum daily excess emissions\* (in pounds) by 13 pounds/day/ton:

$$\text{ERCs required (tons)} = [(\text{Maximum Estimated Excess NOx in lbs.}) \div 3] \div [13 \text{ lbs./day/ton}]$$

\*Where maximum daily excess NOx emissions are the difference between the maximum estimated hours of operation per day at the full-load-emission-rate and 95% of the allowable NOx emissions under Section 22a-174-22(e) of the Regulations.

2. Retrospective calculation will determine the actual credit use and the ERC surplus, if any. At the end of the ozone season, the calculations required in item 1 above will be repeated using (a) the actual total excess emissions for the ozone season, and (b) the maximum actual excess NOx emissions on any of the days projected by the Commissioner to be "moderate to unhealthful", "unhealthful", or "very unhealthful". The actual "ERCs required" will be the greater of the ERCs calculated on the basis of total mass or maximum (peak) day. To the extent that the number of ERCs used to offset peak day emissions exceed the total mass of excess NOx emissions for the ozone season, the remaining mass value of such ERCs may be carried forward for use in the winter (non-ozone season). Any unused ERCs may be carried forward until May 1, 1999, except as may be limited by the trading agreement and order, or by regulation.

*Exhibit I*  
*ERC Calculation for Peaking Units*

Unless it can be demonstrated otherwise, ERCs are assumed to be created by relatively small daily reductions in NOx emissions over the course of an entire ozone season (153 days). The average daily NOx emissions reduction represented by one ton of credit is 13 pounds/day calculated as follows:

$$(1 \text{ ton}) \times (2000 \text{ pounds/ton}) \div 153 \text{ days} = 13 \text{ pounds/day/ton}$$

Thus, an ERC (ton) would be equivalent to a reduction in NOx emissions of 13 pounds/day.

EXAMPLE. If a "peaking" source were to emit one ton of excess NOx per day when operating, but only operates for five days during the ozone season, the owner/operator of the source would nominally need to obtain five tons of ERCs. However, those ERCs are likely to have been created by relatively small daily reductions in NOx emissions over the course of an entire ozone season (153 days). In this example, assuming a purchase of five tons of ERCs, that calculates out to a daily NOx reduction of approximately 65 pounds.

$$(5 \text{ tons} \times 2000 \text{ pounds/ton}) \div 153 \text{ days} = 65 \text{ pounds/day}$$

Clearly, on any day that the "peaking" unit operates, there is much more excess NOx emissions that will not have been offset, on the order of 1,935 pounds:

$$(1 \text{ ton} \times 2000 \text{ pounds/ton}) - (65 \text{ pounds credit}) = 1,935 \text{ pounds excess NOx emissions}$$

While the total amount of NOx emitted would be controlled on a seasonal average basis, on the "peaking" day there would be a potentially significant increase in NOx emitted, and thus an increase in potential ozone creation. In order to achieve a commensurate reduction in ozone creation potential for peakers, an adjustment in the calculation of required ERCs is needed. One approach would be to require ERCs in a quantity that would ensure that the daily average reduction represented by those ERCs would equal the maximum daily excess NOx emissions from the peaking source on any day that it ran. On this basis, a peaking source with a maximum 24-hour excess NOx emission of one ton would be required to purchase 153 tons of ERCs.

$$1 \text{ (ton)/day} \times 153 \text{ days/season} = 153 \text{ tons}$$

This 153 tons of ERCs would be adequate to "offset" excess emissions of one ton per day for as many days as the source operated during a particular ozone season. This has been deemed to be unduly stringent, given some diversity in operation of these sources. In light of the foregoing, this requirement is adjusted downward by two-thirds.

**PROPOSED REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22  
THROUGH USE OF  
DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

**NORWALK POWER LLC  
Trading Agreement and Order No. 8218**

**August, 2002**

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**By Trading Agreement and Order**

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- Exhibit 1 Notice of Hearing and Hearing Certification
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- Exhibit 3 Trading Agreement and Order
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## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in Economic Incentive Program (EIP) guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from NOx control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program is to approve creation of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of nitrogen oxides (NOx). Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving these emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions

to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for timelier rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone

season. Only the DERCS produced during ozone-season months of May through September are available for use during the ozone season.

DERCS are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCS are utilized by sources. Upon approval by the Commissioner, however, such DERCS may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCS may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCS used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERCS generation and use will allow timely program changes, as required.

Use of these DERCS will not jeopardize RFP since the state's NOx rule emission limits for the source creating the DERCS are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERCS use and creation by the state will allow for timely program changes if the use of DERCS exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCS improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCS upon their creation to assure a benefit to the environment and the inventorying of DERCS prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions are at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For

individual sources, the baseline will be the lower of actual or allowable emissions.

#### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the trading agreement and order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION & USE**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source and Identifier:**

Norwalk Power LLC  
Manresa Island Avenue  
Norwalk, Connecticut  
Unit 1 164 megawatt tangentially-fired boiler R-137-0028  
Unit 2 172 megawatt tangentially-fired boiler R-137-0030

**D. Designated Representative:**

Ms. Cynthia Karlic  
Regional Manager  
Telephone No. (860) 638-3170

**E. CT Nonattainment Area Classification: Severe**

**F. Summary of Compliance:**

**Time Period:** December 15, 1999- May 1, 2003  
**Method:** Modifications to burners, combustion controls and operating conditions, and installation of SNCR

Max. Daily Emission Rate  
pursuant to Section 22a-174-22

**Baseline:** 0.25 lb/MMBTU of heat input (24 hour average consuming No. 6)  
0.17 lb/MMBTU of heat input (24 hour average consuming other oil)

**Monitoring:** Continuous Emission Monitoring (CEM), certified NOx mass rate

**Discrete tons:** 52 tons ozone season, 59 tons non-ozone season between December 16, 1999 and June 30, 2000

**Rate of Creation:** determined by CEM

**Discounts: Creation:** 10 percent to benefit the environment.

### G. Description of Compliance:

Creator: Norwalk Power LLC  
Registration Numbers R137-0028 and R137-0030

Norwalk Power LLC ("NP") is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 NP purchased from The Connecticut Light and Power Company ("CL&P") four fossil fuel-fired electric generating stations. One of the four fossil fuel-fired electric generating stations is Norwalk Station, at Manresa Island Avenue in Norwalk, Connecticut ("facility"). At the facility, NRG Norwalk Harbor Operations Inc. operates Unit 1, Connecticut Registration Number 137-0028, a 164 megawatt tangentially-fired boiler and Unit 2 Connecticut Registration Number 137-0030, a 172 megawatt tangentially-fired boiler ("boilers") on No. 6 fuel oil and other oil. The boilers are subject to the requirements of Sections 22a-174-22 (Reasonably Available Control of nitrogen oxide emissions) and 22a-174-22a and 22b (NOx Budget Program). The boilers required modifications to the burners, combustion controls, operating conditions, and the installation of SNCR to meet the standard. CL&P modified the boilers prior to the May 31, 1995 effective date of the NOx RACT rule. Trading Agreement and Order 8158 was issued to CL&P as a mechanism for meeting the NOx RACT requirements. Trading Agreement and Order 8218 has been issued to NP because CL&P no longer owns the facility. The boiler has a dedicated CEM system, certified to 40 Code of Federal Regulations Part 75. The NOx CEM probes are located in the stack outlet of the boiler. The daily NOx emission rates will be monitored, calculated, and recorded using CEM 24-hour averages. A monthly summation of all NOx overcontrol may be submitted to DEP for the purpose of obtaining certified NOx DERCs. NP shall use 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil as the baseline emission rates for the boilers, or the proportioned baseline emission rate.

### H. Source of DERCs

#### Equation for the calculation of DERCs

For the boilers, with daily NOx emissions below the applicable baseline emission rate, NP shall calculate the amount of DERCs *generated* as follows:

$$\text{DERCs (tons)} = [\text{Total heat input}^1 \text{ of all fuels in MMBTU} \times (\text{proportioned RACT emission rate}^2 - \text{the CEM recorded NOx emission rate}^3) \div 2000 \text{ lbs/ton}] \times (0.90).^4$$

For the boilers with daily NOx emissions above the applicable baseline emission rate, NP shall calculate the amount of DERCs or allowances *used* as follows:

DERCs (tons) = [Total heat input of all fuels in MMBTU x (the CEM recorded NOx emission rate - ((.95) x proportioned RACT emission rate)) ] ÷ 2000 pounds.

where:

<sup>1</sup> Heat input shall be calculated using the lower of CEM recorded data or actual fuel usage data in MMBTU per unit of fuel combusted.

<sup>2</sup>calculated pursuant to Section 22a-174-22 (f)(2)(A) of the Regulations.

<sup>3</sup> This rate shall be calculated pursuant to the methodology described in 40 Code of Federal Regulations Part 75. A ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boiler is operating on No. 2 fuel oil.

<sup>4</sup> Ten (10) percent of all DERCs (tons) created shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

**Estimated emission reduction credits generated.**

Sample calculation for May 1, 2001

$$\begin{aligned} \text{DERCs (tons)} &= [51709 \text{ MMBTU} \times (0.25 \text{ lb/MMBTU} - 0.18 \text{ lb/MMBTU}) \div 2000 \text{ lbs/ton}] \\ &= 1.81 \text{ tons of DERCs.} \end{aligned}$$

Less 10% for environmental benefit,  $1.81 \times .90 = 1.63$  tons created.

Attachment 1 of Trading Agreement and Order No. 8218 shows a summary of the proposed emission reductions for the December 16, 1999 through June 30, 1999 time period, and contains supporting data. Attachment 1 also includes spreadsheets of the monthly calculations and tables that show the full set of 24-hour NOx emission data and operating hours used in these calculations.

An accounting of all tons of NOx DERCs created by NP will be provided to the Commissioner on March 1 of every year until all tons are used. (If an approved DERC registry is available, this requirement may be waived by the Commissioner upon request.) This reporting will be included

as part of the annual Emission Statement. This report will include all DERCs created by NP, used by others, and will provide the state with information to be used in auditing the program as described in Part 1. NP may submit reports on an ozone season, non-ozone season (January through April and/or October through December), or annual basis to document the creation of NOx DERCs. DERCs generated in the ozone season will be distinguished from DERCs generated in the non-ozone season. NP will include a summary of all NOx DERCs generated and/or used for the preceding year with the Facility's Annual Emission Statement, including approved DERCs generated and/or purchased from other facilities. Should NP choose not to generate DERCs, NP is expected to notify the Department in order to assist in DERC program planning. Calculations and reports will be in a form similar to that shown in Attachment 1. Following review and written prior approval by the Department, these DERCs will be available for use by approved sources for purposes of compliance with Section 22a-174-22 of the Regulations. Approval in this manner may continue until there are regulatory changes to the NOx rule that affect NOx limitations at the source or until May 1, 2003, whichever comes first.

#### **Restrictions on use**

NP proposes to reconcile DERCs generated on a monthly basis. Several restrictions are placed upon the use of DERCs:

- These DERCs may not be used prior to approval by the DEP.
- DERCs generated during non-ozone season months may not be used during the ozone season.
- Ozone Season Restrictions. The boilers are subject to Section 22a-174-22a of the Regulations (NOx Budget Program) in 1999 and every year thereafter. The boilers may generate ozone season BDERCs to comply with Section 22a-174-22 of the Regulations. :  
1) BDERCs shall only be generated by the boilers from May 1 through September 30 of a given year, 2) BDERCs shall only be used by other NOx Budget Program sources located in Connecticut, 3) BDERCs shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BDERCs generated during a given year shall only be used during the following ozone season, with the exception of BDERCs generated during 1999, which may be used in the 2001 ozone season. BDERCs may be generated until May 1, 2003. BDERCs are subject to all DERC requirements set forth in the Trading Agreement and Order except for those requirements pertaining solely to non-ozone season DERCs and as otherwise may be provided.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of

The State of Connecticut and )

Norwalk Power LLC )

) Trading Agreement  
) and Order No. 8218  
)

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Norwalk Power LLC ("NP") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of emission reduction trading will achieve this result in a timely and cost-effective manner:

A. At the request and with the agreement of NP, the Commissioner finds the following:

1. NP is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 NP purchased from The Connecticut Light and Power Company and now owns one fossil fuel-fired electric generating station, Norwalk Harbor Station, at Manresa Island Avenue, South Norwalk, Connecticut ("facility").
2. At the facility, Norwalk Harbor Operations Inc. operates Norwalk Harbor Station Unit 1, a 164 megawatt tangentially-fired boiler and Norwalk Harbor Station Unit 2, a 172 megawatt tangentially-fired boiler, Connecticut Registration Numbers 137-0028 and 137-0030 respectively, ("boilers"). The boilers have the dual capacity to operate on fuel oil (No. 6 or No. 2). No. 2 fuel oil is used primarily as an ignition fuel as part of the start-up procedure. A continuous emissions monitor ("CEM"), certified to 40 Code of Federal Regulations ("CFR") Part 75, measures nitrogen oxide ("NOx") emissions at a common stack from the boilers.
3. During the year 1979, prior to modifications of the boilers' burners, combustion controls and operating

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BKR

Date:

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conditions, and prior to the installation of a selective noncatalytic reduction system, and based on Department of Environmental Protection ("Department") approved stack test data and AP-42 emission factor data, the average annual NOx emission rate for Norwalk Harbor Station Unit 1 was 0.285 pounds per million British thermal units ("lbs/MMBtu") of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil, and the average annual NOx emission rate for Norwalk Harbor Station Unit 2 was 0.282 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil. On and after May 31, 1995, the Regulations of Connecticut State Agencies ("Regulations") require that the boilers emit NOx at a rate no greater than 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.20 lbs/MMBtu of heat input when operating on No. 2 fuel oil.

4. In January 1994, The Connecticut Light and Power Company completed modifications on both boilers' burners and combustion controls, and began to test and adjust operating conditions, thereby reducing both boilers' NOx emission rates below their allowed and actual baseline emission rates. A selective noncatalytic reduction system was installed at the facility by June, 1995 to provide further reductions of NOx emissions. Such modifications and control equipment enabled NP's boilers to frequently meet and operate below the emission limitation specified in Section 22a-174-22(e) of the Regulations.
5. After December 15, 1999, NP may obtain approval of actual reductions in NOx emissions, generated by operating the boilers at a rate which is below 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil for use as discrete emission reduction credits ("DERCs"). If DERCs are created during the ozone season, NP may obtain approval for such reductions for use as Budget discrete emission reduction credits ("BDERCs").

6. Pursuant to Section 22a-174-22(j) of the Regulations, NP intends to acquire and generate approved DERCS until May 1, 2003 at the facility. Approved DERCS are defined for purposes of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations. NP will acquire approved DERCS monthly on an as-needed basis, as determined by actual NOx emissions in the event that the 24-hour average of actual NOx emissions exceeds the NOx emission limitations of Section 22a-174-22(e) of the Regulations.
7. When properly documented by NP, and approved by the Commissioner, the reductions in NOx emissions identified above, and as computed in accordance with the terms of this Trading Agreement and Order, will conform to the requirements of Section 22a-174-22(j)(3) of the Regulations. Specifically, the reductions will be:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on continuous emission monitoring data as applied in an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut statute or regulation mandated by a current State Implementation Plan ("SIP"), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating, and an appropriate tracking system is in place to monitor all data required to verify and quantify the creation of DERCS.

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Enforceable because the DERCs are approved by the Commissioner retrospectively after the submission by NP of the seasonal or annual report that will document their creation.

8. As documented in Attachment 1, attached to and incorporated by reference into this Trading Agreement and Order, 58.7 tons of ozone season NOx BDERCs and 66.4 tons of non-ozone season NOx DERCs were generated by the boilers between December 16, 1999 and June 30, 2000.
  9. Ten (10) percent of these DERCs (5.9 tons ozone season, 6.6 tons non-ozone season) are retired and permanently removed from all calculations to assure a benefit to the environment. The total available for use, after rounding down to the nearest whole number for annual serial assignment purposes, is 111 DERCs (52 tons ozone season, 59 tons non-ozone season).
- B. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, will allow NP and approved sources within Connecticut to use 52 tons of ozone season NOx BDERCs and 59 tons of non-ozone season NOx DERCs referenced in paragraph A.9. of this Trading Agreement and Order for purposes of compliance under Section 22a-174-22(j) of the Regulations to achieve a portion of the nitrogen oxide emission reductions required by Section 22a-174-22 of the Regulations. DERC creation serial numbers assigned by the Department to these approved reductions of NOx emissions are provided in Table 1 of this Trading Agreement and Order:

TABLE 1

NP DERC Serial Numbers				
Year	Tons	Ozone Season	Tons	Non-ozone season
1999	0	N/A	7	CT99/8218 (DC)NOxnoz1-7
2000	52	CT00/8218 (BDC)NOxoz1-52	52	CT00/8218 (DC)NOxnoz1-52

B.2. Ozone season BDERCs may be generated and used in accordance

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with this Trading Agreement and Order.

- B.3. Upon sufficient documentation as prescribed below, the Commissioner may provide written approval of the generation of additional DERCs by NP retrospectively. Approved DERCs generated by NP may be held by NP or transferred to other persons in accordance with this Trading Agreement and Order.
- B.4. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, hereby allows NP to comply with Section 22a-174-22(d)(1) of the Regulations through use of DERC trading.
- C. With the agreement of NP, the Commissioner, acting under Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes, orders NP as follows:
  - 1. DERC generation.
    - a. For purposes of generating DERCs from the boilers at the facility, NP shall use 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil as the baseline emission rates for the boilers, or the proportioned baseline emission rate set forth in footnote 2 of paragraph C.11 of this Trading Agreement and Order, when simultaneously operating on more than one fuel. NP shall use the above referenced baseline emission rate(s) when calculating the proportioned baseline emission rate. When calculating DERCs, NP shall use the lower of daily total CEM-calculated MMBtu value or actual fuel usage data for the boilers in MMBtu/day, when determining heat input. The ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boilers are operating on No. 2 fuel oil as referenced in paragraph C.11. of this Trading Agreement and Order and shall be retired by the facility and permanently removed from all calculations on a daily basis. An

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additional ten (10) percent of all DERCS (tons) generated by the boilers shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

- b. Non-ozone Season Restrictions. Non-ozone season NOx DERCS generated by NP shall be created and approved in accordance with this Trading Agreement and Order, and shall remain valid until they are used or until May 1, 2003, whichever occurs first.
- c. Ozone Season Restrictions. The boilers are subject to Section 22a-174-22a of the Regulations ("NOx Budget Program") in 1999 and every year thereafter. The boilers may generate ozone season BDERCS to comply with Section 22a-174-22 of the Regulations in accordance with paragraph C.1.a. of this Trading Agreement and Order and the following conditions and restrictions: 1) BDERCS shall only be generated by the boilers from May 1 through September 30 of a given year, 2) BDERCS shall only be used by other NOx Budget Program sources located in Connecticut, 3) BDERCS shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BDERCS generated during a given year shall only be used during the following ozone season, with the exception of BDERCS generated during 1999, which may be used in the 2001 ozone season. For example, BDERCS generated during the 1999 ozone season may be used during the 2001 ozone season. However, BDERCS generated during the 2000 ozone season may only be used during the 2001 ozone season. BDERCS may be generated until May 1, 2003. BDERCS are subject to all DERC requirements set forth in this Trading Agreement and Order except for those requirements pertaining solely to non-ozone season DERCS and as otherwise may be provided.

2. DERC Use. Approved DERCS shall be acquired for compliance with the emission standards in Section 22a-174-22 of the Regulations for the period beginning

December 15, 1999 and continuing until NP achieves permanent compliance for the boilers with the emission standards in Section 22a-174-22(e) of the Regulations or until May 1, 2003, whichever occurs first. NP shall acquire approved DERCs, and document and record the amounts of NOx emissions and DERCs used by serial number (if assigned) by the boilers each day, and shall maintain and provide such records in accordance with the following and Section 22a-174-4 of the Regulations, until May 1, 2003:

- a. Before the first day of each month, calculate projected worst case DERCs required for that calendar month as follows:

DERCs (tons) = {[estimated worst case NOx emission rate in lbs/MMBtu - ((0.95) x (NOx RACT limit or proportioned emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in lbs/MMBtu))} x (Estimated fuel use in MMBtu)} + 2000 pounds.

- b. Acquire sufficient approved DERCs no later than the first day of each month to assure compliance with the emission standards in Section 22a-174-22 of the Regulations for, at a minimum, that calendar month. With the exception of BDERCs, excess DERCs from previous months can be applied to subsequent months. BDERCs are subject to the limitations set forth in paragraph C.l.c. of this Trading Agreement and Order. At a minimum, DERCs required shall be adjusted upwards by 100% if DERCs are not in NP's possession prior to the first day of each month.

- c. No later than the twentieth day of each month, calculate DERCs used in the preceding calendar month, as follows:

(1) For the boilers on each day, determine whether the 24-hour average NOx emission rate\* is less than the baseline emission rate or greater than the NOx RACT limit.

(2) When the boilers have a daily NOx emission

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rate (24-hour average) exceeding the NOx RACT limit, calculate the amount of DERCs used, as follows:

$$\text{DERCs (tons)} = \{[(\text{CEM-recorded NOx daily average emission rate in lbs/MMBtu}^*) - ((0.95) \times (\text{NOx RACT limit or proportioned emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in lbs/MMBtu}))] \times (\text{actual fuel use in MMBtu})\} \div 2000 \text{ pounds.}$$

\*This rate shall be calculated pursuant to the methodology described in 40 CFR Part 75.

- d. Maintain documentation to attest to the fact that DERCs used during the ozone season were generated during the ozone season. Generator certification of this fact shall be sufficient.
  - e. After full program review, and if the Commissioner deems it appropriate, the Commissioner may allow the survival and use of approved DERCs beyond April 30, 2003, subject to the limitations set forth in paragraph C.1.c. of this Trading Agreement and Order.
  - f. Pursuant to Section 22a-174-22(d)(3) of the Regulations, NP may use NOx allowances, pursuant to Section 22a-174-22(j) of the Regulations to achieve all or a portion of the reductions required by Section 22a-174-22 of the Regulations. Any allowance used for compliance with Section 22a-174-22(e) of the Regulations shall be subject to all restrictions and/or requirements applicable to DERCs contained in this Trading Agreement and Order.
3. NP shall maintain records for the boilers showing daily NOx mass emissions, and actual NOx emission rates (24-hour average). NP shall also maintain records showing a daily total of all DERCs generated net of the applicable uncertainty and environmental discounts.

4. In requesting approval of DERCs generated by the boilers, NP shall provide documentation containing a sample spreadsheet with calculation formulas used to determine reported numbers; monthly operating reports of actual fuel usage including the fuel BTU content, number of barrels, gallons, and cubic feet used for each fuel type; daily MMBtu for each fuel type and actual heat input based upon CEM-recorded data; daily weighted and unweighted actual NOx emission rates (24-hour average); and DERCs generated using the baseline emission rate(s), or the proportioned baseline emission rate referenced in paragraph C.1 of this Trading Agreement and Order, net of the applicable uncertainty and environmental discounts.
5. When the daily CEM-recorded NOx emission rate is used to calculate DERCs generated by the boilers, NP shall not include missing data calculated in accordance with any missing data substitution procedures, including those allowed under 40 CFR Part 75. When the daily CEM-recorded NOx emission rate is used to calculate DERCs used by the boilers, NP shall include missing data calculated in accordance with missing data substitution procedures under 40 CFR Part 75.
6. No later than March 1 of every year after issuance of this Trading Agreement and Order, NP shall include with the Annual Emission Statement provided to the Commissioner, a record of each sale or other transfer, and use of any and all of the DERCs approved within and subsequent to issuance of this Trading Agreement and Order until all such DERCs have been used. NP shall also include actual NOx emissions from the boilers, and the amount of all DERCs used (including serial numbers (if assigned) and approved DERCs generated and/or purchased from other facilities), generated and/or approved for the previous calendar year. These reports shall be on a form prescribed by the Commissioner. This reporting may cease if a central registry is approved by the Commissioner. Should NP choose to discontinue the generation of DERCs, NP shall notify the Commissioner in writing upon discontinuance.
7. In order to consider CEM-recorded NOx emission rates

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valid for DERC approval, all NOx and CO<sub>2</sub>/O<sub>2</sub> CEMs must comply with 40 Code of Federal Regulations Part 75.

8. NP shall retain records and supporting documentation as described in this Trading Agreement and Order for a minimum of five years, commencing on the date such records were created. NP shall provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
9. Upon sufficient documentation, as determined by the Commissioner, that NP has met the requirements of paragraphs C.1., C.2., C.3, C.4., C.5., C.7., C.10., and C.11., of this Trading Agreement and Order, the Commissioner may provide written approval of DERCs generated by NP retrospectively, in addition to the those approved in paragraph B. of this Trading Agreement and Order. Requests for approval of all subsequent DERCs generated shall be submitted in writing to the Commissioner. Approved DERCs generated by NP may be held or transferred to other persons. Such DERCs shall remain valid until they are used or until May 1, 2003, whichever occurs first.
10. Should NP choose to generate additional DERCs, reports documenting these DERCs shall be submitted to the Commissioner on an ozone season, non-ozone season (January through April and/or October through December), or annual basis. Such reports shall be compiled on a monthly basis and shall be submitted at least on an annual basis.
11. When the boilers have daily NOx emissions below the baseline emission rate(s) or the proportioned baseline emission rate, NP shall calculate the amount of DERCs generated as follows:

$$\text{DERCs (tons)} = \{[\text{Total heat input}^1 \text{ of all fuels in MMBtu} \times ((\text{proportioned baseline emission rate}^2) - (\text{the CEM-recorded NOx emission rate}^3))] + 2000 \text{ lbs/ton}\} \times (0.90).^4$$

where:

<sup>1</sup> Heat input shall be calculated using the lower of CEM-recorded data or actual fuel usage data in MMBtu per unit of fuel combusted.

<sup>2</sup> This rate shall be calculated by 1) multiplying the heat input of each fuel combusted by the baseline emission rate(s) for such fuel; 2) summing those products; and 3) dividing the sum by the total heat input. If the boilers are operating exclusively on one fuel, NP may replace the proportioned baseline emission rate, for that fuel. The ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boiler is operating on No. 2 fuel oil.

<sup>3</sup> This rate shall be calculated pursuant to the methodology described in 40 Code of Federal Regulations Part 75 and weighted pursuant to the Department of Environmental Protection's policy statement entitled "Guidance for Calculation of Emission Reduction Credits and Determination of Compliance with NOx RACT for Sources Subject to 40 CFR (Acid Rain Sources)" dated 12/18/98 which is attached to and incorporated by reference into this Trading Agreement and Order as part of Attachment 1.

<sup>4</sup> An additional ten (10) percent of all DERCS (tons) generated by the boilers shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

12. Each allowance used for compliance with Section 22a-174-22 of the Regulations shall be equivalent to one discrete emission reduction credit and shall be deducted from NP's NOx Budget Program compliance account upon such use. Allowances shall be considered used for compliance with Section 22a-174-22 of the Regulations when they are transferred from the facility's compliance account or overdraft account to a State of Connecticut NOx allowance retirement account.

13. Approvals. NP shall use best efforts to submit to the

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Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form. If the Commissioner notifies NP that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and NP shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.

14. Definitions. As used in this Trading Agreement and Order, "Commissioner" means the Commissioner or a representative of the Commissioner; "Ozone season" means the period from May 1 through September 30 in any given calendar year; "NOx RACT" means NOx Reasonably Available Control Technology. The date of "issuance" of this Trading Agreement and Order is the date the Trading Agreement and Order is deposited in the U.S. mail or personally delivered, whichever is earlier.
15. Dates. The date of submission to the Commissioner of any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Trading Agreement and Order, the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.
16. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by NP or, if NP is not an individual, by NP's chief executive officer or a duly authorized representative of such officer, as those terms are defined in §22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such

document, and NP or NP's chief executive officer and each such individual shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law."

17. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject NP to an injunction and penalties.
18. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.
19. Notice of transfer; liability of NP. Until NP has fully complied with this Trading Agreement and Order, NP shall notify the Commissioner in writing no later than 15 days after transferring all or any portion of the facility, the operations, the site or the business which is the subject of this Trading Agreement and Order or after obtaining a new mailing or location address. NP's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
20. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution; recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by NP pursuant to this Trading Agreement and Order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require NP to undertake further investigation or further action to prevent or abate violations or pollution.
21. NP's obligations under law. Nothing in this Trading Agreement and Order shall relieve NP of other

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obligations under applicable federal, state and local law.

22. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by NP pursuant to this Trading Agreement and Order will result in compliance or prevent or abate pollution.
23. Access to facility. Any representative of the Department of Environmental Protection may enter the facility without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
24. No effect on rights of other persons. This Trading Agreement and Order neither creates nor affects any rights of persons or municipalities that are not parties to this Trading Agreement and Order.
25. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these DEPCs.
26. Notice to Commissioner of changes. Within 15 days of the date NP becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, NP shall submit the correct or omitted information to the Commissioner.
27. Notification of noncompliance. In the event that NP becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, NP shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice, NP shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and NP shall comply with any dates which may be approved in writing by the Commissioner. Notification by NP shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.
28. Submission of documents. Any document required to be

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Date:

2/1/02

Norwalk Power LLC

Trading Agreement  
and Order No. 8218

submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in this Trading Agreement and Order or in writing by the Commissioner, be directed to:

Wendy Jacobs  
Department of Environmental Protection  
Bureau of Air Management  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106-5127

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Date:

2/1/02

Norwalk Power LLC

Trading Agreement  
and Order No. 8218

NP consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind NP to the terms and conditions of the Trading Agreement and Order.

Norwalk Power LLC

Signature: Bryan K. Ritey  
Type Name: Bryan K. Ritey  
Type Title: Vice President  
Date: 3/1/02

Issued as a final order of the Commissioner of  
Environmental Protection on March 24, 2002.

Arthur J. Rocque, Jr.  
Commissioner

CITY OF NORWALK LAND RECORDS

MAILED CERTIFIED MAIL, RETURN RECEIPT REQUESTED  
Certified Document No.

**PROPOSED REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22  
THROUGH USE OF  
DISCRETE EMISSION REDUCTION CREDITS (DERC's)**

**DEVON POWER LLC  
Trading Agreement and Order No. 8181**

**August, 2002**

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- Exhibit 1 Notice of Hearing and Hearing Certification
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- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in Economic Incentive Program (EIP) guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from NOx control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program is to approve creation of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of nitrogen oxides (NOx). Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving these emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions

to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for timelier rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone

season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCs may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of these DERCs will not jeopardize RFP since the state's NOx rule emission limits for the source creating the DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions are at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For

individual sources, the baseline will be the lower of actual or allowable emissions.

#### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the trading agreement and order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION & USE**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source and Identifier:**

Devon Power LLC  
Naugatuck Avenue,  
Milford, CT  
Unit 10- Pratt and Whitney FT4A-9 turbine generator

**D. Designated Representative:**

Ms. Cynthia Karlic  
Regional Manager  
Telephone No. (860) 638-3170

**E. CT Nonattainment Area Classification: Serious**

**F. Summary of Compliance:**

**Time Period:** On and after December 15, 1999 - prior to May 1, 2003.

**Purpose:** NOx emission reduction compliance for the peaking unit in Table 1:

**Annual DERCs needed:** Estimated 20 DERCs.

**Max. Emission Rate:** Full load emission rate (FLER) (see Table 1 below):

Peaking Unit	FUEL	FLER (lbs/MMBtu)	NOx RACT Rate (lbs/MMBtu)	Stack Test Rate (ppmvd)	Stack Test Rate (lbs/MMBtu)	Date of Stack Test
Devon 10	other oil	0.74	0.289	176.5*	0.67*	10/25/96

(\*) Indicates exceedance of the RACT rate limit for that fuel.

## G. DESCRIPTION OF COMPLIANCE

Devon Power LLC (DP) is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 DP purchased from The Connecticut Light and Power Company and now owns one (1) piece of fuel-burning equipment ("peaking unit") identified in Table 1 of Trading Agreement and Order No. 8181. This peaking unit is a combustion turbine. On and after December 15, 1999 NRG Devon Operations Inc. will operate the peaking unit identified in Table 1 of Trading Agreement and Order No. 8181 at DP's facility. Pursuant to Section 22a-174-22 of the Regulations, The Connecticut Light and Power Company filed a NOx compliance plan dated September 1, 1994. In this plan, The Connecticut Light and Power Company indicated that the peaking unit was not able to meet the NOx RACT limit of 75 ppmvd. The peaking unit is registered and operates subject to the requirements of Section 22a-174-22 of the Regulations. After May 31, 1995 the peaking unit is required to have a NOx emission rate limitation of 75 ppmvd, averaged over 3 hours. In order to achieve compliance, DP proposes to acquire emission reduction credits for the amount of NOx emissions that exceed the standards between December 15, 1999 and May 1, 2003 or until it achieves compliance through NOx controls or other approved means. Pursuant to Section 22a-174-22(j) of the Regulations, DP proposes to acquire sufficient quantities of approved DERCs in advance of each month to offset excess NOx emissions on a monthly basis from the peaking unit in accordance with the protocol of the Department's "Credit Trading for Sources with Irregular NOx Emissions", dated November 5, 1997.

In accordance with Section 22a-174-22(j) of the Regulations, DP proposes to use DERCs for compliance at the Devon Station peaking unit. Each month, the quantity of DERCs required to offset the excess emissions generated during that month by the peaking unit above the RACT limit will be determined. DERCs previously purchased and/or acquired and on-hand will be used to offset any remaining balance of excess emissions (debits) for that month. Design margins will be applied to the RACT emission rate for the peaking unit to ensure an environmental benefit.

On December 15, 1999, DP initially acquired from The Connecticut Light and Power Company, sufficient approved ozone season DERCs and non-ozone season DERCs to offset excess NOx emissions. DP will use (retire) approximately 19 tons of DERCs to offset excess emissions annually. The DERCs will be used thereafter in accordance with the requirements in this SIP and attached Trading Agreement and Order No. 8181. Additional DERCs will be purchased or acquired as needed prior to use based on anticipated future fuel use through May 1, 2003. The number of DERCs initially acquired were calculated based on the estimated fuel usage for the peaking unit and the FLER listed in Table 1 of Trading Agreement and Order No. 8181.

The NOx emission test rate was determined during the official testing program (approved stack testing) conducted on October 25, 1996. The FLER, as shown in Table 1, is used to calculate actual emissions for the peaking unit and is an enforceable limit for the peaking unit. Prior to May 1, 2003, DP will comply during operation of the peaking unit with the FLER, the 5 percent design margin and the NOx emission limit shown in Table 1 of Trading Agreement and Order No. 8181.

Starting December 15, 1999 and no later than the tenth day of each month, beginning the month after execution of Trading Agreement and Order No. 8181, DP will calculate actual DERCs used

in the preceding calendar month, in accordance with Trading Agreement and Order No. 8181.

DP shall calculate the actual DERCS required for the calendar month for the peaking unit and fuel used in excess of the RACT limit, based on the following calculations (described also in Exhibit 1 of Trading Agreement and Order No. 8181):

**At all times (mass calculation):**

$$\text{ERCs (in tons)} = [((\text{FLER in lbs/MMBtu}) - (0.95 \times \text{NOx RACT in lbs/MMBtu})) \times (\text{actual fuel use in MMBtu})] \div 2000 \text{ pounds/ton}$$

**During the ozone season only (peak day calculation):**

the maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthy," "unhealthy," or "very unhealthy," divided by 3 and then divided by 13 (with the result in tons):

$$\text{ERCs (in tons)} = [(\text{Maximum excess NOx in lbs}) \div 3] \div [13 \text{ lbs/day/ton}]$$

Where:

- FLER = full load emission rate presented in Table 1;
- RACT rate = RACT rate presented in Table 1;
- Discount = 5% design margin applied to the RACT rate.

As described in Exhibit 1 of Trading Agreement and Order No. 8181, to the extent that DERCS used to offset on a peak day basis during the ozone season exceed the total mass excess emissions, remaining DERCS may be used in the non-ozone season in the same or subsequent years until May 1, 2003. However, non-ozone season DERCS may only be used during the non-ozone season until May 1, 2003.

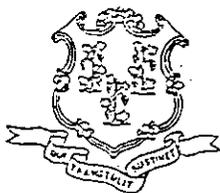
#### **H. SOURCE OF DERCS**

On December 15, 1999, DP has initially acquired approved ozone season DERCS and non-ozone season DERCS from The Connecticut Light and Power Company, approved by the Department on April 29, 1999 and other dates in 1999.

DP may use or consume fewer DERCS than it intends to purchase because of a lower operating rate or upon early establishment of controls or other emission limitation strategies which result in attainment of NOx limitations applicable to the emitting peaking unit. Such residual DERCS may not be used for any purpose other than that described in Trading Agreement and Order No. 8181, contained in Exhibit 3, without the written approval of the Commissioner.

Pursuant to the intent of Section 22a-174-22a(f)(4) of the Regulations, DP may use allowances acquired pursuant to the provisions of Section 22a-174-22a of the Regulations to comply with subsection (e) of Section 22a-174-22 of the Regulations pursuant to the provisions of subsection (j) of Section 22a-174-22 of the Regulations as long as DP remains an owner or operator of a budget source, for purposes of this Trading Agreement and Order. Any allowance used for compliance with subsection (e) of Section 22a-174-22 of the Regulations shall be subject to all restrictions and/or requirements applicable to DERCs contained in this Trading Agreement and Order and/or Section 22a-174-22a of the Regulations.

DP may acquire additional approved DERCs at any time prior to the need to use such DERCs. DP will at all times maintain a balance of approved DERCs sufficient to allow operation for the current month. If, upon audit or inspection, DP fails to demonstrate possession of an adequate amount of DERCs to cover the current month, it will be subject to violation as prescribed in Sections 22a-174-12 and 22a-174-22 of the Regulations.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of  
The State of Connecticut  
and  
Devon Power LLC

Trading Agreement  
and Order No. 8181

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Devon Power LLC ("DP") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of emission reduction credit ("ERC") trading to reduce nitrogen oxide ("NOx") emissions will achieve this result in a timely and cost-effective manner:

- A. At the request and with the agreement of DP, the Commissioner finds the following:
- DP is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On or before December 31, 1999 DP will purchase from The Connecticut Light and Power Company and then own one (1) piece of fuel-burning equipment ("peaking unit") identified in Table 1 of this Trading Agreement and Order. This peaking unit is a combustion turbine.
  - On or before December 31, 1999 NRG Devon Operations Inc. will operate the peaking unit identified in Table 1 of this Trading Agreement and Order at DP's facility.
  - Official U.S. Environmental Protection Agency ("EPA") Reference Method 7E stack testing performed on the date indicated in Table 1, resulted in a NOx emission rate set forth in Table 1.

Table 1 DP - NOx EMISSION RATE AND RACT LIMIT (lbs/MMBtu)						
Peaking Unit	FUEL	FLER (lbs/MMBtu)	NOx RACT Rate (lbs/MMBtu)	Stack Test Rate (ppmvd)	Stack Test Rate (lbs/MMBtu)	Date of Stack Test
Devon 10	other oil	0.74	0.289	175.5	0.67	10/25/96

- The emission rate for the peaking unit and fuel specified in Table 1 is in excess of Section 22a-174-22, Table 22-2, of the Regulations of Connecticut State Agencies ("Regulations"), NOx emission rate limits (Reasonably Available Control Technology "RACT").
- Pursuant to Section 22a-174-22(b) of the Regulations, the peaking unit is subject to Sections 22a-174-22(d) through (k) of the Regulations, pertaining to the control of NOx emissions.
- In accordance with Section 22a-174-22(j) of the Regulations, DP proposes that for the peaking unit identified in Table 1, DP shall use

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Date 12/29/99

ERC trading when burning "other oil", as that term is defined in Section 22a-174-22 of the Regulations.

7. Pursuant to the Department of Environmental Protection's "Credit Trading for Sources with Irregular NOx Emissions" policy, with a revised date of November 5, 1997, attached hereto and incorporated by reference into this Trading Agreement and Order as Exhibit 1, the peaking unit has peak daily NOx emissions greater than three times the average daily emissions during the ozone season and is therefore considered a source with irregular NOx emissions.
  8. Based on DEP approved stack test data, it has been determined that the peaking unit's emissions will not meet the applicable requirements of RACT contained in Section 22a-174-22 of the Regulations. DP proposes to use a Full Load Emission Rate ("FLER") identified in Table 1 for the purposes of calculating ERCs required.
  9. DP intends to continue acquiring approved ERCs as needed.
  10. Approved ERCs are defined for the purpose of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations.
- B. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, and pursuant to Section 22a-174-22 (j) of the Regulations hereby allows DP to comply with Section 22a-174-22 of the Regulations through use of ERC trading referenced in Section A, herein, to achieve the nitrogen oxide emission reduction required by Section 22a-174-22(d)(2) of the Regulations.
- C. With the agreement of DP, the Commissioner, acting under Connecticut General Statutes Sections 22a-6, 22a-171, 22a-174, 22a-175, and 22a-177, orders DP as follows:
1. Upon issuance of this Trading Agreement and Order DP shall comply during operation of the peaking unit with the FLER shown in Table 1 above.
  2. On and after the date which DP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, DP shall have in its possession sufficient approved ERCs to meet applicable RACT requirements and the requirements of this Trading Agreement and Order.
  3. On and after the date which DP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, DP shall, on a daily basis, document and record the amounts of all fuel used by the peaking unit each day and the number of ERCs used for the ozone season (from May 1 through September 30 of each year) and non-ozone season (the remainder of the year).
  4. On and after the date which DP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, pursuant to Section 22a-174-22(j) of the Regulations, DP shall acquire from The Connecticut Light and Power Company sufficient approved non-ozone season ERCs in order to meet applicable RACT requirements and the requirements of this Trading Agreement and Order for the operation of the peaking unit identified in Table 1 of this Trading Agreement and Order during the month of December, 1999.
  5. Except as provided in paragraph C.4. of this Trading Agreement and Order, on and after the date which DP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, pursuant to Section 22a-174-22(j) of the Regulations, DP shall acquire from The Connecticut Light and Power Company sufficient approved ozone and non-ozone season ERCs in order to meet applicable RACT requirements and the requirements of this Trading Agreement and Order for the following month's operation.

6. In accordance with Exhibit 1 of this Trading Agreement and Order, ozone season ERCs for use during the ozone season shall be purchased by DP prior to the beginning of the ozone season.
7. On and after the date which DP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, DP shall maintain and provide the records required by paragraph C.3. of this Trading Agreement and Order in accordance with the following and Section 22a-174-4 of the Regulations, and shall:
  - a. Have in its possession sufficient approved ERCs for the current day, based on the following calculations (described also in Exhibit 1);  
At all times (mass calculation):  
$$\text{ERCs (in tons)} = [((\text{FLER in lbs/MMBtu}) - (0.95 \times \text{NOx RACT in lbs/MMBtu})) \times (\text{actual fuel use in lbs/MMBtu})] + 2000 \text{ pounds/ton}$$
  
During the ozone season only (peak day calculation):  
the maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthy," "unhealthy," or "very unhealthy," divided by 3 and then divided by 13 (with the result in tons):  
$$\text{ERCs (in tons)} = [(\text{Maximum excess NOx in lbs}) + 3] \div [13 \text{ lbs/day/ton}];$$
  - b. At a minimum, adjust upwards by 100% the ERCs required if ERCs are not in DP's possession prior to use;
  - c. As described in Exhibit 1 of this Trading Agreement and Order, to the extent that ERCs used to offset on a peak day basis during the ozone season exceed the total mass excess emissions, remaining ERCs may be used in the non-ozone season in the same or subsequent years until May 1, 2003;
  - d. Document and record daily fuel use, excess NOx emissions and, during the ozone season, the ozone classification as forecasted by the Commissioner on the previous day;
  - e. No later than March 1, 2000, 2001, 2002, 2003 and 2004, include with its annual emissions report to the Commissioner, ERCs used (calculated as described in section C.7.a. above), by ozone and non-ozone seasons, for the previous calendar year;
  - f. Retain the records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records are created;
  - g. Maintain documentation to attest to the fact that ERCs used during the ozone season were generated during the ozone season. The ozone season is from May 1 through September 30 in any calendar year. Generator certification of this fact shall be sufficient; and
  - h. Provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
8. Pursuant to the intent of Section 22a-174-22a(f)(4) of the Regulations, DP may, for a budget source, use allowances acquired pursuant to the provisions of Section 22a-174-22a of the Regulations to comply with subsection (e) of Section 22a-174-22 of the Regulations pursuant to the provisions of subsection (j) of Section 22a-174-22 of the Regulations as long as DP remains an owner of that budget source, for purposes of this Trading Agreement and Order. Any allowance used for compliance with subsection (e) of Section 22a-174-22 of the

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Date 12/29/99

Regulations shall be subject to all restrictions and/or requirements applicable to ERCs contained in this Trading Agreement and Order and/or Section 22a-174-22a of the Regulations.

9. The terms and conditions established by this Trading Agreement and Order shall become effective on the date DP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, and upon issuance of this Trading Agreement and Order.
10. No later than May 1, 2003, DP shall comply with the requirements of Section 22a-174-22(d)(2) of the Regulations. However, after full program review of this and other Trading Agreements and Orders and, if determined to be appropriate, the Commissioner may grant a written extension of this Trading Agreement and Order.
11. Definitions. As used in this order, "Commissioner" means the Commissioner of Environmental Protection or an agent of the Commissioner. "Other oil" means a fuel that is liquid at standard conditions and is not residual oil. "Residual oil" means any fuel oil of No. 4, No. 5, or No. 6 grades, as defined by Commercial Standard C.S. 12-48. "Ozone season" means the period from May 1 through September 30 in any given calendar year. "Issuance" means the date this Trading Agreement and Order is deposited in the U.S. Mail or the date it is personally delivered, whichever is earlier.
12. Notification of noncompliance. In the event that DP becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, DP shall by telephone immediately notify the Bureau of Air Management and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. DP shall also notify the Commissioner in writing within ten days of becoming aware of the noncompliance or potential noncompliance stating the date, time, and duration of the noncompliance, the reasons for the noncompliance or delay and all activities which DP and its agents, employees and representatives took to avoid or repair the results of the noncompliance and prevent the noncompliance, and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved. DP shall comply with any dates which may be approved in writing by the Commissioner. Notification by DP shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing. Nothing herein shall negate DP's obligation to comply with Section 22a-174-7 of the Regulations. To the extent that the provisions of Section 22a-174-7 are inconsistent with the provisions of this Trading Agreement and Order, the more stringent of the provisions in the Trading Agreement and Order or Section 22a-174-7 shall control.
13. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by the responsible corporate officer of DP or a duly authorized representative of such officer, as those terms are defined in Section 22a-430-3(b)(2) of the Regulations, and by the individual or individuals responsible for actually preparing such document, each of whom shall examine and be familiar with the information submitted in the document and all attachments thereto, and shall make inquiry of those individuals responsible for obtaining the information to determine that the information is true, accurate, and complete, and each of whom shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the

submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes or, in accordance with Section 22a-6 of the Connecticut General Statutes, under Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

14. Final Agreement and Order. This Trading Agreement and Order is the final agreement and order by and between the Commissioner and DP with respect to the matters addressed herein, and shall not be modified without the written agreement of both parties.
15. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes or, in accordance with Section 22a-6, under Section 53a-157b of the Connecticut General Statutes.
16. Notice of transfer; liability of DP and others. Until DP has fully complied with this Trading Agreement and Order, DP shall notify the Commissioner in writing no later than fifteen (15) days after transferring all or any portion of the facility, the operations, the site or the business which are the subject of this Trading Agreement and Order, or obtaining a new mailing or location address. Any license transfer shall be conducted in accordance with Section 22a-50 of the Connecticut General Statutes. DP's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
17. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law which are willful or criminally negligent or for which penalties have not been specifically provided in this Trading Agreement and Order, including but not limited to violations of any permit issued by the Commissioner. If at any time the Commissioner determines that the actions taken by DP pursuant to this Trading Agreement and Order have not fully achieved compliance with Section 22a-174-22 of the Regulations, the Commissioner may institute any proceeding against DP and/or require DP to undertake further investigation or further action.
18. DP's obligations under law. Nothing in this Trading Agreement and Order shall relieve DP of other obligations under applicable federal, state and local law.
19. Access to records and facility. Any representative of the Department of Environmental Protection may enter and inspect the facility and inspect and copy records within normal business hours without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
20. No effect on rights of other persons. This Trading Agreement and Order shall neither create nor affect any rights of persons who or municipalities which are not parties to this Trading Agreement and Order.
21. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these ERCs.
22. Notice to Commissioner of changes. Within fifteen (15) days of the date DP becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, DP shall submit the correct or omitted information to the Commissioner.

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Devon Power LLC

Trading Agreement  
and Order No. 3131

23. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in writing by the Commissioner, be directed to:

Mr. David Jawin  
Department of Environmental Protection  
Bureau of Air Management  
Compliance and Field Operations Division  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106

Initials



-6-

Date

12/29/99

Devon Power LLC

Trading Agreement  
and Order No. 8181

DP consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind DP to the terms and conditions of the Trading Agreement and Order.

Devon Power LLC

Signature: Robert S. Evans II  
Type Name: Robert S. Evans II  
Type Title: Executive Director, Environmental Services  
NRG Energy, Inc.  
Date: 12/29/99

Issued as a final consent order of the Commissioner of

Environmental Protection on January 12, 2000.

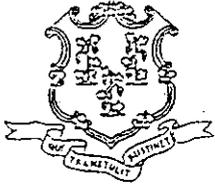
Arthur J. Rocque, Jr.  
Commissioner

CITY OF MILFORD  
LAND RECORDS

MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document

Exhibit 1  
Trading Agreement and Order No. 8181



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



REVISED 11/5/97

Credit Trading for Sources with Irregular NOx Emissions

The following outlines the Department's concerns and methodology for dealing with NOx compliance pursuant to §22a-174-22(j), Regulations of Connecticut State Agencies ("Regulations"), emission trading for "peakers" and other sources that have peak emissions that are substantially higher than their average daily emissions. For purposes of this protocol, peaking units are defined as sources with peak daily NOx emissions greater than three times their average daily emissions during the ozone season.

The basic concept of the trading program is that sources with excess NOx emissions (a rate that exceeds the rate limits in the Regulations) may obtain NOx emission reduction credits ("ERCs") from sources that have "over-controlled" their NOx emissions. Although typical sources can obtain credits on a mass basis (one ton of ERCs to offset one ton of excess emissions) with an acceptable environmental outcome, sources with large variations in emissions from day to day pose an additional problem for ozone attainment planning.

The most common peaking units or "peakers" are electricity generating units that run during times of high electricity consumption. Electricity demand is often the highest during hot, humid days of the summer when the potential for ozone formation is also high. Peakers frequently have high emission rates. To the extent that these units produce emissions at exactly the time when emissions need to be reduced to limit ozone formation, allowing peakers to continue to comply with new rate limits through the use of ERCs on a ton-for-ton basis will exacerbate this effect. On the other hand, if it can be demonstrated that the ERCs being used by peakers were generated on a comparable basis (i.e., during days of high ozone potential), then ton-for-ton use by peakers would be appropriate.

The full impact of the NOx emissions from these types of facilities during summer operation must consider temporal variability as well as mass of excess emissions. Any ERC trade must consider equivalency to the NOx reductions that control equipment would produce on an ozone day on both a temporal and a mass basis. The protocol below places appropriate requirements on peaking units to reflect the greater impact of NOx emitted under this type of usage pattern. Attachment 1 provides a detailed example of this issue.

*NOx Emissions Reduction Credit Use Computation For Peakers*

- Peaking units are only considered to be a temporal issue for the ozone season months.
- All excess NOx emissions during the winter (non-ozone season) need only be offset by ERCs on a mass basis.
- Prior to each ozone season there will be a prospective calculation to determine how many tons of ERCs must be "on hand" during the ozone season. A retrospective calculation will determine how many ERCs were actually "used" during the ozone season.

For ERC use during the ozone season:

1. Prospective calculation determines the number of ERCs that must be provided for the ozone season. (Beginning in 1996, the ERCs must be in place no later than May 1.)

ERCs required for the ozone season shall be calculated based on: (a) a mass basis (total anticipated excess NOx emissions over the ozone season) and (b) a peak-day basis (maximum excess emissions for any day during the ozone season). Sources will be required to provide credits equal to the greater of the amount calculated on a mass or peak-day basis. The timing of actual credit provision will be governed by the terms of the specific trading order issued for that source.

- (a) Mass basis: ERCs required will be equal to the total number of tons of anticipated excess NOx emissions over the entire ozone season, calculated in the same manner used for other sources using ERCs (i.e., including any discounts).
- (b) Peak (daily rate) basis: ERCs (in tons) required will be calculated by dividing one-third of the maximum daily excess emissions\* (in pounds) by 13 pounds/day/ton:

$$\text{ERCs required (tons)} = [(\text{Maximum Estimated Excess NOx in lbs.}) \div 3] \div [13 \text{ lbs./day/ton}]$$

\*Where maximum daily excess NOx emissions are the difference between the maximum estimated hours of operation per day at the full-load-emission-rate and 95% of the allowable NOx emissions under Section 22a-174-22(e) of the Regulations.

2. Retrospective calculation will determine the actual credit use and the ERC surplus, if any. At the end of the ozone season, the calculations required in item 1 above will be repeated using (a) the actual total excess emissions for the ozone season, and (b) the maximum actual excess NOx emissions on any of the days projected by the Commissioner to be "moderate to unhealthful", "unhealthful", or "very unhealthful". The actual "ERCs required" will be the greater of the ERCs calculated on the basis of total mass or maximum (peak) day. To the extent that the number of ERCs used to offset peak day emissions exceed the total mass of excess NOx emissions for the ozone season, the remaining mass value of such ERCs may be carried forward for use in the winter (non-ozone season). Any unused ERCs may be carried forward until May 1, 1999, except as may be limited by the trading agreement and order, or by regulation.

*Exhibit 1*  
*ERC Calculation for Peaking Units*

Unless it can be demonstrated otherwise, ERCs are assumed to be created by relatively small daily reductions in NOx emissions over the course of an entire ozone season (153 days). The average daily NOx emissions reduction represented by one ton of credit is 13 pounds/day calculated as follows:

$$(1 \text{ ton}) \times (2000 \text{ pounds/ton}) \div 153 \text{ days} = 13 \text{ pounds/day/ton}$$

Thus, an ERC (ton) would be equivalent to a reduction in NOx emissions of 13 pounds/day.

**EXAMPLE.** If a "peaking" source were to emit one ton of excess NOx per day when operating, but only operates for five days during the ozone season, the owner/operator of the source would nominally need to obtain five tons of ERCs. However, those ERCs are likely to have been created by relatively small daily reductions in NOx emissions over the course of an entire ozone season (153 days). In this example, assuming a purchase of five tons of ERCs, that calculates out to a daily NOx reduction of approximately 65 pounds.

$$(5 \text{ tons} \times 2000 \text{ pounds/ton}) \div 153 \text{ days} = 65 \text{ pounds/day}$$

Clearly, on any day that the "peaking" unit operates, there is much more excess NOx emissions that will not have been offset, on the order of 1,935 pounds:

$$(1 \text{ ton} \times 2000 \text{ pounds/ton}) - (65 \text{ pounds credit}) = 1,935 \text{ pounds excess NOx emissions}$$

While the total amount of NOx emitted would be controlled on a seasonal average basis, on the "peaking" day there would be a potentially significant increase in NOx emitted, and thus an increase in potential ozone creation. In order to achieve a commensurate reduction in ozone creation potential for peakers, an adjustment in the calculation of required ERCs is needed. One approach would be to require ERCs in a quantity that would ensure that the daily average reduction represented by those ERCs would equal the maximum daily excess NOx emissions from the peaking source on any day that it ran. On this basis, a peaking source with a maximum 24-hour excess NOx emission of one ton would be required to purchase 153 tons of ERCs.

$$1 \text{ (ton)/day} \times 153 \text{ days/season} = 153 \text{ tons}$$

This 153 tons of ERCs would be adequate to "offset" excess emissions of one ton per day for as many days as the source operated during a particular ozone season. This has been deemed to be unduly stringent, given some diversity in operation of these sources. In light of the foregoing, this requirement is adjusted downward by two-thirds.

**PROPOSED REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22  
THROUGH USE OF  
DISCRETE EMISSION REDUCTION CREDITS (DERC's)**

**DEVON POWER LLC  
Trading Agreement and Order No. 8219**

**August, 2002**

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**PART 2. DESCRIPTION OF DERC CREATION AND USE**

**By Trading Agreement and Order**

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in Economic Incentive Program (EIP) guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from NOx control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program is to approve creation of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of nitrogen oxides (NOx). Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving these emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions

to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for timelier rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone

season. Only the DERCS produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCs may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of these DERCs will not jeopardize RFP since the state's NOx rule emission limits for the source creating the DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions are at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For

individual sources, the baseline will be the lower of actual or allowable emissions.

#### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the trading agreement and order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION & USE**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source and Identifier:**

Devon Power LLC  
Naugatuck Avenue,  
Milford, CT  
Unit 7, a 109 megawatt front-fired boiler R-105-0055  
Unit 8, a 109 megawatt front-fired boiler R-105-0058

**D. Designated Representative:**

Ms. Cynthia Karlic  
Regional Manager  
Telephone No. (860) 638-3170

**E. CT Nonattainment Area Classification: Serious**

**F. Summary of Compliance:**

**Time Period:** December 15, 1999- May 1, 2003  
**Method:** Modifications to burners, combustion controls and operating conditions and installation of natural gas operating capabilities

Max. Daily Emission Rate  
pursuant to Section 22a-174-22

Baseline: 0.25 lb/MMBTU of heat input (24 hour average consuming No. 6 fuel oil)  
0.17 lb/MMBTU of heat input (24 hour average consuming No. 2 fuel oil)  
0.20 lb/MMBTU of heat input (24 hour average consuming natural gas)

## Devon Power LLC

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Monitoring: Continuous Emission Monitoring, (CEM) certified NOx mass rate  
Discrete tons: 30 tons ozone season and 104 tons non-ozone season between December 16, 1999 and June 30, 2000

Rate of Creation: determined by CEM

Discounts: Creation: 10 percent to benefit the environment.

### G. Description of Compliance:

Creator: The Connecticut Light and Power Company  
Registration Numbers R105-0055 and R105-0058

Devon Power LLC ("DP") is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 DP purchased from The Connecticut Light and Power Company ("CL&P") four fossil fuel-fired electric generating stations. One of the four fossil fuel-fired electric generating stations is Devon Station, Naugatuck Avenue in Milford, Connecticut ("facility"). At the facility, NRG Devon Operations Inc. operates Unit 7, Connecticut Registration Number 105-0055, a 109 megawatt front-fired boiler and Unit 8, Connecticut Registration Number 105-0058, a 109 megawatt front-fired boiler ("boilers") on No. 6 fuel oil, No. 2 fuel oil, and natural gas. The boilers are subject to the requirements of Section 22a-174-22 Reasonably Available Control of nitrogen oxide emissions and 22a-174-22a and 22b (The NOx Budget Program). The boilers required modifications to the burners, combustion controls and operating conditions to meet the standard. CL&P modified the boilers prior to the May 31, 1995 effective date of the NOx RACT rule. Trading Agreement and Order 8159 was issued to CL&P as a mechanism for meeting the NOx RACT requirements. Trading Agreement and Order 8219 has been issued to DP because CL&P no longer owns the facility. The boiler has a dedicated CEM system, certified to 40 Code of Federal Regulations Part 75. The NOx CEM probes are located in the stack outlet of the boiler. The daily NOx emission rates will be monitored, calculated, and recorded using CEM 24-hour averages. A monthly summation of all NOx over-control may be submitted to DEP for the purpose of obtaining certified NOx DERCs. DP shall use 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil, 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil, and 0.20 lb/MMBtu when operating on natural gas as the baseline emission rates for the boilers, or the proportioned baseline emission rate.

## H. Source of DERCs

### Equation for the calculation of DERCs

For the boilers with daily NOx emissions below the applicable baseline emission rate, DP shall calculate the amount of DERCs *generated* as follows:

$$\text{DERCs (tons)} = [\text{Total heat input}^1 \text{ of all fuels in MMBTU} \times (\text{proportioned RACT emission rate}^2 - \text{the CEM recorded NOx emission rate}^3) \div 2000 \text{ lbs/ton}] \times (0.90).^4$$

For the boilers with daily NOx emissions above the applicable baseline emission rate, DP shall calculate the amount of DERCs *used* as follows:

$$\text{DERCs (tons)} = [\text{Total heat input of all fuels in MMBTU} \times (\text{the CEM recorded NOx emission rate} - ((.95) \times \text{proportioned RACT emission rate}))] \div 2000 \text{ pounds.}$$

where:

<sup>1</sup> Heat input shall be calculated using the lower of CEM recorded data or actual fuel usage data in MMBTU per unit of fuel combusted.

<sup>2</sup>calculated pursuant to Section 22a-174-22 (f)(2)(A) of the Regulations.

<sup>3</sup> This rate shall be calculated pursuant to the methodology described in 40 Code of Federal Regulations Part 75. A ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boiler is operating on No. 2 fuel oil.

<sup>4</sup> Ten (10) percent of all DERCs (tons) created shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

### Estimated emission reduction credits generated.

Sample calculation for June 12, 2001

$$\begin{aligned} \text{DERCs (tons)} &= [35878 \text{ MMBTU} \times (0.25 \text{ lb/MMBTU} - 0.208 \text{ lb/MMBTU}) \div 2000 \text{ lbs/ton}] \\ &= 0.76 \text{ tons of DERCs.} \end{aligned}$$

Less 10% for environmental benefit,  $.76 \times .90 = .68$  tons created

Attachment 1 of Trading Agreement and Order No. 8213 shows a summary of the proposed annual emission reductions and contains supporting data. Attachment 1 also includes spreadsheets of the monthly calculations and tables which will show the full set of 24-hour NOx emission data and operating hours used in these calculations.

An accounting of all tons of NOx DERCs created by DP will be provided to the Commissioner on March 1 of every year until all tons are used. (If an approved DERC registry is available, this requirement may be waived by the Commissioner upon request.) This reporting will be included as part of the annual Emission Statement. This report will include all DERCs created by DP and used by others, and will provide the state with information to be used in auditing the program as described in Part 1. DP may submit reports on a quarterly or semi-annual basis to document the creation of NOx DERCs. DERCs generated in the ozone season will be distinguished from DERCs generated in the non-ozone season. DP will include a summary of all NOx DERCs generated and/or used for the preceding year with the Facility's Annual Emission Statement, including approved DERCs generated and/or purchased from other facilities. Should DP choose not to generate DERCs, DP is expected to notify the Department in order to assist in DERC program planning. Calculations and reports will be in a form similar to that shown in Attachment 1. Following review and written prior approval by the Department, these DERCs will be available for use by approved sources for purposes of compliance with Section 22a-174-22 of the Regulations. Approval in this manner may continue until there are regulatory changes to the NOx rule that affect NOx limitations at the source or until May 1, 2003, whichever comes first.

#### Restrictions on use

DP proposes to reconcile DERCs generated on a monthly basis. Several restrictions are placed upon the use of DERCs:

- These DERCs may not be used prior to approval by the DEP.
- On average, these DERCs may not be used at a rate greater than that at which they were created.
- DERCs generated during non-ozone season months may not be used during the ozone season.
- Ozone Season Restrictions. The boiler is subject to Section 22a-174-22a of the

Regulations (NOx Budget Program) in 1999 and every year thereafter. The boiler may generate ozone season BDERCs to comply with Section 22a-174-22 of the Regulations. :

- 1) BDERCs shall only be generated by the boiler from May 1 through September 30 of a given year,
- 2) BDERCs shall only be used by other NOx Budget Program sources located in Connecticut,
- 3) BDERCs shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and
- 4) BDERCs generated during a given year shall only be used during the following ozone season, with the exception of BDERCs generated during 1999, which may be used in the 2001 ozone season.

BDERCs may be generated until May 1, 2003. BDERCs are subject to all DERC requirements set forth in the Trading Agreement and Order except for those requirements pertaining solely to non-ozone season DERCs and as otherwise may be provided.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of

The State of Connecticut and )

Devon Power LLC )

) Trading Agreement  
) and Order No. 3219  
)

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Devon Power LLC ("DP") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of emission reduction trading will achieve this result in a timely and cost-effective manner:

A. At the request and with the agreement of DP, the Commissioner finds the following:

1. DP is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 DP purchased from The Connecticut Light and Power Company and now owns one fossil fuel-fired electric generating station, Devon Station, at Naugatuck Avenue, Milford, Connecticut ("facility").
2. At the facility, NRG Devon Operations Inc. operates Devon Station Unit 7, a 109 megawatt front-fired boiler and Devon Station Unit 8, a 109 megawatt front-fired boiler, Connecticut Registration Numbers 105-0055 and 105-0058 respectively, ("boilers"). The boilers have the dual capacity to operate on fuel oil (No. 6 or No. 2) and/or natural gas. No. 2 fuel oil is used primarily as an ignition fuel as part of the start-up procedure. A continuous emissions monitor ("CEM"), certified to 40 Code of Federal Regulations ("CFR") Part 75, measures nitrogen oxide ("NOx") emissions at a common stack from the boilers.
3. During the year 1982, prior to modifications of the boilers' burners, combustion controls and operating conditions, and prior to the installation of natural gas operating capabilities, and based on Department of Environmental Protection ("Department") approved stack

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Date:

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test data and AP-42 emission factor data, the average annual NOx emission rate for Devon Station Unit 7 was 0.267 pounds per million British thermal units ("lbs/MMBtu") of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil, and the average annual NOx emission rate for Devon Station Unit 8 was 0.254 lbs/MMBtu of heat input when operating on No. 6 fuel oil and 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil. On and after May 31, 1995, the Regulations of Connecticut State Agencies ("Regulations") require that the boilers emit NOx at a rate no greater than 0.25 lbs/MMBtu of heat input (24-hour average) when operating on No. 6 fuel oil and 0.20 lbs/MMBtu of heat input (24-hour average) when operating on No. 2 fuel oil or natural gas.

4. In January 1994, The Connecticut Light and Power Company completed modifications on both boilers' burners and combustion controls and began to test and adjust operating conditions, thereby reducing the boilers' NOx emission rates below their allowed and actual baseline emission rates. Natural gas operating capabilities were installed at the facility by August, 1994 to provide further reductions of NOx emissions. Such modifications and installation capabilities enabled DP's boilers to frequently meet and operate below the emission limitation specified in Section 22a-174-22(e) of the Regulations.
5. On and after December 15, 1999, DP may obtain approval of actual reductions in NOx emissions, generated by operating the boilers at a rate which is below 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil, 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil and 0.20 lbs/MMBtu of heat input when operating on natural gas for use as discrete emission reduction credits ("DERCs"). If DERCs are created during the ozone season, DP may obtain approval for such reductions for use as Budget discrete emission reduction credits ("BDERCs").

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6. Pursuant to Section 22a-174-22(j) of the Regulations, DP intends to acquire and generate approved DERCs until May 1, 2003 at the facility. Approved DERCs are defined for purposes of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations. DP will acquire approved DERCs monthly on an as-needed basis, as determined by actual NOx emissions in the event that the 24-hour average of actual NOx emissions exceeds the NOx emission limitations of Section 22a-174-22(e) of the Regulations.
7. When properly documented by DP, and approved by the Commissioner, the reductions in NOx emissions identified above, and as computed in accordance with the terms of this Trading Agreement and Order, will conform to the requirements of Section 22a-174-22(j)(3) of the Regulations. Specifically, the reductions will be:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on continuous emission monitoring data as applied in an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut statute or regulation mandated by a current State Implementation Plan ("SIP"), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems and installation capabilities are in place and operating, and an appropriate tracking system is in place to

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monitor all data required to verify and quantify the creation of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively after the submission by DP of the seasonal or annual report(s) that will document their creation.

8. As documented in Attachment 1, attached to and incorporated by reference into this Trading Agreement and Order, 33.7 tons of ozone season NOx BDERCs and 116.5 tons of non-ozone season NOx DERCs were generated by the boilers between December 15, 1999 and June 30, 2000.
9. Ten (10) percent of these DERCs (3.4 tons ozone season, 11.7 tons non-ozone season) are retired and permanently removed from all calculations to assure a benefit to the environment. The total available for use, after rounding down to the nearest whole number for annual serial assignment purposes, is 134 DERCs (30 tons ozone season, 104 tons non-ozone season).
- 3.1. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, will allow DP and approved sources within Connecticut to use 30 tons of ozone season NOx BDERCs and 104 tons of non-ozone season NOx DERCs referenced in paragraph A.9. of this Trading Agreement and Order for purposes of compliance under Section 22a-174-22(j) of the Regulations to achieve a portion of the nitrogen oxide emission reductions required by Section 22a-174-22 of the Regulations. DERC creation serial numbers assigned by the Department to these approved reductions of NOx emissions are provided in Table 1 of this Trading Agreement and Order:

TABLE 1

DP DERC Serial Numbers				
Year	Tons	Ozone Season	Tons	Non-ozone Season
1999	0	N/A	10	CT99/8219 (DC) NOxnoz1-10
2000	30	CT00/8219 (BDC) NOxoz1-30	94	CT00/8219 (DC) NOxnoz1-94

- B.2. Ozone season BDERCs may be generated and used in accordance with this Trading Agreement and Order.
- B.3. Upon sufficient documentation as prescribed below, the Commissioner may provide written approval of the generation of additional DERCs by DP retrospectively. Approved DERCs generated by DP may be held by DP or transferred to other persons in accordance with this Trading Agreement and Order.
- C. With the agreement of DP, the Commissioner, acting under Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes, orders DP as follows:
1. DERC generation.
    - a. For purposes of generating DERCs from the boilers at the facility, DP shall use 0.25 lbs/MMBtu of heat input when operating on No. 6 fuel oil, 0.17 lbs/MMBtu of heat input when operating on No. 2 fuel oil and 0.20 lbs/MMBtu of heat input when operating on natural gas as the baseline emission rates for the boilers, or the proportioned baseline emission rate set forth in footnote 2 of paragraph C.11. of this Trading Agreement and Order, when simultaneously operating on more than one fuel. DP shall use the above referenced baseline emission rate(s) when calculating the proportioned baseline emission rate. When calculating DERCs, DP shall use the lower of daily total CEM-calculated MMBtu value or actual fuel usage data for the boilers in MMBtu/day, when determining heat input. The ten (10) percent uncertainty discount due to not having

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data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boilers are operating on No. 2 fuel oil as referenced in paragraph C.11. of this Trading Agreement and Order and shall be retired by the facility and permanently removed from all calculations on a daily basis. An additional ten (10) percent of all DERCs (tons) generated by the boilers shall be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

- b. Non-ozone Season Restrictions. Non-ozone season NOx DERCs generated by DP shall be created and approved in accordance with this Trading Agreement and Order, and shall remain valid until they are used or until May 1, 2003, whichever occurs first.
- c. Ozone Season Restrictions. The boilers are subject to Section 22a-174-22a of the Regulations ("NOx Budget Program") in 1999 and every year thereafter. The boilers may generate ozone season BDERCs to comply with Section 22a-174-22 of the Regulations in accordance with paragraph C.1.a. of this Trading Agreement and Order and the following conditions and restrictions: 1) BDERCs shall only be generated by the boilers from May 1 through September 30 of a given year, 2) BDERCs shall only be used by other NOx Budget Program sources located in Connecticut, 3) BDERCs shall only be used to offset ozone season excess emissions, and shall not be used for compliance during the non-ozone season; and 4) BDERCs generated during a given year shall only be used during the following ozone season, with the exception of BDERCs generated during 1999, which may be used in the 2001 ozone season. For example, BDERCs generated during the 1999 ozone season may be used during the 2001 ozone season. However, BDERCs generated during the 2000 ozone season may only be used during the 2001 ozone season. BDERCs may be generated until May 1, 2003. BDERCs are subject to all DERC requirements

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set forth in this Trading Agreement and Order except for those requirements pertaining solely to non-ozone season DERCs and as otherwise may be provided.

2. DERC Use. Approved DERCs shall be acquired for compliance with the emission standards in Section 22a-174-22 of the Regulations for the period beginning December 15, 1999 and continuing until DP achieves permanent compliance for the boilers with the emission standards in Section 22a-174-22(e) of the Regulations or until May 1, 2003, whichever occurs first. DP shall acquire approved DERCs, and document and record the amounts of NOx emissions and DERCs used by serial number (if assigned) by the boilers each day, and shall maintain and provide such records in accordance with the following and Section 22a-174-4 of the Regulations, until May 1, 2003:

- a. Before the first day of each month, calculate projected worst case DERCs required for that calendar month as follows:

$$\text{DERCs (tons)} = \{[\text{estimated worst case NOx emission rate in lbs/MMBtu} - ((0.95) \times (\text{NOx RACT limit or proportioned emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in lbs/MMBtu}))] \times (\text{Estimated fuel use in MMBtu})\} \div 2000 \text{ pounds.}$$

- b. Acquire sufficient approved DERCs no later than the first day of each month to assure compliance with the emission standards in Section 22a-174-22 of the Regulations for, at a minimum, that calendar month. With the exception of BDERCs, excess DERCs from previous months can be applied to subsequent months. BDERCs are subject to the limitations set forth in paragraph C.l.c. of this Trading Agreement and Order. At a minimum, DERCs required shall be adjusted upwards by 100% if DERCs are not in DP's possession prior to the first day of each month.

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- c. No later than the twentieth day of each month, calculate DERCs used in the preceding calendar month, as follows:
- (1) For the boilers on each day, determine whether the 24-hour average NOx emission rate\* is less than the baseline emission rate or greater than the NOx RACT limit.
  - (2) When the boilers have a daily NOx emission rate (24-hour average) exceeding the NOx RACT limit, calculate the amount of DERCs used, as follows:

DERCs (tons) = {[(CEM-recorded NOx daily average emission rate in lbs/MMBtu\*) - ((0.95) x (NOx RACT limit or proportioned emission rate calculated pursuant to Section 22a-174-22(f)(2)(A) of the Regulations in lbs/MMBtu)] x (actual fuel use in MMBtu)} + 2000 pounds.

\*This rate shall be calculated pursuant to the methodology described in 40 CFR Part 75.

- d. Maintain documentation to attest to the fact that DERCs used during the ozone season were generated during the ozone season. Generator certification of this fact shall be sufficient.
- e. After full program review, and if the Commissioner deems it appropriate, the Commissioner may allow the survival and use of approved DERCs beyond April 30, 2003, subject to the limitations set forth in paragraph C.1.c. of this Trading Agreement and Order.
- f. Pursuant to Section 22a-174-22(d)(3) of the Regulations, DP may use NOx allowances, pursuant to Section 22a-174-22(j) of the Regulations to

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achieve all or a portion of the reductions required by Section 22a-174-22 of the Regulations. Any allowance used for compliance with Section 22a-174-22(e) of the Regulations shall be subject to all restrictions and/or requirements applicable to DERCs contained in this Trading Agreement and Order.

3. DP shall maintain records for the boilers showing daily NOx mass emissions, and actual NOx emission rates (24-hour average). DP shall also maintain records showing a daily total of all DERCs generated net of the applicable uncertainty and environmental discounts.
4. In requesting approval of DERCs generated by the boilers, DP shall provide documentation containing a sample spreadsheet with calculation formulas used to determine reported numbers; monthly operating reports of actual fuel usage including the fuel BTU content, number of barrels, gallons, and cubic feet used for each fuel type; daily MMBtu for each fuel type and actual heat input based upon CEM-recorded data; daily weighted and unweighted actual NOx emission rates (24-hour average); and DERCs generated using the baseline emission rate(s), or the proportioned baseline emission rate referenced in paragraph C.1. of this Trading Agreement and Order, net of the applicable uncertainty and environmental discounts.
5. When the daily CEM-recorded NOx emission rate is used to calculate DERCs generated by the boiler, DP shall not include missing data calculated in accordance with any missing data substitution procedures, including those allowed under 40 CFR Part 75. When the daily CEM-recorded NOx emission rate is used to calculate DERCs used by the boilers, DP shall include missing data calculated in accordance with missing data substitution procedures under 40 CFR Part 75.
6. No later than March 1 of every year after issuance of this Trading Agreement and Order, DP shall include with the Annual Emission Statement provided to the

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Commissioner, a record of each sale or other transfer, and use of any and all of the DERCs approved within and subsequent to issuance of this Trading Agreement and Order until all such DERCs have been used. DP shall also include actual NOx emissions from the boilers, and the amount of all DERCs used (including serial numbers (if assigned) and approved DERCs generated and/or purchased from other facilities), generated and/or approved for the previous calendar year. These reports shall be on a form prescribed by the Commissioner. This reporting may cease if a central registry is approved by the Commissioner. Should DP choose to discontinue the generation of DERCs, DP shall notify the Commissioner in writing upon discontinuance.

7. In order to consider CEM-recorded NOx emission rates valid for DERC approval, all NOx and CO<sub>2</sub>/O<sub>2</sub> CEMs must comply with 40 Code of Federal Regulations Part 75.
8. DP shall retain records and supporting documentation as described in this Trading Agreement and Order for a minimum of five years, commencing on the date such records were created. DP shall provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
9. Upon sufficient documentation, as determined by the Commissioner, that DP has met the requirements of paragraphs C.1., C.2., C.3, C.4., C.5., C.7., C.10., and C.11., of this Trading Agreement and Order, the Commissioner may provide written approval of DERCs generated by DP retrospectively, in addition to those approved in paragraph B. of this Trading Agreement and Order. Requests for approval of all subsequent DERCs generated shall be submitted in writing to the Commissioner. Approved DERCs generated by DP may be held or transferred to other persons. Such DERCs shall remain valid until they are used or until May 1, 2003, whichever occurs first.
10. Should DP choose to generate additional DERCs, reports

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documenting these DERCs shall be submitted to the Commissioner on an ozone season, non-ozone season (January through April and/or October through December) or annual basis. Such reports shall be compiled on a monthly basis and shall be submitted at least on an annual basis.

11. When the boilers have daily NOx emissions below the applicable baseline emission rate(s), or the proportioned baseline emission rate, DP shall calculate the amount of DERCs generated as follows:

$$\text{DERCs (tons)} = \{[\text{Total heat input}^1 \text{ of all fuels in MMBtu} \times ((\text{proportioned baseline emission rate}^2) - (\text{the CEM-recorded NOx emission rate}^3))] + 2000 \text{ lbs/ton} \times (0.90)\}^4$$

<sup>1</sup> Heat input shall be calculated using the lower of CEM-recorded data or actual fuel usage data in MMBtu per unit of fuel combusted.

<sup>2</sup> This rate shall be calculated by 1) multiplying the heat input of each fuel combusted by the baseline emission rate(s) for such fuel; 2) summing those products; and 3) dividing the sum by the total heat input. If the boilers are operating exclusively on one fuel, DP may replace the proportioned baseline emission rate with the applicable baseline emission rate, for that fuel. The ten (10) percent uncertainty discount due to not having data from an official Method 7-E stack test or CEM data while operating on No. 2 fuel oil shall be incorporated into the proportioned baseline emission rate whenever the boilers are operating on No. 2 fuel oil.

<sup>3</sup> This rate shall be calculated pursuant to the methodology described in 40 Code of Federal Regulations Part 75 and weighted pursuant to the Department of Environmental Protection's policy statement entitled "Guidance for Calculation of Emission Reduction Credits and Determination of Compliance with NOx RACT for Sources Subject to 40 CFR (Acid Rain Sources)" dated

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12/18/98 which is attached to and incorporated by reference into this Trading Agreement and Order as part of Attachment 1.

<sup>4</sup> An additional ten (10) percent of all DERCS (tons) generated by the boilers shall also be retired by the facility and permanently removed from all calculations on a daily basis to assure a benefit to the environment.

12. Each allowance used for compliance with Section 22a-174-22 of the Regulations shall be equivalent to one discrete emission reduction credit and shall be deducted from DP's NOx Budget Program compliance account upon such use. Allowances shall be considered used for compliance with Section 22a-174-22 of the Regulations when they are transferred from the facility's compliance account or overdraft account to a State of Connecticut NOx allowance retirement account.
13. Approvals. DP shall use best efforts to submit to the Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form. If the Commissioner notifies DP that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and DP shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.
14. Definitions. As used in this Trading Agreement and Order, "Commissioner" means the Commissioner or a representative of the Commissioner; "Ozone season" means the period from May 1 through September 30 in any given calendar year; "NOx RACT" means NOx Reasonably Available Control Technology. The date of "issuance" of this Trading Agreement and Order is the date the Trading Agreement and Order is deposited in the U.S. mail or personally delivered, whichever is earlier.

15. Dates. The date of submission to the Commissioner of any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Trading Agreement and Order, the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.
16. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by DP or, if DP is not an individual, by DP's chief executive officer or a duly authorized representative of such officer, as those terms are defined in §22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such document, and DP or DP's chief executive officer and each such individual shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law."
17. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject DP to an injunction and penalties.
18. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other

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applicable law.

19. Notice of transfer; liability of DP. Until DP has fully complied with this Trading Agreement and Order, DP shall notify the Commissioner in writing no later than 15 days after transferring all or any portion of the facility, the operations, the site or the business which is the subject of this Trading Agreement and Order or after obtaining a new mailing or location address. DP's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
20. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by DP pursuant to this Trading Agreement and Order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require DP to undertake further investigation or further action to prevent or abate violations or pollution.
21. DP's obligations under law. Nothing in this Trading Agreement and Order shall relieve DP of other obligations under applicable federal, state and local law.
22. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by DP pursuant to this Trading Agreement and Order will result in compliance or prevent or abate pollution.
23. Access to facility. Any representative of the Department of Environmental Protection may enter the facility without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
24. No effect on rights of other persons. This Trading Agreement and Order neither creates nor affects any rights of persons or municipalities that are not parties to this Trading Agreement and Order.
25. No Creation of Property Rights. This Trading Agreement

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and Order does not create any property rights with respect to these DERCS.

26. Notice to Commissioner of changes. Within 15 days of the date DP becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, DP shall submit the correct or omitted information to the Commissioner.
27. Notification of noncompliance. In the event that DP becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, DP shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice, DP shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and DP shall comply with any dates which may be approved in writing by the Commissioner. Notification by DP shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.
28. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in this Trading Agreement and Order or in writing by the Commissioner, be directed to:

Wendy Jacobs  
Department of Environmental Protection  
Bureau of Air Management  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106-5127

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Date:

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Devon Power LLC

Trading Agreement  
and Order No. 8219

DP consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind DP to the terms and conditions of the Trading Agreement and Order.

Devon Power LLC

Signature:

Bryan K. Riley

Type Name:

Bryan K. Riley

Type Title:

Vice President

Date:

3/1/02

Issued as a final order of the Commissioner of

Environmental Protection on

March 22

2002.

Arthur J. Rocque, Jr.  
Commissioner

CITY OF MILFORD LAND RECORDS  
MAILED CERTIFIED MAIL, RETURN RECEIPT REQUESTED  
Certified Document No.

**PROPOSED REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22  
THROUGH USE OF  
DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

**NORWALK POWER LLC  
Trading Agreement and Order No. 8184**

**August, 2002**

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**PART 2. DESCRIPTION OF DERC CREATION AND USE**

**By Trading Agreement and Order**

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in Economic Incentive Program (EIP) guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from NOx control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program is to approve creation of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of nitrogen oxides (NOx). Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving these emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions

to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for timelier rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone

season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCs may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of these DERCs will not jeopardize RFP since the state's NOx rule emission limits for the source creating the DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions are at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For

individual sources, the baseline will be the lower of actual or allowable emissions.

#### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the trading agreement and order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION & USE**

**A. Administering Agency:**

The State of Connecticut  
 Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source and Identifier:**

Norwalk Power LLC  
 Manresa Island Avenue  
 Norwalk, Connecticut  
 Unit 10- Westinghouse 18 MW Gas Turbine (R-137-0032)

**D. Designated Representative:**

Ms. Cynthia Karlic  
 Regional Manager  
 Telephone No. (860) 638-3170

**E. CT Nonattainment Area Classification: Severe**

**F. Summary of Compliance:**

**Time Period:** On and after December 15, 1999 - prior to May 1, 2003.  
**Purpose:** NOx emission reduction compliance for the peaking unit in Table 1:  
**Annual DERCs needed:** Estimated 20 DERCs.  
**Max. Emission Rate:** Full load emission rate (FLER) (see Table 1 below):

Table 1 NP - NOx EMISSION RATE AND RACT LIMIT (lbs/MMBtu)						
Peaking Unit	FUEL	FLER (lbs/MMBtu)	NOx RACT Rate (lbs/MMBtu)	Stack Test Rate (ppmvd)	Stack Test Rate (lbs/MMBtu)	Date of Stack Test
Norwalk Harbor 10	other oil	0.52	0.289	119.5*	0.47*	7/10/96

(\*) Indicates exceedance of the RACT rate limit for that fuel.

## G. DESCRIPTION OF COMPLIANCE

Norwalk Power LLC (NP) is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On December 15, 1999 NP purchased from The Connecticut Light and Power Company and now owns one (1) piece of fuel-burning equipment ("peaking unit") identified in Table 1 of Trading Agreement and Order No. 8184. This peaking unit is a combustion turbine. On and after December 15, 1999 NRG Norwalk Harbor Operations Inc. will operate the peaking unit identified in Table 1 of Trading Agreement and Order No. 8184 at NP's facility. Pursuant to Section 22a-174-22 of the Regulations, The Connecticut Light and Power Company filed a NOx compliance plan dated September 1, 1994. In this plan, The Connecticut Light and Power Company indicated that the peaking unit was not able to meet the NOx RACT limit of 75 ppmvd. The peaking unit is registered and operates subject to the requirements of Section 22a-174-22 of the Regulations. After May 31, 1995 the peaking unit is required to have a NOx emission rate limitation of 75 ppmvd, averaged over 3 hours. In order to achieve compliance, NP proposes to acquire emission reduction credits for the amount of NOx emissions that exceed the standards between December 15, 1999 and May 1, 2003 or until it achieves compliance through NOx controls or other approved means. Pursuant to Section 22a-174-22(j) of the Regulations, NP proposes to acquire sufficient quantities of approved DERCs in advance of each month to offset excess NOx emissions on a monthly basis from the peaking unit in accordance with the protocol of the Department's "*Credit Trading for Sources with Irregular NOx Emissions*", dated November 5, 1997.

In accordance with Section 22a-174-22(j) of the Regulations, NP proposes to use DERCs for compliance when operating the peaking unit. Each month, the quantity of DERCs required to offset the excess emissions generated during that month by the peaking unit above the RACT limit will be determined. DERCs previously purchased and/or acquired and on-hand will be used to offset any remaining balance of excess emissions (debits) for that month. Design margins will be applied to the RACT emission rate for the peaking unit to ensure an environmental benefit.

On December 15, 1999, NP initially acquired from The Connecticut Light and Power Company, sufficient approved ozone season DERCs and non-ozone season DERCs to offset excess NOx emissions. NP will use (retire) approximately 7 tons of DERCs to offset excess emissions annually. The DERCs will be used thereafter in accordance with the requirements in this SIP and attached Trading Agreement and Order No. 8184. Additional DERCs will be purchased or acquired as needed prior to use based on anticipated future fuel use through May 1, 2003. The number of DERCs initially acquired were calculated based on the estimated fuel usage for the peaking unit and the FLER listed in Table 1.

The NOx emission test rate was determined during the official testing program (approved stack testing) conducted on October 25, 1996. The FLER, as shown in Table 1, is used to calculate actual emissions for the peaking unit and is an enforceable limit for the peaking unit. Prior to May 1, 2003, NP will comply during operation of the peaking unit with the FLER, the 5 percent design margin and the NOx emission limit shown in Table 1 of Trading Agreement and Order No. 8184.

Starting December 15, 1999 and no later than the tenth day of each month, beginning the month

after execution of Trading Agreement and Order No. 8184, NP will calculate actual DERCs used in the preceding calendar month, in accordance with Trading Agreement and Order No. 8184.

NP shall calculate the actual DERCs required for the calendar month for the peaking unit and fuel used in excess of the RACT limit, based on the following calculations (described also in Exhibit 1 of Trading Agreement and Order No. 8184):

**At all times (mass calculation):**

$$\text{ERCs (in tons)} = \left[ \left( \text{FLER in lbs/MMBtu} - (0.95 \times \text{NOx RACT in lbs/MMBtu}) \right) \times \right. \\ \left. \left( \text{actual fuel use in MMBtu} \right) \right] \div 2000 \text{ pounds/ton}$$

**During the ozone season only (peak day calculation):**

the maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthful," "unhealthful," or "very unhealthful," divided by 3 and then divided by 13 (with the result in tons):

$$\text{ERCs (in tons)} = \left[ \left( \text{Maximum excess NOx in lbs} \right) \div 3 \right] \div \left[ 13 \text{ lbs/day/ton} \right]$$

Where:

- FLER = full load emission rate presented in Table 1;
- RACT rate = RACT rate presented in Table 1;
- Discount = 5% design margin applied to the RACT rate.

As described in Exhibit 1 of Trading Agreement and Order No. 8184, to the extent that DERCs used to offset on a peak day basis during the ozone season exceed the total mass excess emissions, remaining DERCs may be used in the non-ozone season in the same or subsequent years until May 1, 2003. However, non-ozone season DERCs may only be used during the non-ozone season until May 1, 2003.

#### **H. SOURCE OF DERCS**

On December 15, 1999, NP has initially acquired approved ozone season DERCs and non-ozone season DERCs from The Connecticut Light and Power Company, approved by the Department on April 29, 1999 and other dates in 1999.

NP may use or consume fewer DERCs than it intends to purchase because of a lower operating rate or upon early establishment of controls or other emission limitation strategies which result in attainment of NOx limitations applicable to the emitting peaking unit. Such residual DERCs may not be used for any purpose other than that described in Trading Agreement and Order No.

8184, contained in Exhibit 3, without the written approval of the Commissioner.

Pursuant to the intent of Section 22a-174-22a(f)(4) of the Regulations, NP may use allowances acquired pursuant to the provisions of Section 22a-174-22a of the Regulations to comply with subsection (e) of Section 22a-174-22 of the Regulations pursuant to the provisions of subsection (j) of Section 22a-174-22 of the Regulations as long as NP remains an owner or operator of a budget source, for purposes of this Trading Agreement and Order. Any allowance used for compliance with subsection (e) of Section 22a-174-22 of the Regulations shall be subject to all restrictions and/or requirements applicable to DERs contained in this Trading Agreement and Order and/or Section 22a-174-22a of the Regulations.

NP may acquire additional approved DERs at any time prior to the need to use such DERs. NP will at all times maintain a balance of approved DERs sufficient to allow operation for the current month. If, upon audit or inspection, NP fails to demonstrate possession of an adequate amount of DERs to cover the current month, it will be subject to violation as prescribed in Sections 22a-174-12 and 22a-174-22 of the Regulations.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of )  
The State of Connecticut )  
and )  
Norwalk Power LLC )

Trading Agreement  
and Order No. 8184

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Norwalk Power LLC ("NP") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of emission reduction credit ("ERC") trading to reduce nitrogen oxide ("NOx") emissions will achieve this result in a timely and cost-effective manner:

- A. At the request and with the agreement of NP, the Commissioner finds the following:
- NP is an exempt wholesale electric generating company with its principal place of business in Sewickley, Pennsylvania. On or before December 31, 1999 NP will purchase from The Connecticut Light and Power Company and then own one (1) piece of fuel-burning equipment ("peaking unit") identified in Table 1 of this Trading Agreement and Order. This peaking unit is a combustion turbine.
  - On or before December 31, 1999 NRG Norwalk Harbor Operations Inc. will operate the peaking unit identified in Table 1 of this Trading Agreement and Order at NP's facility.
  - Official U.S. Environmental Protection Agency ("EPA") Reference Method 7E stack testing performed on the date indicated in Table 1, resulted in a NOx emission rate set forth in Table 1.

Table 1 NP - NOX EMISSION RATE AND RACT LIMIT (lbs/MMBtu)						
Peaking Unit	FUEL	FLER (lbs/MMBtu)	NOx RACT Rate (lbs/MMBtu)	Stack Test Rate (ppmvd)	Stack Test Rate (lbs/MMBtu)	Date of Stack Test
Norwalk Harbor 10	other oil	0.52	0.289	119.5	0.47	7/10/96

- The emission rate for the peaking unit and fuel specified in Table 1 is in excess of Section 22a-174-22, Table 22-2, of the Regulations of Connecticut State Agencies ("Regulations"), NOx emission rate limits (Reasonably Available Control Technology "RACT").
- Pursuant to Section 22a-174-22(b) of the Regulations, the peaking unit is subject to Sections 22a-174-22(d) through (k) of the Regulations, pertaining to the control of NOx emissions.
- In accordance with Section 22a-174-22(j) of the Regulations, NP proposes that for the peaking unit identified in Table 1, NP shall

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Date 12/29/99

use ERC trading when burning "other oil", as that term is defined in Section 22a-174-22 of the Regulations.

7. Pursuant to the Department of Environmental Protection's "Credit Trading for Sources with Irregular NOx Emissions" policy, with a revised date of November 5, 1997, attached hereto and incorporated by reference into this Trading Agreement and Order as Exhibit 1, the peaking unit has peak daily NOx emissions greater than three times the average daily emissions during the ozone season and is therefore considered a source with irregular NOx emissions.
  8. Based on DEP approved stack test data, it has been determined that the peaking unit's emissions will not meet the applicable requirements of RACT contained in Section 22a-174-22 of the Regulations. NP proposes to use a Full Load Emission Rate ("FLER") identified in Table 1 for the purposes of calculating ERCs required.
  9. NP intends to continue acquiring approved ERCs as needed.
  10. Approved ERCs are defined for the purpose of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations.
- B. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, and pursuant to Section 22a-174-22 (j) of the Regulations hereby allows NP to comply with Section 22a-174-22 of the Regulations through use of ERC trading referenced in Section A, herein, to achieve the nitrogen oxide emission reduction required by Section 22a-174-22(d)(2) of the Regulations.
- C. With the agreement of NP, the Commissioner, acting under Connecticut General Statutes Sections 22a-6, 22a-171, 22a-174, 22a-175, and 22a-177, orders NP as follows:
1. Upon issuance of this Trading Agreement and Order NP shall comply during operation of the peaking unit with the FLER shown in Table 1 above.
  2. On and after the date which NP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, NP shall have in its possession sufficient approved ERCs to meet applicable RACT requirements and the requirements of this Trading Agreement and Order.
  3. On and after the date which NP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, NP shall, on a daily basis, document and record the amounts of all fuel used by the peaking unit each day and the number of ERCs used for the ozone season (from May 1 through September 30 of each year) and non-ozone season (the remainder of the year).
  4. On and after the date which NP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, pursuant to Section 22a-174-22(j) of the Regulations, NP shall acquire from The Connecticut Light and Power Company sufficient approved non-ozone season ERCs in order to meet applicable RACT requirements and the requirements of this Trading Agreement and Order for the operation of the peaking unit identified in Table 1 of this Trading Agreement and Order during the month of December, 1999.
  5. Except as provided in paragraph C.4. of this Trading Agreement and Order, on and after the date which NP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, pursuant to Section 22a-174-22(j) of the Regulations, NP shall acquire from The Connecticut Light and Power Company sufficient approved ozone and non-ozone season ERCs in order to meet applicable RACT

requirements and the requirements of this Trading Agreement and Order for the following month's operation.

6. In accordance with Exhibit 1 of this Trading Agreement and Order, ozone season ERCs for use during the ozone season shall be purchased by NP prior to the beginning of the ozone season.

7. On and after the date which NP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, NP shall maintain and provide the records required by paragraph C.3. of this Trading Agreement and Order in accordance with the following and Section 22a-174-4 of the Regulations, and shall:

a. Have in its possession sufficient approved ERCs for the current day, based on the following calculations (described also in Exhibit 1);

At all times (mass calculation):

$$\text{ERCs (in tons)} = [((\text{FLER in lbs/MMBtu}) - (0.95 \times \text{NOx RACT in lbs/MMBtu})) \times (\text{actual fuel use in lbs/MMBtu})] \div 2000 \text{ pounds/ton}$$

During the ozone season only (peak day calculation):

the maximum actual excess NOx emissions (in lbs) on any of the days projected by the Commissioner to be "moderate to unhealthful," "unhealthful," or "very unhealthful," divided by 3 and then divided by 13 (with the result in tons);

$$\text{ERCs (in tons)} = [(\text{Maximum excess NOx in lbs}) \div 3] \div [13 \text{ lbs/day/ton}];$$

b. At a minimum, adjust upwards by 100% the ERCs required if ERCs are not in NP's possession prior to use;

c. As described in Exhibit 1 of this Trading Agreement and Order, to the extent that ERCs used to offset on a peak day basis during the ozone season exceed the total mass excess emissions, remaining ERCs may be used in the non-ozone season in the same or subsequent years until May 1, 2003;

d. Document and record daily fuel use, excess NOx emissions and, during the ozone season, the ozone classification as forecasted by the Commissioner on the previous day;

e. No later than March 1, 2000, 2001, 2002, 2003 and 2004, include with its annual emissions report to the Commissioner, ERCs used (calculated as described in section C.7.a. above), by ozone and non-ozone seasons, for the previous calendar year;

f. Retain the records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records are created;

g. Maintain documentation to attest to the fact that ERCs used during the ozone season were generated during the ozone season. The ozone season is from May 1 through September 30 in any calendar year. Generator certification of this fact shall be sufficient; and

h. Provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.

8. Pursuant to the intent of Section 22a-174-22a(f)(4) of the Regulations, NP may, for a budget source, use allowances acquired pursuant to the provisions of Section 22a-174-22a of the Regulations to comply with subsection (e) of Section 22a-174-22 of the Regulations pursuant to the provisions of subsection (j) of Section

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Date 12/20/09

22a-174-22 of the Regulations as long as NP remains an owner of that budget source, for purposes of this Trading Agreement and Order. Any allowance used for compliance with subsection (e) of Section 22a-174-22 of the Regulations shall be subject to all restrictions and/or requirements applicable to ERCs contained in this Trading Agreement and Order and/or Section 22a-174-22a of the Regulations.

9. The terms and conditions established by this Trading Agreement and Order shall become effective on the date NP purchases the peaking unit identified in Table 1 of this Trading Agreement and Order, and upon issuance of this Trading Agreement and Order.
10. No later than May 1, 2003, NP shall comply with the requirements of Section 22a-174-22(d)(2) of the Regulations. However, after full program review of this and other Trading Agreements and Orders and, if determined to be appropriate, the Commissioner may grant a written extension of this Trading Agreement and Order.
11. Definitions. As used in this order, "Commissioner" means the Commissioner of Environmental Protection or an agent of the Commissioner. "Other oil" means a fuel that is liquid at standard conditions and is not residual oil. "Residual oil" means any fuel oil of No. 4, No. 5, or No. 6 grades, as defined by Commercial Standard C.S. 12-48. "Ozone season" means the period from May 1 through September 30 in any given calendar year. "Issuance" means the date this Trading Agreement and Order is deposited in the U.S. Mail or the date it is personally delivered, whichever is earlier.
12. Notification of noncompliance. In the event that NP becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, NP shall by telephone immediately notify the Bureau of Air Management and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. NP shall also notify the Commissioner in writing within ten days of becoming aware of the noncompliance or potential noncompliance stating the date, time, and duration of the noncompliance, the reasons for the noncompliance or delay and all activities which NP and its agents, employees and representatives took to avoid or repair the results of the noncompliance and prevent the noncompliance, and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved. NP shall comply with any dates which may be approved in writing by the Commissioner. Notification by NP shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing. Nothing herein shall negate NP's obligation to comply with Section 22a-174-7 of the Regulations. To the extent that the provisions of Section 22a-174-7 are inconsistent with the provisions of this Trading Agreement and Order, the more stringent of the provisions in the Trading Agreement and Order or Section 22a-174-7 shall control.
13. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by the responsible corporate officer of NP or a duly authorized representative of such officer, as those terms are defined in Section 22a-430-3(b)(2) of the Regulations, and by the individual or individuals responsible for actually preparing such document, each of whom shall examine and be familiar with the information submitted in the document and all attachments thereto, and shall make inquiry of those individuals responsible for obtaining the information to determine that the information is true, accurate, and complete, and each of whom shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I

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Date 12/29/99

certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes or, in accordance with Section 22a-6 of the Connecticut General Statutes, under Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

14. Final Agreement and Order. This Trading Agreement and Order is the final agreement and order by and between the Commissioner and NP with respect to the matters addressed herein, and shall not be modified without the written agreement of both parties.
15. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes or, in accordance with Section 22a-6, under Section 53a-157b of the Connecticut General Statutes.
16. Notice of transfer; liability of NP and others. Until NP has fully complied with this Trading Agreement and Order, NP shall notify the Commissioner in writing no later than fifteen (15) days after transferring all or any portion of the facility, the operations, the site or the business which are the subject of this Trading Agreement and Order, or obtaining a new mailing or location address. Any license transfer shall be conducted in accordance with Section 22a-60 of the Connecticut General Statutes. NP's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
17. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law which are willful or criminally negligent or for which penalties have not been specifically provided in this Trading Agreement and Order, including but not limited to violations of any permit issued by the Commissioner. If at any time the Commissioner determines that the actions taken by NP pursuant to this Trading Agreement and Order have not fully achieved compliance with Section 22a-174-22 of the Regulations, the Commissioner may institute any proceeding against NP and/or require NP to undertake further investigation or further action.
18. NP's obligations under law. Nothing in this Trading Agreement and Order shall relieve NP of other obligations under applicable federal, state and local law.
19. Access to records and facility. Any representative of the Department of Environmental Protection may enter and inspect the facility and inspect and copy records within normal business hours without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
20. No effect on rights of other persons. This Trading Agreement and Order shall neither create nor affect any rights of persons who or municipalities which are not parties to this Trading Agreement and Order.
21. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these ERCs.
22. Notice to Commissioner of changes. Within fifteen (15) days of the date NP becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant

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Norwalk Power LLC

Trading Agreement  
and Order No. 8184

information was omitted, NP shall submit the correct or omitted information to the Commissioner.

23. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in writing by the Commissioner, be directed to:

Mr. David Jawin  
Department of Environmental Protection  
Bureau of Air Management  
Compliance and Field Operations Division  
Emissions and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106

Initials



Date 12/29/99

Norwalk Power LLC

Trading Agreement  
and Order No. 8184

NP consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind NP to the terms and conditions of the Trading Agreement and Order.

Norwalk Power LLC

Signature:

Robert S. Evans II

Type Name:

Robert S. Evans II

Type Title:

Executive Director, Environmental Services  
NRG Energy, Inc.

Date:

12/29/99

Issued as a final consent order of the Commissioner of

Environmental Protection on

January 12

, 2000.

Arthur J. Rocque, Jr.  
Commissioner

CITY OF NORWALK  
LAND RECORDS

MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document.

Exhibit 1  
Trading Agreement and Order No. 8184



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



REVISED 11/5/97

Credit Trading for Sources with Irregular NOx Emissions

The following outlines the Department's concerns and methodology for dealing with NOx compliance pursuant to §22a-174-22(j), Regulations of Connecticut State Agencies ("Regulations"), emission trading for "peakers" and other sources that have peak emissions that are substantially higher than their average daily emissions. For purposes of this protocol, peaking units are defined as sources with peak daily NOx emissions greater than three times their average daily emissions during the ozone season.

The basic concept of the trading program is that sources with excess NOx emissions (a rate that exceeds the rate limits in the Regulations) may obtain NOx emission reduction credits ("ERCs") from sources that have "over-controlled" their NOx emissions. Although typical sources can obtain credits on a mass basis (one ton of ERCs to offset one ton of excess emissions) with an acceptable environmental outcome, sources with large variations in emissions from day to day pose an additional problem for ozone attainment planning.

The most common peaking units or "peakers" are electricity generating units that run during times of high electricity consumption. Electricity demand is often the highest during hot, humid days of the summer when the potential for ozone formation is also high. Peakers frequently have high emission rates. To the extent that these units produce emissions at exactly the time when emissions need to be reduced to limit ozone formation, allowing peakers to continue to comply with new rate limits through the use of ERCs on a ton-for-ton basis will exacerbate this effect. On the other hand, if it can be demonstrated that the ERCs being used by peakers were generated on a comparable basis (i.e., during days of high ozone potential), then ton-for-ton use by peakers would be appropriate.

The full impact of the NOx emissions from these types of facilities during summer operation must consider temporal variability as well as mass of excess emissions. Any ERC trade must consider equivalency to the NOx reductions that control equipment would produce on an ozone day on both a temporal and a mass basis. The protocol below places appropriate requirements on peaking units to reflect the greater impact of NOx emitted under this type of usage pattern. Attachment 1 provides a detailed example of this issue.

*NOx Emissions Reduction Credit Use Computation For Peakers*

- Peaking units are only considered to be a temporal issue for the ozone season months.
- All excess NOx emissions during the winter (non-ozone season) need only be offset by ERCs on a mass basis.
- Prior to each ozone season there will be a prospective calculation to determine how many tons of ERCs must be "on hand" during the ozone season. A retrospective calculation will determine how many ERCs were actually "used" during the ozone season.

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*For ERC use during the ozone season:*

1. Prospective calculation determines the number of ERCs that must be provided for the ozone season. (Beginning in 1996, the ERCs must be in place no later than May 1.)  
 ERCs required for the ozone season shall be calculated based on: (a) a mass basis (total anticipated excess NOx emissions over the ozone season) and (b) a peak-day basis (maximum excess emissions for any day during the ozone season). Sources will be required to provide credits equal to the greater of the amount calculated on a mass or peak-day basis. The timing of actual credit provision will be governed by the terms of the specific trading order issued for that source.
  - (a) Mass basis: ERCs required will be equal to the total number of tons of anticipated excess NOx emissions over the entire ozone season, calculated in the same manner used for other sources using ERCs (i.e., including any discounts).
  - (b) Peak (daily rate) basis: ERCs (in tons) required will be calculated by dividing one-third of the maximum daily excess emissions\* (in pounds) by 13 pounds/day/ton:

$$\text{ERCs required (tons)} = [(\text{Maximum Estimated Excess NOx in lbs.}) \div 3] \div [13 \text{ lbs./day/ton}]$$

\*Where maximum daily excess NOx emissions are the difference between the maximum estimated hours of operation per day at the full-load-emission-rate and 95% of the allowable NOx emissions under Section 22a-174-22(e) of the Regulations.

2. Retrospective calculation will determine the actual credit use and the ERC surplus, if any. At the end of the ozone season, the calculations required in item 1 above will be repeated using (a) the actual total excess emissions for the ozone season, and (b) the maximum actual excess NOx emissions on any of the days projected by the Commissioner to be "moderate to unhealthful", "unhealthful", or "very unhealthful". The actual "ERCs required" will be the greater of the ERCs calculated on the basis of total mass or maximum (peak) day. To the extent that the number of ERCs used to offset peak day emissions exceed the total mass of excess NOx emissions for the ozone season, the remaining mass value of such ERCs may be carried forward for use in the winter (non-ozone season). Any unused ERCs may be carried forward until May 1, 1999, except as may be limited by the trading agreement and order, or by regulation.

*Exhibit I*  
*ERC Calculation for Peaking Units*

Unless it can be demonstrated otherwise, ERCs are assumed to be created by relatively small daily reductions in NOx emissions over the course of an entire ozone season (153 days). The average daily NOx emissions reduction represented by one ton of credit is 13 pounds/day calculated as follows:

$$(1 \text{ ton}) \times (2000 \text{ pounds/ton}) \div 153 \text{ days} = 13 \text{ pounds/day/ton}$$

Thus, an ERC (ton) would be equivalent to a reduction in NOx emissions of 13 pounds/day.

**EXAMPLE.** If a "peaking" source were to emit one ton of excess NOx per day when operating, but only operates for five days during the ozone season, the owner/operator of the source would nominally need to obtain five tons of ERCs. However, those ERCs are likely to have been created by relatively small daily reductions in NOx emissions over the course of an entire ozone season (153 days). In this example, assuming a purchase of five tons of ERCs, that calculates out to a daily NOx reduction of approximately 65 pounds.

$$(5 \text{ tons} \times 2000 \text{ pounds/ton}) \div 153 \text{ days} = 65 \text{ pounds/day}$$

Clearly, on any day that the "peaking" unit operates, there is much more excess NOx emissions that will not have been offset, on the order of 1,935 pounds:

$$(1 \text{ ton} \times 2000 \text{ pounds/ton}) - (65 \text{ pounds credit}) = 1,935 \text{ pounds excess NOx emissions}$$

While the total amount of NOx emitted would be controlled on a seasonal average basis, on the "peaking" day there would be a potentially significant increase in NOx emitted, and thus an increase in potential ozone creation. In order to achieve a commensurate reduction in ozone creation potential for peakers, an adjustment in the calculation of required ERCs is needed. One approach would be to require ERCs in a quantity that would ensure that the daily average reduction represented by those ERCs would equal the maximum daily excess NOx emissions from the peaking source on any day that it ran. On this basis, a peaking source with a maximum 24-hour excess NOx emission of one ton would be required to purchase 153 tons of ERCs.

$$1 \text{ (ton)/day} \times 153 \text{ days/season} = 153 \text{ tons}$$

This 153 tons of ERCs would be adequate to "offset" excess emissions of one ton per day for as many days as the source operated during a particular ozone season. This has been deemed to be unduly stringent, given some diversity in operation of these sources. In light of the foregoing, this requirement is adjusted downward by two-thirds.

*Completed 7/17/02*

**REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22 (NO<sub>x</sub> RULE)  
THROUGH USE OF DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

**Sikorsky Aircraft Corporation**

**Boilers Nos. 1, 2, 3, 4, and 5**

**June, 2002**

**Sikorsky Aircraft Corporation**  
Trading Agreement and Order No. 8120

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## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency's (EPA) State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in EIP guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from nitrogen oxides (NOx) control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program includes approval of creation and use of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of NOx. Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for more timely rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not

have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of DERCs will not jeopardize RFP since the state's NOx rule emission limits for the sources creating and/or using DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources the baseline will be the lower of actual or allowable emissions.

### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP.

After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the SIP for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the Trading Agreement and Order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.



## G. DESCRIPTION OF COMPLIANCE

The following is a summary of Sikorsky's compliance issues and a description of how Sikorsky Aircraft Corporation will comply with Section 22a-174-22 of the Regulations. These requirements are formally contained in Trading Agreement and Order No. 8120 (See attachment).

Sikorsky's Stratford, Connecticut facility is involved in aircraft manufacturing. The facility has been operating at this location since 1955. Sikorsky presently employs approximately 5,500 people. At the facility, Sikorsky operates five (5) Wicks steam boilers, which burn natural gas and #6 oil, and are subject to Section 22a-174-22 of the Regulations of Connecticut State Agencies. The subject boilers provide steam for heating and various process applications.

In accordance with regulatory requirements, Sikorsky filed a NOx compliance plan dated August 29, 1994. On June 16, 1995 Sikorsky filed a revised compliance plan, which indicated Sikorsky's decision to use seasonal fuel switching pursuant to Section 22a-174-22(f)(2)(A) of the Regulations. However, Sikorsky has been unable to meet the requirements of Section 22a-174-22(f)(2)(A) when operating on No. 6 fuel oil.

In this plan, Sikorsky indicated that it was not economically feasible at that time to install NOx controls (low-NOx burners) on the boilers. In order to achieve compliance, Sikorsky proposes to acquire emission reduction credits for the amount of NOx emissions that exceed the standards between May 31, 1995 and May 1, 2003 or until it achieves compliance through NOx controls or other approved means. Pursuant to Sections 22a-174-22(j) of the Regulations, Sikorsky proposes to acquire sufficient quantities of approved DERCs in advance of each month to offset excess NOx emissions on a monthly basis from the affected equipment in accordance with *Connecticut Guidelines for DERCs*.

In accordance with Section 22a-174-22(j) of the Regulations, Sikorsky proposes to use a 30-day trading period for determining DERCs required. Each month, the quantity of DERCs required to offset the excess emissions generated during that month by the affected equipment above 0.25 lbs/MMBtu RACT limits will be determined. DERCs previously purchased and on-hand will be used to offset any remaining balance of excess emissions (debits) for that month. Design margins will be applied to the RACT emission rate for each piece of affected equipment and fuel burned to ensure an environmental benefit.

On May 23, 1996, Sikorsky initially purchased 14 tons of DERCs from United Illuminating Company to offset excess NOx emissions (2 tons of ozone season DERCs and 12 tons of non-ozone season DERCs). Sikorsky used (retired) approximately 6.4 tons of DERCs to offset excess emissions from the date of RACT implementation, May 31, 1995 through April 19, 1996 (0.1 tons of ozone season DERCs and 6.3 tons of non-ozone season DERCs). A 10 (ten) % additional premium is included in the retirement of 6.4 tons of DERCs for having passed the December 31, 1995 deadline date for DERC purchase. The remaining 7.6 tons were used thereafter in accordance with the requirements in this SIP and attached Trading Agreement and Order No. 8120 to offset excess NOx emissions.

Fuel use records and NOx emissions calculations show that Sikorsky did not have sufficient DERCs on hand prior to use during the period February 2000 through August 31, 2001 to compensate for 19.37 tons (1.43 tons ozone and 17.94 tons non-ozone) of excess NOx

emissions. Sikorsky was required to purchase additional DERCs to offset the insufficiency. On October 22, 2001 Sikorsky purchased an additional 50 tons (10 tons ozone and 40 tons non-ozone) DERCs to compensate for the above insufficiency and to have additional DERCs on hand for future use. Additional DERCs will be purchased as needed prior to use based on anticipated future fuel use through May 1, 2003.

The actual emission rates, as determined by approved stack test, and RACT rates for the affected equipment in the Sikorsky trading set are shown in Table 2 below:

UNIT	REG. or PERMIT No.	FUEL	HEAT INPUT	STACK TEST RATE (6/95 & 6/97)	STACK TEST RATE (10/00)	RACT RATE
Boiler No. 1	R178-0019	No. 6 fuel oil Natural Gas	48.0 50.4	0.35 0.19	0.30 0.18	0.25 0.20
Boiler No. 2	R178-0018	No. 6 fuel oil Natural Gas	48.0 50.4	0.31 0.18	0.30 0.20	0.25 0.20
Boiler No. 3	R178-0017	No. 6 fuel oil Natural Gas	48.0 50.4	0.32 0.101	0.30 0.16	0.25 0.20
Boiler No. 4	R178-0016	No. 6 fuel oil Natural Gas	48.0 50.4	0.30 0.19	0.31 0.19	0.25 0.20
Boiler No. 5	P178-0039	No. 6 fuel oil Natural Gas	49.5 52.5	0.32 0.10	0.34 0.12	0.25 0.20

Required DERCs for the affected pieces of equipment are determined by estimating the fuel to be consumed in MMBtu by each unit, and multiplying these amounts by the difference between the FLER in lbs/MMBtu and 95% of the RACT limit in lbs/MMBtu (see equation 1 and 2 below). The 0.95 factor is a built-in design margin, assuring a typical contingency level of over compliance to allow for uncertainties. The estimated DERCs must be purchased prior to use.

For No. 6 fuel oil, the FLER was based on a 10% contingency above the maximum emission rate demonstrated by any boiler on No. 6 fuel oil. The NOx emission test rates are those determined during the official testing program (DEP approved stack testing) conducted on various dates between June 20, 1995 and June 26, 1995 and on June 12, 1997 and October 2000. Each FLER, as shown in Table 1, is used to calculate actual emissions for each piece of affected equipment included in the trading set, and is an enforceable limit for each piece of affected equipment. Prior to May 1, 2003, Sikorsky will comply during operation of each piece of affected equipment with the FLERs, the 5 percent design margin and the NOx emission limits shown in Table 1 above:

Starting May 31, 1995, before the first day of each month, Sikorsky shall calculate projected worst case DERCs required that calendar month for each boiler, as follows:

Equation. 1  $DERCs (tons) = [worst\ case\ estimated\ fuel\ use\ in\ MMBtu \times (FLER\ lbs/MMBtu - (0.95 \times RACT\ rate\ lbs/MMBtu))] \div 2000\ pounds/ton$

Where:

- RACT rate = RACT rate shown in Table 1 of the Trading Agreement and Order.
- FLER = full load emission rate as shown in Table 1 of the Trading Agreement and Order.
- Discount (0.95) = 5% design margin applied to the RACT rate.
- Fuel heating value = 150,000 BTU per gallon

Starting May 31, 1995 and no later than the tenth day of each month, Sikorsky will calculate actual DERCs used in the preceding calendar month, in accordance with the following:

Sikorsky shall calculate the actual DERCs required for the calendar month for each affected piece of equipment and fuel used in the trading set operating in excess of the RACT limits, by multiplying the fuel consumed in MMBtu per month for each boiler and fuel type by the difference between the established FLER in lbs/MMBtu and the RACT rate in lbs/MMBtu corrected for the 5 percent design margin. (See equation 2.0)

Equation. 2  $DERCs (tons) = [Actual\ fuel\ use\ in\ MMBtu \times (FLER\ lbs/MMBtu - (0.95 \times RACT\ rate\ lbs/MMBtu))] \div 2000\ pounds/ton$

The total amount of approved DERCs used and permanently retired each month shall be equal to the sum of the DERCs required for that month to offset the monthly debit. Excess (unused) ozone DERCs may be carried over to any other month until May 1, 2003. However, non-ozone DERCs may only be used during the non-ozone season until May 1, 2003.

Compliance is demonstrated by summing all of the emitting affected equipment's excess emissions over a month and utilizing DERCs to offset this amount. Approved DERCs must be owned prior to their use. If the FLER is exceeded, Sikorsky shall purchase and retire DERCs equal to the exceedance in pounds per hour per boiler multiplied by the total operating hours of each boiler and summed together to determine the total insufficiency plus a 100% premium.

If the period of non-compliance with the FLER is not known, the time period since the last previous stack test shall be used to calculate the period of non-compliance unless evidence demonstrating, to the Commissioner's satisfaction, that a different time period should be used is submitted by Sikorsky to the Commissioner, in writing, and the Commissioner approves such time period. The FLER, stack test rates and fuels set forth in Table 1 may be modified only after the consent of the Commissioner by written modification of the Trading Agreement and Order.

Sikorsky shall have sufficient DERCs on hand at the beginning of every month. If Sikorsky does not have sufficient DERCs in its possession prior to use, the DERCs insufficiency shall be adjusted upwards, at a minimum, by two times (2x). The DERC insufficiency is the difference between the approved DERCs on hand and the excess actual NOx emissions calculated above.

Sikorsky shall document and record daily and monthly totals of all fuel consumption and DERCs on hand and used and daily NOx mass emissions for each boiler. Excess credits from previous

months can be applied to subsequent months.

Sikorsky shall maintain documentation regarding the number of DERCS in its possession, purchased and used each month, as well as to attest to the fact that approved DERCS used in the ozone season were created during the ozone season. Generator certification shall be sufficient. The ozone season is May 1 to September 30 in any calendar year. All records shall be maintained in accordance with Section 22a-174-4 and 22a-174-22 of the Regulations and shall be provided to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.

No later than March 1 of every year after issuance of this Trading Agreement and Order, Sikorsky shall include with the Annual Emission Statement provided to the Commissioner, a record of each sale or other transfer, and use of any and all of the DERCS within and subsequent to issuance of this Trading Agreement and Order until all such DERCS have been used. Sikorsky shall also include actual NOx emissions from each boiler, and the amount of all DERCS used for the previous calendar year. These reports will be on a form prescribed by the Commissioner. This reporting may cease if the Commissioner approves a central registry.

#### **H. SOURCE OF DERCS**

Sikorsky has procured a total of 64 tons ( 12 tons of ozone season DERCS and 52 tons of non-ozone season DERCS) of approved DERCS from The United Illuminating Company as follows:

- 1) May 23, 1996, Sikorsky initially purchased 14 tons of ozone season DERCS.
- 2) October 22, 2001, Sikorsky purchased an additional 50 tons (10 tons ozone and 40 tons non-ozone)

Additional DERCS will be purchased as needed prior to use based on anticipated future fuel use through May 1, 2003. Sikorsky may acquire additional approved DERCS at any time prior to the need to use such DERCS.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



State of Connecticut  
and  
Sikorsky Aircraft  
Corporation

Trading Agreement  
and Order No. 8120

WHEREAS, the Commissioner of Environmental Protection ("Commissioner") and the Sikorsky Aircraft Corporation ("Sikorsky") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of discrete emission reduction credit ("DERC") trading to reduce nitrogen oxide ("NOx") emissions will achieve this result in a timely and cost-effective manner:

- A. At the request and with the agreement of Sikorsky, the Commissioner finds the following:
- Sikorsky is a corporation which owns and operates a facility involved in aircraft manufacturing at 6900 Main Street in Stratford, Connecticut ("facility").
  - At the facility, Sikorsky operates five (5) dual-fuel fired steam boilers, numbered 1, 2, 3, 4, and 5 ("boilers") capable of burning natural gas or No. 6 fuel oil, which are subject to Section 22a-174-22, Regulations of Connecticut State Agencies ("Regulations") pertaining to the control of NOx emissions.
  - Official U.S. Environmental Protection Agency ("EPA") Reference Method 7E stack testing performed on June 20 through June 26, 1995; June 12, 1997; and October 3 through 10, 2000 resulted in NOx emission rates as follows:

Table 1  
SIKORSKY - NOx EMISSION RATES AND RACT LIMITS (lbs/MMBtu)

UNIT	REG. OR PERMIT No.	FUEL	HEAT INPUT (MMBtu)	STACK TEST RATE (6/95 & 6/97)	STACK TEST RATE (10/00)	RACT RATE
Boiler No. 1	R178-0019	No. 6 oil Natural Gas	48.0 50.4	0.35 0.19	0.30 0.18	0.25 0.20
Boiler No. 2	R178-0018	No. 6 oil Natural Gas	48.0 50.4	0.31 0.18	0.30 0.20	0.25 0.20
Boiler No. 3	R178-0017	No. 6 oil Natural Gas	48.0 50.4	0.32 0.19	0.30 0.16	0.25 0.20
Boiler No. 4	R178-0016	No. 6 oil Natural Gas	48.0 50.4	0.30 0.19	0.31 0.19	0.25 0.20
Boiler No. 5	P178-0039	No. 6 oil Natural Gas	49.5 52.5	0.32 0.10	0.34 0.12	0.25 0.20

- Pursuant to Section 22a-174-22(j) of the Regulations, Sikorsky proposes to acquire and use approved DERCs monthly, as specified in Section C. of this Trading Agreement and Order to compensate for the excess NOx emissions from May 31, 1995 until May 1, 2003, or until full compliance with Section 22a-174-22 of the Regulations is achieved, whichever comes first.

5. Section 22a-174-22(j) of the Regulations allows the owner or operator of a source to use emission reduction trading to offset excess NOx emissions. Such reductions shall be, at a minimum, equivalent to those emission reductions that would be achieved by complying with all applicable emissions limitations in Section 22a-174-22(e) of the Regulations.
  6. For the period from May 31, 1995 through April 19, 1996, for having passed the December 31, 1995 deadline for purchasing DERCs (during which time Sikorsky burned 869,851 gallons of No. 6 fuel oil with a heating value of 150,000 Btu/gallon in the boilers, resulting in the excess emissions of 0.098 tons of NOx during the ozone season and 5.682 tons of NOx during the non-ozone season) Sikorsky purchased and retired 5.8 tons of DERCs plus an additional ten (10) percent of required DERCs for late purchase of credits, for a total of 6.4 tons (0.1 ozone season DERCs and 6.3 non-ozone season DERCs).
  7. On May 23, 1996, pursuant to Section 22a-174-22 (j) of the Regulations, Sikorsky acquired an initial 2 tons of approved ozone season DERCs and 14 tons of approved non-ozone season DERCs to compensate for the above insufficiency and to have additional DERCs on hand for future use.
  8. Fuel use records and NOx emissions calculations show that Sikorsky did not have sufficient DERCs on hand prior to use during the period February 2000 through August 31, 2001 to compensate for 19.37 tons (1.43 tons ozone and 17.94 tons non-ozone) of excess NOx emissions.
  9. On October 22, 2001 Sikorsky purchased an additional 50 tons (10 tons ozone and 40 tons non-ozone) to compensate for the above insufficiency and to have additional DERCs on hand for future use.
  10. Approved DERCs are defined for the purpose of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations.
- B. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) the Regulations, hereby allows Sikorsky to comply with Section 22a-174-22(d)(1) of the Regulations through use of DERC trading.
- C. With the agreement of Sikorsky, the Commissioner, acting under Connecticut General Statutes Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177, orders Sikorsky as follows:
1. DERCs Use. Approved DERCs shall be acquired for compliance with the emission standards in Section 22a-174-22 of the Regulations for the period beginning May 31, 1995 and continuing until Sikorsky achieves permanent compliance for boilers 1, 2, 3, 4 and 5 with the emission standards in Section 22a-174-22(e) of the Regulations or until May 1, 2003, whichever occurs first. Sikorsky shall acquire approved DERCs, and document and record the amounts of NOx emissions and DERCs used by serial number (if assigned) by boilers 1, 2, 3, 4, and 5 monthly, and shall maintain and provide such records in accordance with the following and Section 22a-174-4 of the Regulations, until May 1, 2003:
    - a. Except for the time period specified in paragraph C.1.(c), before the first day of each month, Sikorsky shall calculate projected worst case DERCs required that calendar month for each boiler, as follows:

$$\text{DERCs (tons)} = [\text{worst case estimated fuel use in MMBtu} \times (\text{FLER lbs/MMBtu} - (0.95 \times \text{RACT rate lbs/MMBtu}))] + 2000 \text{ pounds/ton}$$

Where:

- RACT rate = RACT rate shown in Table 2 of this Trading Agreement and Order.
  - FLER = full load emission rate as shown in Table 2 of this Trading Agreement and Order.
  - Discount (0.95) = 5% design margin applied to the RACT rate.
  - Fuel heating value = 150,000 BTU per gallon
- b. No later than the twentieth day of each month, calculate DERCs used when burning #6 oil in the boilers during the preceding calendar month, as follows:
- $$\text{DERCs (tons)} = [\text{Actual fuel use in MMBtu} \times (\text{FLER lbs/MMBtu} - (0.95 \times \text{RACT rate lbs/MMBtu}))] \div 2000 \text{ pounds/ton}$$
- c. On and after November 1, 2001, at a minimum, DERCs required each month shall be adjusted upwards by 100 percent for any periods that Sikorsky does not have sufficient DERCs in its possession to compensate for excess emissions prior to the first day of each month.
- d. Maintain documentation to attest to the fact that DERCs used during the ozone season were generated during the ozone season. Generator certification of this fact shall be sufficient.
- e. After full program review, and if the Commissioner deems it appropriate, the Commissioner may allow the survival and use of approved DERCs beyond April 30, 2003.
2. Prior to May 1, 2003, Sikorsky shall comply with the FLERs shown in Table 2 below during operation of each boiler:

UNIT	FUEL	FLER (lbs/MMBtu)	NOx EMISSION RATE LIMITS (lbs/MMBtu)
Boiler No. 1	No. 6 oil	0.39	0.25
Boiler No. 2	No. 6 oil	0.34	0.25
Boiler No. 3	No. 6 oil	0.35	0.25
Boiler No. 4	No. 6 oil	0.33	0.25
Boiler No. 5	No. 6 oil	0.35	0.25

3. FLERs, stack test rates and fuels set forth in Tables 1 and 2 may be modified only after the consent of the Commissioner by written modification of this Trading Agreement and Order.

4. If the FLER is exceeded, Sikorsky shall purchase and retire DERCs equal to the exceedance in pounds per hour per boiler multiplied by the total operating hours of each boiler and summed together to determine the total insufficiency plus a 100% premium. If the period of non-compliance with the FLER is not known, the time period since the last previous stack test shall be used to calculate the period of non-compliance unless evidence demonstrating, to the Commissioner's satisfaction, that a different time period should be used is submitted by Sikorsky to the Commissioner, in writing, and the Commissioner accepts such time period.
5. Sikorsky shall retain records and supporting documentation as described in this Trading Agreement and Order for a minimum of five years, commencing on the date such records were created. Sikorsky shall provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
6. No later than May 1, 2003, Sikorsky shall comply with the requirements of Section 22a-174-22(d)(1) of the Regulations unless this Trading Agreement and Order is otherwise extended by the Commissioner.
7. No later than March 1 of each year this Trading Agreement and Order is in effect, Sikorsky shall include with the annual emission report to the Commissioner, the monthly rate and annual total of fuel consumption for each fuel and boiler, DERCs obtained, date obtained, quantity remaining, serial numbers if applicable and used each month during the previous calendar year.
8. Pursuant to Section 22a-174-22(k) of the Regulations, Sikorsky shall conduct NOx emission testing of the boilers at least once every five years commencing from the most recent date identified in paragraph A.3 of this Trading Agreement and Order.
9. Approvals. Sikorsky shall use best efforts to submit to the Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form. If the Commissioner notifies Sikorsky that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and Sikorsky shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.
10. Definitions. As used in this Trading Agreement and Order, "Commissioner" means the Commissioner or a representative of the Commissioner; "Ozone season" means the period from May 1 through September 30 in any given calendar year, and "NOx RACT" means NOx Reasonably Available Control Technology. The date of "issuance" of this Trading Agreement and Order is the date the Trading Agreement and Order is deposited in the U.S. mail or personally delivered, whichever is earlier.
11. Dates. The date of submission to the Commissioner of any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Trading Agreement and Order, the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a

date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.

12. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by Sikorsky's chief executive officer or a duly authorized representative of such officer, as those terms are defined in §22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such document, and Sikorsky or Sikorsky's chief executive officer and each such individual shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law."
13. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject Sikorsky to an injunction and penalties.
14. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.
15. Notice of transfer: liability of Sikorsky. Until Sikorsky has fully complied with this Trading Agreement and Order, Sikorsky shall notify the Commissioner in writing no later than 15 days after transferring all or any portion of the facility, the operations, the site or the business which is the subject of this Trading Agreement and Order or after obtaining a new mailing or location address. Sikorsky's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
16. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by Sikorsky pursuant to this Trading Agreement and Order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require Sikorsky to undertake further investigation or further action to prevent or abate violations or pollution.
17. Sikorsky's obligations under law. Nothing in this Trading Agreement and Order shall relieve Sikorsky of other obligations under applicable federal, state and local law.
18. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by Sikorsky pursuant to this Trading Agreement and Order will result in compliance or prevent or abate pollution.
19. Access to facility. Any representative of the Department of Environmental Protection may enter the facility without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.

20. No effect on rights of other persons. This Trading Agreement and Order neither creates nor affects any rights of persons or municipalities that are not parties to this Trading Agreement and Order.
21. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these DERCS.
22. Notice to Commissioner of changes. Within 15 days of the date Sikorsky becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, Sikorsky shall submit the correct or omitted information to the Commissioner.
23. Notification of noncompliance. In the event that Sikorsky becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, Sikorsky shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice, Sikorsky shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and Sikorsky shall comply with any dates which may be approved in writing by the Commissioner. Notification by Sikorsky shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.
24. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in this Trading Agreement and Order or in writing by the Commissioner, be directed to:

Mr. Roland L. Severance Jr., PE  
Department of Environmental Protection  
Bureau of Air Management  
Emissions and Credit Trading Section  
79 Elm Street, 5<sup>th</sup> Floor  
Hartford, Connecticut 06106-5127

Sikorsky Aircraft Corporation

Trading Agreement And Order No. 8120

Sikorsky consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind Sikorsky to the terms and conditions of the Trading Agreement and Order.

Sikorsky Aircraft Corporation

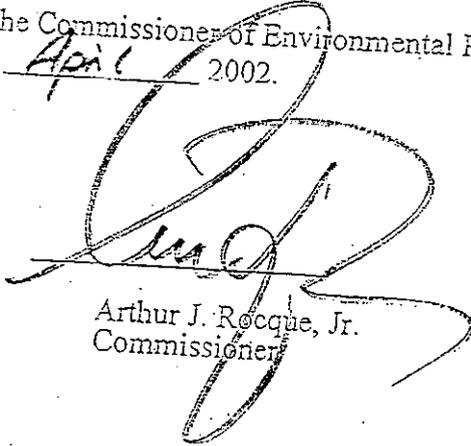
BY: Signature: Susan R. McFarland

Type Name: Susan R. McFarland

Type Title: Manager; Environment, Health and Safety

Date: 2/13/02

Entered as a final consent order of the Commissioner of Environmental Protection numbered 8120  
this 5th day of April 2002.



Arthur J. Rocque, Jr.  
Commissioner

TOWN OF STRATFORD  
MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document

**PROPOSED REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22  
THROUGH USE OF  
DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

**SMURFIT-STONE CONTAINER CORPORATION  
Trading Agreement and Order No. 8124**

**AUGUST, 2002**

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**PART 2. DESCRIPTION OF DERC CREATION AND USE**

**By Trading Agreement and Order**

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order 8124 to Create and Use DERCS
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in Economic Incentive Program (EIP) guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from NOx control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program is to approve creation of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of nitrogen oxides (NOx). Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving these emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions

to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for timelier rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit report of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of inter-temporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone

season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

There is no effect on attainment because DERCs may presently not be used by sources beyond the ozone attainment date of 2003. On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of these DERCs will not jeopardize RFP since the state's NOx rule emission limits for the source creating the DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For

individual sources, the baseline will be the lower of actual or allowable emissions.

#### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. After issuance of each Trading Agreement and Order the source using DERCs agrees to have sufficient approved DERCs in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCs that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCs created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the trading agreement and order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCs by using the reporting procedures required herein. A summary of the creation and use of DERCs will be prepared each year along with an audit of each source, which is conducted every spring, and the overall performance of the program is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION & USE**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection, Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected:**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source and Identifier:**

Smurfit-Stone Container Corporation  
125 Depot Road  
Uncasville, CT 06382  
Riley Boiler Permit # 107-008

**D. Designated Representative:**

Mr. Lewis Armstrong  
Technical Director  
Telephone No. (860) 848-1500

**E. CT Nonattainment Area Classification: Serious**

**F. Summary of Compliance:**

**Time Period:** May 31, 1995- May 1, 2003  
**Method:** Low-NOx Burner and Flue Gas Recirculation  
**Stack test date:** September 12, 2000

Table 1. Emission Rates (lbs/MMBtu)

Dates	Fuel	Test rate	FLER <sup>1</sup>	RACT <sup>2</sup>
August 23, 1995- September 12, 2000	Residual oil	.318	.363	.250
	Natural gas	.072	.086	.200
September 13, 2000- May 1, 2003	Residual oil	.342	.389	.250
	Natural gas	.055	.066	.200

1 Full Load Emission Rate

2 Reasonable Available Control Technology

**Discounts:**

Design Margin-	Less 5% from RACT
Environmental-	Less 10% of DERCs Created when using Natural Gas
Uncertainty-	Less 20% of DERCs Created when using Natural Gas

**G. Description of Compliance:**

The Uncasville Mill began operation in 1910 and has had several owners and several moderate upgrades. In 1984 Stone Container Corporation ("Stone") purchased the mill from Connecticut ContainerBoard. In 1991 Stone installed dual-fire (residual oil and natural gas) capability to the 99.5 MMBtu/hr Riley Boiler ("Boiler") and entered into an agreement with neighboring AES Thames to purchase process steam. Since that time the boiler has been used to supply back-up steam in the event that AES is in a shut down. On November 18, 1998 Stone merged with Jefferson Smurfit Corporation ("JSC"). Stone continues to operate the mill as SSC, a wholly owned subsidiary of JSC.

In 1990, the actual NOx emission from the boiler was 79.2 tons. Pursuant to Subsection (m) of Section 22a-174-22 Stone filed a NOx compliance plan on August 29, 1994. In the plan, Stone indicated that improvements to the boiler were needed to comply with the new NOx emission rates. Those improvements included removal of the air preheater and the installation of a low NOx burner and flue gas recirculation system. The new equipment installation was completed prior to May 1, 1995. Pursuant to Subsection (k) of Section 22a-174-22, stack testing was conducted on August 15, 1995 and September 12, 2000. Official U.S. Environmental Protection Agency ("EPA") Reference Method 7 stack testing resulted in NOx emission rates set forth in Table 1. Stone proposed to create Discrete Emission Credits (DERCs) while burning natural gas to offset exceedances generated from the use of residual oil.

Natural gas is metered into the mill through a Yankee Gas Company Meter. The meter is made by the American Meter Company and has a Rockwell Equimeter Electrocoector P & T unit. In addition to the gas company meter, the boiler is equipped with a Rosemount flow meter model number 3051CD. The flow meter has a Smart Pressure Transmitter with a 0.075% of span accuracy based on the manufacturer data. The Rosemount flow meter is connected to the Rosemount Control System and is monitored by the power house operator throughout the day. The power house operator also reads the gas company meter every morning. The Yankee Gas meter reading is checked against the Rosemount Flow Meter and recorded in a logbook. Any discrepancies between the two readings will trigger a calibration check of the meters. The monthly natural gas usage is generated from this method. When residual oil is fired, daily consumption is tracked by the powerhouse operator probing the above ground tank. Each reading is checked against the flow meter reading on a Rosemount Distributed Control System. The flow meter is a Rosemount Model 1151DEP-flow transmitter

with a 0.25% of span accuracy based on manufacturer's data. This usage is recorded in a logbook. Any discrepancies between the two readings will trigger a calibration check to the flow meter. The monthly fuel oil usage is generated from this method.

#### H. Creation of Credits

DERCs will be created when using natural gas with a Full Load Emission Rate (FLER) below that required in Table 22-1 of Section 22a-174-22 of the Regulations (RACT). The FLER includes a self-imposed buffer of 20%. When operating the Riley Boiler on natural gas, Stone Container shall calculate the amount of DERCs generated, as follows:

$$\text{DERCs generated (tons)} = \frac{\text{Actual Fuel Use in MMBtu} \times (.20 \text{ lbs/MMBtu} - \text{FLER in lbs/MMBtu}) \times .70}{2000 \text{ lb/ton}}$$

#### I. Consumption of Credits

DERCs will be consumed when using residual oil, which has a higher FLER than RACT. The FLER for residual oil includes a self-imposed buffer of 14%, and the RACT rate is discounted 5% to assure a benefit to the environment. Before the first day of each month, Stone shall calculate the projected DERCs required for the next calendar month for the Boiler as follows:

$$\text{DERCs (tons)} = \frac{\text{Estimated Fuel Use in MMBtu} \times (\text{FLER in lbs/MMBtu} - (0.95 \times .25 \text{ lbs/MMBtu}))}{2000 \text{ lb/ton}}$$

Stone shall document that sufficient approved DERCs are available for the Boiler no later than the first of each calendar month to assure compliance for, at a minimum, that calendar month. No later than the tenth day of each month, Stone shall calculate DERCs used in the preceding calendar month for the Boiler as follows:

$$\text{DERCs (tons)} = \frac{\text{Actual Fuel Use in MMBtu} \times (\text{FLER in lbs/MMBtu} - (0.95 \times .25 \text{ lbs/MMBtu}))}{2000 \text{ lb/ton}}$$



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of )  
The State of Connecticut and )  
Stone Container Corporation )

Trading Agreement and Order No. 8124

Whereas, the Commissioner of Environmental Protection ("Commissioner") and Stone Container Corporation ("SCC") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of emission reduction trading will achieve this result in a timely and cost-effective manner:

A. At the request and with the agreement of SCC, the Commissioner finds the following:

1. SCC is a corporation that operates a paper mill facility at 125 Depot Road, Uncasville, Connecticut ("facility").
2. At the facility, SCC operates a Riley Boiler ("Boiler") with a maximum rated capacity of 99.5 Million British Thermal Units ("MMBTU") per hour. The 1990 Department of Environmental Protection ("DEP") Emissions Inventory, using emission factors from AP-42, lists a total of 79.2 tons of NOx from the Boiler when firing residual oil. The most representative year for establishing a basis for historical emissions is 1992, when the Boiler fired natural gas and residual oil. The 1992 NOx emission, based on the lower of actual or allowable emissions, actual fuel data, and stack test was 40.9 tons. The Boiler is subject to Section 22a-174-22, Regulations of Connecticut State Agencies ("Regulations") pertaining to the control of Nitrogen Oxides (NO<sub>x</sub>).
3. In April 1995, SCC removed the air preheater, and installed a flue gas recirculation system, a low-NO<sub>x</sub> burner, and an economizer on the boiler.
4. Official U.S. Environmental Protection Agency ("EPA") Reference Method 7E stack testing performed on the dates indicated in Table 1, resulted in NOx emission rates set forth in Table 1.

Initials *pmj*

Date 1/3/02

Boiler	Fuel	Stack Test Date	Emission Rates		
			Stack Test	FLER	RACT
Riley	Residual Oil	August 23, 1995	.318	.363	.250
	Natural Gas	August 23, 1995	.072	.086	.200
	Residual Oil	September 12, 2000	.342	.389	.250
	Natural Gas	September 12, 2000	.055	.066	.200

5. The Boiler has dual-fuel capability; residual oil and natural gas. When firing residual oil, the Boiler exceeds the NOx Reasonably Available Control Technology ("RACT") limit as specified in Table 22-1, Section 22a-174-22 of the Regulations. When burning natural gas, the Boiler complies with the NOx RACT limit as specified in table 22-1, Section 22a-174-22 of the Regulations.
6. The full load emission rate ("FLER") includes a self-imposed buffer of 20 % for natural gas and 14% for residual oil. From the May 31, 1995 through September 11, 2000 the FLERs shall be .363 lb/MMBtu for residual oil and .086 lb/MMBtu for natural gas. On and after September 12, 2000 the FLERs shall be .389 lb/MMBtu for residual oil and .066 lb/MMBtu for natural gas.
7. Pursuant to Section 22a-174-22(j) of the Regulations, SCC proposes to comply by creating discrete emission reduction credits ("DERCs") while burning natural gas and using a portion of the DERCs while burning residual oil.
8. SCC shall discount DERCs as follows:
  - (a) Ten (10) percent of the DERCs generated by the facility will be permanently removed from all calculations to assure a benefit to the environment.
  - (b) Twenty (20) percent of the DERCs generated will be permanently removed

from all calculations for uncertainties.

9. When properly documented by SCC, and approved by the Commissioner, the emission reductions identified above will conform to the requirements of Section 22a-174-22(j)(3) of the Regulations. Specifically, the reductions will be:

Real: because they will result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions will be properly measured, recorded and reported.

Quantifiable: because they are based on Stack Test Data as applied in an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus: because they are not required by any Connecticut statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent: because the flue gas recirculation system and low-NO<sub>x</sub> burner will be in place and operating, and an appropriate tracking system is in place to monitor all data required to verify and quantify the creation of DERCs.

Enforceable: because the DERCs are approved by the Commissioner retrospectively after the submission by SCC of the seasonal or annual report that will document their creation.

10. For the period of January 1995 through December 2000, SCC emitted 4.4 tons of excess NO<sub>x</sub> emissions from the Boiler while burning residual oil. In the that time period, SCC created 24.3 non-ozone season DERCs and 6.1 ozone season DERCs from the Boiler while burning natural gas. Ten (10) percent of these DERCs are retired and permanently removed from all calculations to assure a benefit to the environment, and twenty (20) percent are removed for uncertainties; leaving 27.4 approved DERCs (21.9 non-ozone season, and 5.5 ozone season) available for use.

11. Approved DERCs are defined for the purpose of this order as those, which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations.

- B.1. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, and pursuant to Section 22a-174-22(d)(3) of the Regulations, hereby allows SCC, and approved sources within Connecticut, to use 5.5 tons of ozone season NOx DERCs and 21.9 tons of non-ozone season NOx DERCs for purposes of compliance under Section 22a-174-22(j) of the Regulations to achieve all or a portion of the nitrogen oxide emission reductions required by Section 22a-174-22 and/or as emission offsets for new sources for compliance with the requirements of Section 22a-174-3(l)(5) of the Regulations. DERC creation serial numbers assigned by the Department to these approved reductions of NOx emissions are provided in Table 2 of this Trading Agreement and Order:

Table 2: NOx DERC Serial Numbers

Year	Ozone Season	Non-Ozone Season
1995	CT95/8124(DC)NOxoz1-3	CT95/8124(DC)Noxnonoz1-6
1996	CT96/8124(DC)Noxoz1	CT96/8124(DC)Noxnonoz1-3
1997	N/A	CT97/8124(DC)Noxnonoz1
1998	CT98/8124(DC)Noxoz1	CT98/8124(DC)Noxnonoz1-3
1999	CT99/8124(DC)Noxoz1	CT99/8124(DC)Noxnonoz1-6
2000	CT00/8124(DC)NOxoz1	CT00/8124(DC)Noxnonoz1

- B.2. Upon sufficient documentation as described below, the Commissioner may provide written approval of the generation of additional DERCs by SCC retrospectively. Approved DERCs generated by SCC may be held by SCC or transferred to other persons in accordance with this Trading Agreement and Order.

B.3. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, hereby allows SCC to comply with Section 22a-174-22(d)(1) of the Regulations through use of DERC trading.

C. With the agreement of SCC, the Commissioner, acting under Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes, orders SCC as follows:

1. Upon issuance of this Trading Agreement and Order SCC shall comply with the FLER's shown in table 1 above during operation of the Boiler.
2. On and after the date of issuance of this consent order, and prior to May 1, 2003 or until SCC achieves compliance with the emission standards in Section 22a-174-22(e) of the Regulations, whichever occurs earlier, SCC shall have in its possession required, approved DERCs.
3. On and after the date of issuance of this consent order, and prior to May 1, 2003 or until SCC achieves compliance with the emission standards in Section 22a-174-22(e) of the Regulations, whichever occurs earlier, SCC shall document and record the amounts of natural gas and number 6 oil (collectively referred to as "fuel") and DERCs used by the Boiler each month, and provide such records in accordance with the following and Section 22a-174-22 of the Regulations:
  - a. Before the first day of each month, calculate projected DERCs required for the next calendar month for the Boiler as follows:

$$\text{DERCs (tons)} = \frac{\text{Estimated Fuel Use in MMBtu} \times (\text{FLER in lbs/MMBtu} - (0.95 \times .25 \text{ lbs/MMBtu}))}{2000 \text{ lb/ton}}$$

- b. Document that sufficient approved DERCs are available for the Boiler no later than the first of each calendar month to assure compliance for, at a minimum, that calendar month. DERCs required shall be adjusted upwards by 100% if approved DERCs are not in SCC's possession prior to use. However, based on the gravity of the noncompliance, the Commissioner may require additional upward adjustment;

Initials SMJ

Date 1/3/02

- c. No later than the tenth day of each month, calculate DERCs used in the preceding calendar month for the Boiler as follows:

$$\text{DERCs (tons)} = \frac{\text{Actual Fuel Use in MMBtu} \times (\text{FLER in lbs/MMBtu} - (0.95 \times .25 \text{ lbs/MMBtu}))}{2000 \text{ lb/ton}}$$

- d. Document and record monthly consumption of fuel and DERCs;
- e. No later than March 1 of each year this Consent Order is in effect, include with its annual emissions report to the Commissioner, the monthly rate of fuel consumption for the Boiler and DERCs used by the Boiler for the previous calendar year;
- f. Retain records and supporting documentation as described in this section for a minimum of five years, commencing on the date such records were created;
- g. Maintain documentation to attest to the fact that DERCs used during the ozone season were generated during the ozone season. The ozone season is from May 1 through September 30 in any calendar year. Generator certification of this fact shall be sufficient; and;
- h. Provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
4. When operating the Riley Boiler on natural gas, Stone Container shall calculate the amount of DERCs generated, as follows:

$$\text{DERCs generated (tons)} = \frac{\text{Actual Fuel Use in MMBtu} \times (.20 \text{ lbs/MMBtu} - \text{FLER in lbs/MMBtu}) \times .70}{2000 \text{ lb/ton}}$$

5. In requesting DERC approval, Stone Container shall provide documentation containing monthly operating reports of actual fuel usage and DERCs generated net of the thirty (30) percent discount.

6. No later than May 1, 2003, SCC shall comply with the requirements of Section 22a-174-22(d)(1) of the Regulations. However, after full program review of this and other Trading Agreements and Orders and, if determined to be appropriate, the Commissioner may grant a written extension of this Trading Agreement and Order.
7. The FLER's may be adjusted upon satisfactory demonstration to the Department and written approval by the Commissioner.
8. Pursuant to Section 22a-174-22(k) of the Regulations, SCC shall conduct NOx emission testing of the Boiler at least once every five years commencing from the later date identified in Table 1 of this Trading Agreement and Order.
9. Noncompliance with the established FLER shall subject SCC to make restitution by matching the quantity of emissions ("true up") caused by the exceedance plus a 100% premium. The true up in tons of DERCs shall be equal to the FLER exceedance in lbs/MMBtu, multiplied by the total heat input during the period of noncompliance divided by 2000 lbs/ton. If the period of non-compliance is not known, the time period from completion of the last/previous Department witnessed stack test through the date the FLER compliance is achieved as approved by the Commissioner shall be used. However, nothing in this trading Agreement and Order shall effect the Commissioner's authority to institute any proceeding or take any other action to require additional upward adjustment, based on the gravity of any alleged noncompliance or violation of law.
10. Approvals. SCC shall use best efforts to submit to the Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form. If the Commissioner notifies SCC that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and SCC shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.

Initials   *pmj*  

7

Date 1/3/02

11. Definitions. As used in this order, "Commissioner" means the Commissioner of Environmental Protection or an agent of the Commissioner. "Residual oil" means any fuel oil of No. 4, No. 5, or No. 6 grades, as defined by Commercial Standard C.S. 12-48. "Ozone season" means the period from May 1 through September 30 in any given calendar year. "Issuance" means the date this Trading Agreement and Order is deposited in the U.S. Mail or the date it is personally delivered, whichever is earlier.
12. Dates. The date of submission to the Commissioner of any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Trading Agreement and Order, the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.
13. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by the responsible corporate officer of SCC or a duly authorized representative of such officer, as those terms are defined in Section 22a-430-3(b)(2) of the Regulations, and by the individual or individuals responsible for actually preparing such document, each of whom shall examine and be familiar with the information submitted in the document and all attachments thereto, and shall make inquiry of those individuals responsible for obtaining the information to determine that the information is true, accurate, and complete, and each of whom shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false

statement made in the submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes or, in accordance with Section 22a-6 of the Connecticut General Statutes, under Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

14. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject SCC to an injunction and penalties.
15. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes or, in accordance with Section 22a-6, under Section 53a-157b of the Connecticut General Statutes.
16. Notice of transfer; liability of SCC and others. Until SCC has fully complied with this Trading Agreement and Order, SCC shall notify the Commissioner in writing no later than fifteen (15) days after transferring all or any portion of the facility, the operations, the site or the business which are the subject of this Trading Agreement and Order, or obtaining a new mailing or location address. Any license transfer shall be conducted in accordance with Section 22a-60 of the Connecticut General Statutes. SCC's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
17. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law which are willful or criminally negligent or for which penalties have not been specifically provided in this Trading Agreement and Order, including but not limited to violations of any permit issued by the Commissioner. If at any time the Commissioner determines that the actions taken by SCC pursuant to this Trading Agreement and Order have not fully achieved compliance with Section 22a-174-22 of the Regulations, the Commissioner may institute any proceeding against SCC and/or require SCC to undertake further investigation or further action.

18. SCC's obligations under law. Nothing in this Trading Agreement and Order shall relieve SCC of other obligations under applicable federal, state and local law.
19. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by SCC pursuant to this Trading Agreement and Order will result in compliance or prevent or abate pollution.
20. Access to records and facility. Any representative of the Department of Environmental Protection may enter and inspect the facility and inspect and copy records within normal business hours without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
21. No effect on rights of other persons. This Trading Agreement and Order shall neither create nor affect any rights of persons who or municipalities which are not parties to this Trading Agreement and Order.
22. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these DERCS.
23. Notice to Commissioner of changes: Within fifteen (15) days of the date SCC becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, SCC shall submit the correct or omitted information to the Commissioner.
24. Notification of noncompliance. In the event that SCC becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, SCC shall by telephone immediately notify the Bureau of Air Management and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. SCC shall also notify the Commissioner in writing within ten days of becoming aware of the noncompliance or potential noncompliance stating the date, time, and duration of the noncompliance, the reasons for the noncompliance or delay and all activities which SCC and its

Stone Container Corporation

Trading Agreement  
and Order #8124

agents, employees and representatives took to avoid or repair the results of the noncompliance and prevent the noncompliance, and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved. SCC shall comply with any dates, which may be approved in writing by the Commissioner. Notification by SCC shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.

25. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in writing by the Commissioner, be directed to:

Mr. Michael LaFleur  
Department of Environmental Protection  
Bureau of Air Management  
Compliance and Field Operations  
Emission and Credit Trading Section  
79 Elm Street  
Hartford, Connecticut 06106

Initials ML

Date 1/3/02

Stone Container Corporation

Trading Agreement  
and Order #8124

SCC consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind SCC to the terms and conditions of the Trading Agreement and Order.

Stone Container Corporation

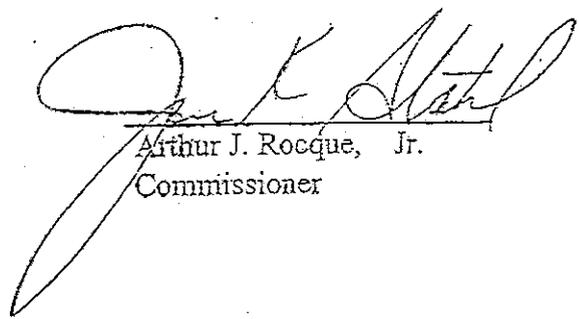
Signature: 

Type Name: Paul M. Hayes

Type Title: General Manager

Date: 1/3/02

Issued as a final consent order of the Commissioner of Environmental Protection on 1/15 2002

  
Arthur J. Rocque, Jr.  
Commissioner

TOWN OF MONTVILLE  
LAND RECORDS

MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document No.

REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22 (NO<sub>x</sub> RULE)  
THROUGH USE OF DISCRETE EMISSION REDUCTION CREDITS (DERCs)

## University of Connecticut

For  
Trading Agreement and Order No. 8115  
Modification No. 1

For  
Boilers No. 1, 2, 3, 4, 5, 6, 7, and 8

September, 2002

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By Trading Agreement and Order

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EXHIBITS

- Exhibit 1 Notice of Hearing and Hearing Certification
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- Exhibit 3 Trading Agreement and Order
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency's (EPA) State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in EIP guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from nitrogen oxides (NOx) control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERCS creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program includes approval of creation and use of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of NOx. Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERCS creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for more timely rule compliance because more options are available to the regulated source. DERCS trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NOx rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

On an overall state basis, improved NOx rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not

have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of DERCs will not jeopardize RFP since the state's NOx rule emission limits for the sources creating and/or using DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources the baseline will be the lower of actual or allowable emissions.

### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP.

After issuance of each Trading Agreement and Order the source using DERCS agrees to have sufficient approved DERCS in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCS that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

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#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCS created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the SIP for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the Trading Agreement and Order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCS by using the reporting procedures required herein. A summary of the creation and use of DERCS will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCS to determine if additional restrictions are needed to assure that the use of DERCS does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION AND/OR USE  
By Trading Agreement and Order**

**A. Administering Agency:**

The State of Connecticut

~~Department of Environmental Protection~~

Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected :**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source :**

University of Connecticut .

31 Le Doyt Road

Storrs, CT 06269-3038

**D. Designated Representative:**

Mr. George Krause, Environmental Engineer. Tel: (203) 486-3236

**E. Nonattainment Area Classification: Serious**

**F. Summary of Compliance**

Time Period: On and after May 31, 1995 - prior to May 1, 2003.

Purpose: NOx Emission reduction compliance for the following units:  
Boilers No. 1, 2, 3, 4, 5, 6, 7, and 8

Annual ERCs needed: Estimated 5 tons.

Max. Emission Rate: N/A

**G. DESCRIPTION OF COMPLIANCE**

The following is a summary of the University of Connecticut (UCONN) compliance issues and a description of how UCONN will comply with Section 22a-174-22 of the RCSA. These requirements are formally contained in the revised Trading Agreement and Order No. 8115 modification No. 1 (See attachment).

Modification No. 1 adds the following to page 3, Paragraph C.2 of Trading Agreement and Order No. 8115:

- G. Notwithstanding paragraph C.2.A; DERCS required shall be adjusted upwards by at least 100% if DERCS are not in UCONN's possession prior to use.
- H. UCONN shall notify the Commissioner in writing, within 30 days from the date of discovery of any deficit in DERCS, and shall submit copies of revised spreadsheets and supporting calculations for review and approval by the Commissioner.
- I. Nothing in this Trading Agreement and Order shall prohibit the Commissioner from imposing additional premiums or taking additional enforcement action that the Commissioner deems appropriate.

**H. SOURCE OF CREDITS**

To date, UCONN has purchased a total of 126.7 tons (71.7 tons ozone and 55 tons non-ozone) of DERCS as follows:

- 1996 12 tons ozone from *NJ-1 approved 8/28/95, through Clean Air Action Corporation.*
- 1997 33.7 tons ozone from *NJ-1 approved 8/28/95, through Clean Air Action Corporation.*
- 1997 55 tons non-ozone United Illuminating
- 2001 26 tons ozone *NJ-1 approved 8/28/95, through Clean Air Action Corporation.*

UCONN may acquire additional approved DERCS at any time prior to the need to use such credits. UCONN will at all times maintain a balance of approved DERCS sufficient to allow operation for the current month. If, upon audit and/or inspection UCONN fails to demonstrate possession of an adequate amount of DERCS to cover the current month, it will be subject to violation as prescribed in Sections 22a-174-12 and 22a-174-22, R.C.S.A.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



STATE OF CONNECTICUT

AND

UNIVERSITY OF CONNECTICUT

ORDER NO. 8115  
MODIFICATION

TRADING AGREEMENT AND ORDER MODIFICATION

In the matter of a Trading Agreement and Order between the Commissioner of Environmental Protection ("Commissioner") and University of Connecticut ("UCONN") ("Respondent").

WHEREAS, the Commissioner and Respondent, having agreed to the terms and conditions set forth in Trading Agreement and Order No. 8115 issued on November 19, 1996, do now, by mutual agreement, modify said Trading Agreement and Order as follows:

Page 3, Paragraph C 2 of Trading Agreement and Order No. 8138 is modified to add the following paragraphs:

- G. Notwithstanding paragraph C.2.A; ERCs required shall be adjusted upwards by at least 100% if ERCs are not in UCONN's possession prior to use.
- H. UCONN shall notify the Commissioner in writing, within 30 days from the date of discovery of any deficit in ERCs, and shall submit copies of revised spreadsheets and supporting calculations for review and approval by the Commissioner.
- I. Nothing in this Trading Agreement and Order shall prohibit the Commissioner from imposing additional premiums or taking additional enforcement action that the Commissioner deems appropriate.

All other terms and conditions of Trading Agreement and Order No. 8115 issued by the Commissioner acting under Chapter 446c, Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes shall remain in effect.

(Printed on Recycled Paper)

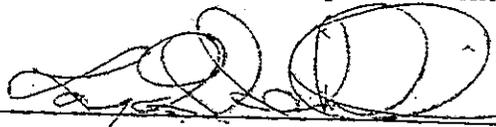
79 Elm Street • Hartford, CT 06106-5127

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UCONN TRADING AGREEMENT AND ORDER NO. 8115 MODIFICATION Cont.

University of Connecticut hereby consents to the entry of this modification to the Trading Agreement and Order without further notice.

University of Connecticut

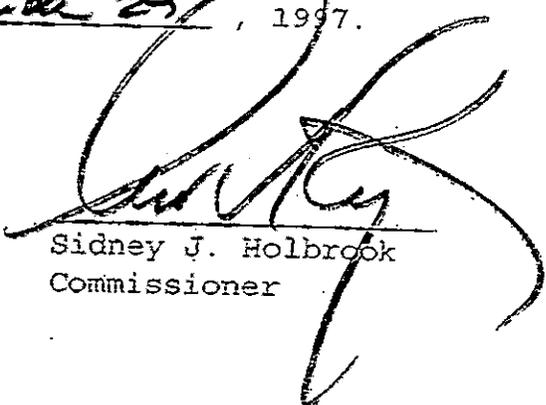
Signature: 

Type Name: Mr. Larry G. Schilling

Type Title: Executive Director of Facilities

Date: 7/29/97

Issued as a final consent order of the Commissioner of Environmental Protection on September 29, 1997.

  
Sidney J. Holbrook  
Commissioner

CITY OF MANSFIELD, CONNECTICUT  
LAND RECORDS

MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document 266 541 891

Complete 7/17/02

**REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR SINGLE SOURCE COMPLIANCE WITH CONNECTICUT  
EMISSION LIMITS ON OXIDES OF NITROGEN  
Regulations of Connecticut State Agencies, Section 22a-174-22 (NO<sub>x</sub> RULE)  
THROUGH USE OF DISCRETE EMISSION REDUCTION CREDITS (DERCs)**

**University of Connecticut**

For  
Trading Agreement and Order No. 8115A  
Boilers No. 2 and 7

Previously  
Boilers No. 1, 2, 3, 4, 5, 6, 7, and 8

July, 2002

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
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## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following criteria were developed using U. S. Environmental Protection Agency's (EPA) State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

Part I of this narrative is generic for Connecticut's program. Part II of this narrative is specific to the individual source involved and may be for one or more of the following: creation, use or averaging of credits, including discrete emission reduction credits (DERCS) and allowances.

EPA has set forth its guidance for DERCS in EIP guidance designed to cover an entire range of market-based approaches for stationary and mobile sources, one of which is emissions trading, including the creation of DERCS from nitrogen oxides (NOx) control and the use of DERCS to meet NOx Reasonably Available Control Technology (RACT) requirements. Creation of DERCS for use in compliance with the NOx RACT rules meets the criteria for such programs set forth in the EIP rules. DERC creation is a type of emissions-limiting strategy, as that term is used in EPA's EIP guidance.

The present scope of this program includes approval of creation and use of specific discrete emission reductions from a single source, and thereby define them retrospectively as DERCS for use or trading until May 1, 2003 by sources for compliance with the Regulations of Connecticut State Agencies (Regulations), Section 22a-174-22, regarding control of NOx. Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx DERCS as a method of compliance. The DERC creator and user must comply with all other applicable local, state and federal laws and regulations.

### **B. STATEMENT OF GOALS AND RATIONALE**

The goal of the emissions trade is to lower the cost of compliance with NOx control requirements. The purpose of approving emission reductions as DERCS is to encourage the over control of emissions, below the lower of actual or allowable emissions, and to provide affected sources the flexibility of an alternative mechanism for meeting environmental requirements as envisioned by the Connecticut NOx RACT regulations (Section 22a-174-22 of the Regulations).

An advantage of this mechanism is the incentive it provides sources of air contaminant emissions to reduce their emissions below the limits that are established under traditional command and control regulatory programs. It also improves rule effectiveness by allowing for more timely rule compliance because more options are available to the regulated source. DERC trading is intended to benefit both the environment and the regulated entities and can achieve equal or better environmental results at a lower cost than traditional regulatory approaches.

Creation or use of DERCs in compliance with Section 22a-174-22 of the Regulations will not interfere with reasonable-further-progress (RFP) demonstrations filed with EPA by the State of Connecticut. Indeed, the program should assist the DEP in advancing RFP. The DERC creator and user of DERCs, will continue to report actual emissions. The state inventory will reflect shutdowns or actual emissions as determined from an approved baseline of emissions indicated in each Trading Agreement and Order. The DEP monitors the generation of DERCs and the eventual use of DERCs and conducts a yearly audit of the program.

DERCs produced by the above-described methodology are real, quantifiable, surplus, permanent and enforceable, as required by EPA EIP guidance. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air, net of any consequential increase in actual emissions resulting from shifting demand. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on an appropriate reliable and replicable protocol, providing the rate and total mass amount of reduction.

Surplus because they are not required by any Connecticut Statute or regulation mandated by a current State Implementation Plan (SIP), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the advanced control systems are in place and operating and an appropriate tracking system is in place to monitor use of DERCs.

Enforceable because the DERCs are approved by the Commissioner retrospectively.

Creation and subsequent use of DERCs should be viewed as a program that operates within the known constraints of RFP, the NO<sub>x</sub> rule, and other SIP requirements. Restrictions on the use of DERCs will address concerns about RFP and attainment in a context of intertemporal trading. Specifically, the Commissioner will require that:

The DERCs must be certified by the Department prior to use.

DERCs generated during non-ozone season months may not be used during the ozone season. Only the DERCs produced during ozone-season months of May through September are available for use during the ozone season.

DERCs are presently authorized only for the purpose of compliance with Section 22a-174-22 of the Regulations for use before May 1, 2003.

Written permission must be obtained from the Commissioner before DERCs are utilized by sources. Upon approval by the Commissioner, however, such DERCs may be used by sources with valid Trading Agreement and Orders authorizing such use.

On an overall state basis, improved NO<sub>x</sub> rule-effectiveness will assure that any excess in the number of DERCs used as compared to those created during any particular time period will not

have a significant impact on projected reductions of NOx. Careful tracking and monitoring of DERC generation and use will allow timely program changes, as required.

Use of DERCs will not jeopardize RFP since the state's NOx rule emission limits for the sources creating and/or using DERCs are more stringent than EPA's NOx RACT guidance (57 FR 55620, November 25, 1992) and, therefore, a reduction beyond that federally-required will be occurring.

A yearly audit and on-going tracking and monitoring of DERC use and creation by the state will allow for timely program changes if the use of DERCs exceeds their creation by a significant amount. A full program assessment will be conducted and the program may be extended beyond April 30, 2003.

The creation and use of DERCs improves the probability of the RFP demonstration as a result of a combination of factors including seasonal shifting of NOx emissions from summer to winter, a minimum ten (10) percent retirement of DERCs upon their creation to assure a benefit to the environment and the inventorying of DERCs prior to use. There may be some environmental benefit from removing NOx and other pollutants from the air at a time when emissions were at higher levels and using them at a later time. Taken together, these benefits qualify as exceptional under EIP requirements.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions are measured by the state and serve as the starting point from which to generate a projected inventory for the ozone season used in the ozone attainment demonstration analysis. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions. For individual sources the baseline will be the lower of actual or allowable emissions.

### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

Subject sources will comply with the applicable provisions of Section 22a-174-22(k) of the Regulations, Emissions Testing and Monitoring and Section 22a-174-22(l) of the Regulations, Reporting and Record keeping. Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

An accounting of the use of all DERCs created and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that DERCs are used only once, and to represent the DERCs and their use in required EPA modeling, demonstration and reporting requirements.

The effects of the use of DERCs will be monitored by the state using an enhanced inventory reporting procedure. Reporting for purpose of DERC use and for the annual emission inventory program must be done on the same basis to address baseline accounting issues. Particular emphasis is placed on the relationship of the creation and use of DERCs to determine if additional restrictions are needed to assure that the use of DERCs does not jeopardize RFP.

After issuance of each Trading Agreement and Order the source using DERCS agrees to have sufficient approved DERCS in its possession at all times to provide for operation for the current calendar month. At a minimum, any excess emissions not on hand, prior to use by an individual source are corrected by requiring the source to retire the number of DERCS that should have been on hand prior to use and an additional 100%. The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision.

#### **E. IMPLEMENTATION SCHEDULE**

Once approved, DERCS created may be used for approved purposes for compliance with the NOx rule through April 30, 2003.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the SIP for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

Compliance is determined based upon emissions records, monitoring data, stack testing, DERC ownership and use records and compliance with the Trading Agreement and Order. Conditions of the DERC Trading Agreement and Order will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

#### **H. AUDIT AND RECONCILIATION**

The State of Connecticut will monitor the effects of creation and subsequent use of DERCS by using the reporting procedures required herein. A summary of the creation and use of DERCS will be prepared each year along with an audit of each source, which is conducted every spring, and the program's overall performance is audited annually. Particular emphasis is placed on the relationship of the creation and use of DERCS to determine if additional restrictions are needed to assure that the use of DERCS does not jeopardize RFP. Tracking and monitoring of DERC use and creation will allow timely changes, if necessary. A complete review of the program has been undertaken and extension of the program through April 30, 2003 is found to be desirable. Another program review will be conducted before the program is extended beyond April 30, 2003.

**PART 2. DESCRIPTION OF DERC CREATION AND/OR USE  
By Trading Agreement and Order**

**A. Administering Agency:**

The State of Connecticut  
Department of Environmental Protection  
Bureau of Air Management

**B. Pollutant and Regulatory Standard Affected :**

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22.

**C. Source :**

University of Connecticut .  
31 Le Doyt Road  
Storrs, CT 06269-3038

**D. Designated Representative:**

Mr. George Krause, Environmental Engineer. Tel: (203) 486-3236

**E. Nonattainment Area Classification: Serious**

**F. Summary of Compliance**

**Time Period:** On and after May 31, 1995 - prior to May 1, 2003.

**Purpose:** NOx Emission reduction compliance for the following units:

**Annual ERCs needed:** Estimated 5 tons.

**Max. Emission Rate:** Full load emission rates (FLER) (see Table below):

Prior to May 1, 2003, and provided all conditions of this Trading Agreement and Order are met, UCONN shall comply with the FLERs shown in Table 1 when burning #2 oil in boiler No. 2.

<b>Unit</b>	<b>Fuel</b>	<b>FLER (lbs/MMBtu)</b>	<b>NOx Emission Rate Limits (lbs/MMBtu)</b>
Boiler No. 2	#2 oil	0.27	0.20

**G. DESCRIPTION OF COMPLIANCE**

The following is a summary of the University of Connecticut (UCONN) compliance issues and a description of how UCONN will comply with Section 22a-174-22 of the RCSA. These requirements are formally contained in the revised Trading Agreement and Order No. 8115A (See attachment). Trading Agreement and Order No. 8115A supersedes No. 8115 and contains new requirements to reflect the conversion from #6 oil to #2 oil as explained in the following summary.

The University of Connecticut (UCONN) is a State owned institution of higher education that operates on a campus of buildings in Storrs, Connecticut. It has been operating at this location since 1881 and presently accommodates over 12,500 students.

At the facility, UCONN operates eight (8) dual-fuel fired steam boilers, numbered 1, 2, 3, 4, 5, 6, 7, and 8 ("boilers") which are subject to Section 22a-174-22, Regulations of Connecticut State Agencies ("Regulations") pertaining to the control of NOx emissions. UCONN provides heat and cooling through its power plant facilities on the campus.

Pursuant to the Regulations, UCONN filed a compliance plan dated September 29, 1994. In this plan, UCONN indicates that it is not economically feasible at this time to install NOx controls on all its boilers. In order to achieve compliance, UCONN proposes to acquire emission reduction credits for the amount of NOx emissions that exceed the new standards between May 31, 1995 and May 1, 2003 or until it achieves compliance through NOx controls or other approved means.

To reduce NOx emissions UCONN converted boilers Nos. 1, 2, 3, 4, 5, 6, 7, and 8 from #6 oil to cleaner burning #2 oil. UCONN agrees that while this Trading Agreement and Order remains in effect, #6 oil will not be burned in these boilers. Department of Environmental Protection ("DEP") approved stack testing showed that all the boilers except boiler No. 2 (see table 2 below) reduced emissions to below the required limits in Section 22a-174-22 Table 22-1 when burning #2 oil.

Table 2 UCONN – NOx Emission Rates and RACT Limits (lbs/MMBtu)					
Boiler #	DEP Registration	Fuel	Heat Input	Stack Test Rate	RACT Rate
boiler No. 2	98-15-1-15	#2 oil	111.1	0.24	0.20

In accordance with R.C.S.A. Section 22a-174-22(j), UCONN proposes to use a 30-day trading period for determining DERCS required. Each month, the quantity of ERCs required to offset the excess emissions generated during that month by the boilers above RACT limits will be determined. ERCs previously purchased and on-hand will be used to offset any remaining balance of excess emissions (debits) for that month. Design margins will be applied to the RACT emission rate for each boiler and fuel to ensure an environmental benefit. UCONN will obtain additional DERCS on an as needed basis.

Calculation of DERCs for "Use"

Approved DERCs shall be acquired for compliance with the emission standards in Section 22a-174-22 of the Regulations for the period beginning April 6, 2000 and continuing until UCONN achieves permanent compliance for boiler No. 2 with the emission standards in Section 22a-174-22(e) of the Regulations or until May 1, 2003, whichever occurs first. UCONN shall acquire approved DERCs, and document and record the amounts of NOx emissions and DERCs used by serial number (if assigned) by boiler No. 2 monthly, and shall maintain and provide such records in accordance with the following and Section 22a-174-4 of the Regulations, until May 1, 2003:

- a. Before the first day of each month, UCONN shall calculate projected worst case DERCs required that calendar month for boiler No. 2, as follows:

Equation 1.  $DERCs (tons) = [worst\ case\ estimated\ fuel\ use\ in\ MMBtu \times (FLER\ lbs/MMBtu - (0.95 \times RACT\ rate\ lbs/MMBtu))] \div 2000\ pounds/ton$

- b. UCONN shall acquire sufficient approved DERCs no later than the first of each month to assure compliance for, at a minimum, that calendar month. Excess DERCs from previous months can be applied to subsequent months. No later than the tenth day of each month, calculate DERCs used when burning #2 oil in boiler No. 2 during the preceding calendar month, as follows:

Equation 2.  $DERCs (tons) = [Actual\ fuel\ use\ in\ MMBtu \times (FLER\ lbs/MMBtu - (0.95 \times RACT\ rate\ lbs/MMBtu))] \div 2000\ pounds/ton.$

UCONN shall maintain documentation to attest to the fact that DERCs used during the ozone season were generated during the ozone season. Generator certification of this fact shall be sufficient.

Prior to May 1, 2003, and provided all conditions of the Trading Agreement and Order are met, UCONN shall comply with the FLERs shown in Table 2 when burning #2 oil in boiler No. 2.

Table 3 UCONN FLER and NOx Emission Rate			
Boiler	Fuel	FLER (lbs/MMBtu)	NOx Emission Rate Limits (lbs/MMBtu)
No. 2	#2 oil	0.27	0.20

On and after April 6, 2000, if at the first day of any month it is determined that UCONN did not have in its possession sufficient DERCs to cover the excess NOx emissions during the prior month for boiler No. 2, UCONN shall acquire and immediately retire sufficient DERCs to correct the insufficiency, plus a 100 percent premium for any month of such insufficiency.

Noncompliance with an established FLER shall subject UCONN to make restitution by matching the quantity of emissions ("true up") caused by the exceedance plus a 100 percent premium. The true up in tons of DERCS shall be equal to the FLER exceedance in lbs/MMBtu, multiplied by the total heat input during the period of noncompliance divided by 2000 lbs/ton. If the period of noncompliance is not known, the time period from the completion of the last/previous Department witnessed stack test through the date of the FLER compliance is achieved as approved by the Commissioner shall be used. However, nothing in the Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any action to require additional upward adjustment, based on the gravity of any alleged noncompliance or violation of law.

Pursuant to Section 22a-174-22(k) of the Regulations, UCONN shall conduct NOx emission tests of boilers Nos. 1, 2, 3, 4, 5, 6, 7 and 8 at least once every five years commencing from the dates of the applicable year 2000 emissions tests for boilers Nos. 1, 2, 3, 4, 5, 6, 7 and 8 referenced in paragraph A.5 of the Trading Agreement and Order. Notwithstanding this emission testing requirement, boiler Nos. 4, 5, and 6 are scheduled to be taken out of service with the startup of Boiler No. 9 and, therefore, will not require further testing beyond the date they are officially removed from service.

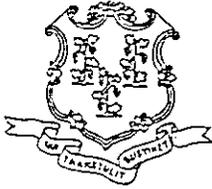
Boiler No. 7 operating restriction. For having failed to meet the 90% of highest operating rate requirements specified in Section 22a-174-22(k) of the Regulations, UCONN shall restrict the operating capacity of boiler No. 7 to a new operating rate limit of 111.1 MMBtu/hr of heat input and 80,000 lbs/hr. of steam output. However, if at any time after March 23, 2000 during the period while the Trading Agreement and Order remains in effect, UCONN exceeds this new operating rate limit stated in this paragraph of the Trading Agreement and Order, UCONN shall conduct NOx emissions testing of boiler No. 7 on or before sixty (60) days after the exceedance of the above limits of the Trading Agreement and Order.

#### H. SOURCE OF CREDITS

UCONN has purchased a total of 126.7 tons (71.7 tons ozone and 55 tons non-ozone) of DERCS as follows:

- 1996 12 tons ozone from *NJ-1 approved 8/28/95*, through *Clean Air Action Corporation*.
- 1997 33.7 tons ozone from *NJ-1 approved 8/28/95*, through *Clean Air Action Corporation*.
- 1997 55 tons non-ozone United Illuminating
- 2001 26 tons ozone *NJ-1 approved 8/28/95*, through *Clean Air Action Corporation*.

UCONN may acquire additional approved DERCS at any time prior to the need to use such credits. UCONN will at all times maintain a balance of approved DERCS sufficient to allow operation for the current month. If, upon audit and/or inspection UCONN fails to demonstrate possession of an adequate amount of ERCs to cover the current month, it will be subject to violation as prescribed in Sections 22a-174-12 and 22a-174-22, R.C.S.A.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of )  
The State of Connecticut and )  
University of Connecticut )

Trading Agreement  
and Order No. 8115A

WHEREAS, the Commissioner of Environmental Protection ("Commissioner") and the University of Connecticut ("UCONN") agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of discrete emission reduction credit ("DERC") trading to reduce nitrogen oxide ("NOx") emissions will achieve this result in a timely and cost-effective manner:

- A. At the request and with the agreement of UCONN, the Commissioner finds the following:
1. UCONN is a State owned institution of higher learning that operates on a campus of buildings in Storrs, Connecticut ("facility").
  2. At the facility, UCONN operates eight (8) dual-fuel fired steam boilers, numbered 1, 2, 3, 4, 5, 6, 7, and 8 ("boilers") which are subject to Section 22a-174-22, Regulations of Connecticut State Agencies ("Regulations") pertaining to the control of NOx emissions.
  3. UCONN converted boilers Nos. 1, 2, 3, 4, 5, 6, 7, and 8 from #6 oil to cleaner burning #2 oil and completed Department of Environmental Protection ("DEP") approved stack testing when burning #2 oil and the results have been approved by the DEP.
  4. UCONN agrees that while this Trading Agreement and Order remains in effect, #6 oil will not be burned in these boilers.
  5. Official U.S. Environmental Protection Agency ("EPA") Reference Method 7E stack testing performed on March 16 through April 5, 2000 showed that boiler No. 2, when burning #2 oil, has a nitrogen oxide ("NOx") emission rate of 0.24 lbs/MMBtu, which exceeds the 0.20 lbs/MMBtu allowable NOx emission rate limit specified in Section 22a-174-22(e) of the Regulations as shown in Table 1 below:

Table 1 UCONN - NOX EMISSION RATES AND RACT LIMITS (lbs/MMBtu)					
Boiler #	DEP Registration	Fuel	Heat Input	Stack Test Rate	RACT Rate
boiler No. 2	98-15-1-15	#2 oil	111.1	0.24	0.20

6. UCONN proposes, when burning #2 oil in boiler No. 2, to obtain and use DERCs in accordance with this Trading Agreement and Order.
7. UCONN boiler No. 7 has been unable to comply with Section 22a-174-22(k) of the Regulations which requires emissions testing to be conducted when the source is operating at or above 90 percent of its highest operating rate, unless allowed otherwise by the Commissioner in a permit or order.

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8. UCONN proposes to comply with the 90 percent of highest operating rate test requirement for boiler No. 7 by accepting an operating restriction which will reduce the maximum rated capacity ("MRC") heat input from 138.9 MMBtu/hr, and a corresponding steam output of 100,000 lbs/hr, to a new lower MRC of 111.1 MMBtu/hr and a corresponding steam output of 80,000 lbs./hr.
  9. Approved DERCs are defined for the purpose of this Trading Agreement and Order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations.
  10. On and after April 6, 2000 this Trading Agreement and Order supersedes Trading Agreement and Order No. 8115 and its modifications.
- B. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(3) of the Regulations, hereby allows UCONN to comply with Section 22a-174-22(d)(1) of the Regulations through use of DERC trading.
- C. With the agreement of UCONN, the Commissioner, acting under Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes, orders UCONN as follows:

1. DERCs Use. Approved DERCs shall be acquired for compliance with the emission standards in Section 22a-174-22 of the Regulations for the period beginning April 6, 2000 and continuing until UCONN achieves permanent compliance for boiler No. 2 with the emission standards in Section 22a-174-22(e) of the Regulations or until May 1, 2003, whichever occurs first. UCONN shall acquire approved DERCs, and document and record the amounts of NOx emissions and DERCs used by serial number (if assigned) by boiler No. 2 monthly, and shall maintain and provide such records in accordance with the following and Section 22a-174-4 of the Regulations, until May 1, 2003:
  - a. Before the first day of each month, UCONN shall calculate projected worst case DERCs required that calendar month for boiler No. 2, as follows:

$$\text{DERCs (tons)} = [\text{worst case estimated fuel use in MMBtu} \times (\text{FLER lbs/MMBtu} - (0.95 \times \text{RACT rate lbs/MMBtu}))] \div 2000 \text{ pounds/ton}$$

Where:

- RACT rate = RACT rate shown in Table 2 of this Trading Agreement and Order.
  - FLER = full load emission rate as shown in Table 2 of this Trading Agreement and Order.
  - Discount (0.95) = 5% design margin applied to the RACT rate.
  - Fuel heating value = 130,000 BTU per gallon
- b. Acquire sufficient approved DERCs no later than the first of each month to assure compliance for, at a minimum, that calendar month. Excess DERCs from previous months can be applied to subsequent months
  - c. No later than the tenth day of each month, calculate DERCs used when burning #2 oil in boiler No. 2 during the preceding calendar month, as follows:

$$\text{DERCs (tons)} = \frac{[\text{Actual fuel use in MMBtu} \times (\text{FLER lbs/MMBtu} - (0.95 \times \text{RACT rate lbs/MMBtu}))]}{2000 \text{ pounds/ton}}$$

- d. Maintain documentation to attest to the fact that DERCs used during the ozone season were generated during the ozone season. Generator certification of this fact shall be sufficient.
  - e. After full program review, and if the Commissioner deems it appropriate, the Commissioner may allow the survival and use of approved DERCs beyond April 30, 2003.
2. Prior to May 1, 2003, and provided all conditions of this Trading Agreement and Order are met, UCONN shall comply with the FLERs shown in Table 2 when burning #2 oil in boiler No. 2.

Table 2 UCONN FLER and NOx Emission Rate			
Boiler	Fuel	FLER (lbs/MMBtu)	NOx Emission Rate Limits (lbs/MMBtu)
No. 2	#2 oil	0.27	0.20

- 3. On and after April 6, 2000, if at the first day of any month it is determined that UCONN did not have in its possession sufficient ERCs to cover the excess NOx emissions during the prior month for boiler No. 2, UCONN shall acquire and immediately retire sufficient ERCs to correct the insufficiency, plus a 100 percent premium for any month of such insufficiency.
- 4. The FLER, stack test rates and fuels set forth in Tables 1 and 2 may be modified only after the consent of the Commissioner by written modification of this Trading Agreement and Order.
- 5. Noncompliance with an established FLER shall subject UCONN to make restitution by matching the quantity of emissions ("true up") caused by the exceedance plus a 100 percent premium. The true up in tons of ERCs shall be equal to the FLER exceedance in lbs/MMBtu, multiplied by the total heat input during the period of noncompliance divided by 2000 lbs/ton. If the period of noncompliance is not known, the time period from the completion of the last/previous Department witnessed stack test through the date of the FLER compliance is achieved as approved by the Commissioner, shall be used. However, nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any action to require additional upward adjustment, based on the gravity of any alleged noncompliance or violation of law.
- 6. The Commissioner may require the upward adjustment of the premium if additional violations are found.
- 7. Pursuant to Section 22a-174-22(k) of the Regulations, UCONN shall conduct NOx emission tests of boilers Nos. 1, 2, 3, 4, 5, 6, 7 and 8 at least once every five years commencing from the dates of the applicable year 2000 emissions tests for boilers Nos. 1, 2, 3, 4, 5, 6, 7 and 8 referenced in paragraph A.5. Notwithstanding this emission testing requirement, boiler Nos. 4, 5, and 6 are scheduled to be taken out of service with the startup of Boiler No. 9 and, therefore, will not require further testing beyond the date they are officially removed from service.
- 8. Boiler No. 7 operating restriction. For having failed to meet the 90% of highest operating rate requirements specified in Section 22a-174-22(k) of the Regulations, UCONN shall restrict the operating capacity of boiler No. 7 to a new MRC limit of 111.1 MMBtu/hr of

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heat input and 80,000 lbs/hr. of steam output. However, if at any time after March 23, 2000 during the period while this Trading Agreement and Order remains in effect, UCONN exceeds this new MRC limit stated in this paragraph, UCONN shall conduct NOx emissions testing of boiler No. 7 on or before sixty (60) days after the exceedance of the above limits in accordance with the following:

- a. UCONN shall submit to the Commissioner for his review and written approval an Intent-To-Test ("ITT") protocol not less than thirty (30) days prior to the emissions testing required pursuant to paragraph C.7, of this Trading Agreement and Order. The ITT protocol shall include at least:
    - i. The Department of Environmental Protection's Bureau of Air Management Test Form No. 1, "Intent to Test";
    - ii. System operating parameters indicative of the highest operating rate since the March 23, 2000 stack test, including, but not limited to: steam output rate, temperature and pressure, fuel firing rate, and NOx emissions rate.
  - b. The ITT protocol shall provide that UCONN shall perform testing as specified in Sections 22a-174-5 and 22a-174-22 of the Regulations, including operating boiler No. 7 at not less than ninety percent (90%) of its maximum rated capacity limit or highest operating rate since its last/previous emissions test, whichever is higher.
  - c. UCONN shall perform all testing required by paragraph C.8. in accordance with the approved ITT protocol.
  - d. In conducting and performing the testing required by paragraph C.8, and in analyzing the results of such testing, UCONN shall adhere to methods specified in Sections 22a-174-5 and 22a-174-22 of the Regulations and as approved by the United States Environmental Protection Agency ("EPA") and the Commissioner.
  - e. UCONN shall schedule all emissions testing so as to allow the Commissioner to be present during such testing and to independently verify facility operations, air pollution control equipment parameters, and testing procedures.
  - f. Within 30 days after completing any emissions testing required by this Trading Agreement and Order, UCONN shall submit to the Commissioner a written report providing the results of such testing; within 15 days of a notice from the Commissioner indicating any deficiencies in such report, UCONN shall submit a revised report.
9. Approvals. UCONN shall use best efforts to submit to the Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form. If the Commissioner notifies UCONN that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and UCONN shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.
10. Definitions. As used in this Trading Agreement and Order, "Commissioner" means the Commissioner or a representative of the Commissioner; "Ozone season" means the period from May 1 through September 30 in any given calendar year, and "NOx RACT" means NOx Reasonably Available Control Technology. The date of "issuance" of this Trading

Agreement and Order is the date the Trading Agreement and Order is deposited in the U.S. mail or personally delivered, whichever is earlier.

11. Dates. The date of submission to the Commissioner of any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Trading Agreement and Order, the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.
12. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by UCONN's chief executive officer or a duly authorized representative of such officer, as those terms are defined in §22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such document, and UCONN or UCONN's chief executive officer and each such individual shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law."
13. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject UCONN to an injunction and penalties.
14. False statements. Any false statement in any information submitted pursuant to this Trading Agreement and Order is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.
15. Notice of transfer; liability of UCONN. Until UCONN has fully complied with this Trading Agreement and Order, UCONN shall notify the Commissioner in writing no later than 15 days after transferring all or any portion of the facility, the operations, the site or the business which is the subject of this Trading Agreement and Order or after obtaining a new mailing or location address. UCONN's obligations under this Trading Agreement and Order shall not be affected by the passage of title to any property to any other person or municipality.
16. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by UCONN pursuant to this Trading Agreement and Order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require UCONN to undertake further investigation or further action to prevent or abate violations or pollution.
17. UCONN's obligations under law. Nothing in this Trading Agreement and Order shall relieve UCONN of other obligations under applicable federal, state and local law.

18. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by UCONN pursuant to this Trading Agreement and Order will result in compliance or prevent or abate pollution.
19. Access to facility. Any representative of the Department of Environmental Protection may enter the facility without prior notice for the purposes of monitoring and enforcing the actions required or allowed by this Trading Agreement and Order.
20. No effect on rights of other persons. This Trading Agreement and Order neither creates nor affects any rights of persons or municipalities that are not parties to this Trading Agreement and Order.
21. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these DERCs.
22. Notice to Commissioner of changes. Within 15 days of the date UCONN becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, UCONN shall submit the correct or omitted information to the Commissioner.
23. Notification of noncompliance. In the event that UCONN becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, UCONN shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice, UCONN shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and UCONN shall comply with any dates which may be approved in writing by the Commissioner. Notification by UCONN shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.
24. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in this Trading Agreement and Order or in writing by the Commissioner, be directed to:

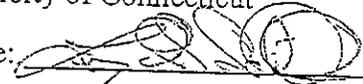
Mr. Roland L. Severance Jr., PE  
Department of Environmental Protection  
Bureau of Air Management  
Emissions and Credit Trading Section  
79 Elm Street, 5<sup>th</sup> Floor  
Hartford, Connecticut 06106-5127

University of Connecticut

Trading Agreement and Order No. 8115A

UCONN consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind UCONN to the terms and conditions of the Trading Agreement and Order.

University of Connecticut

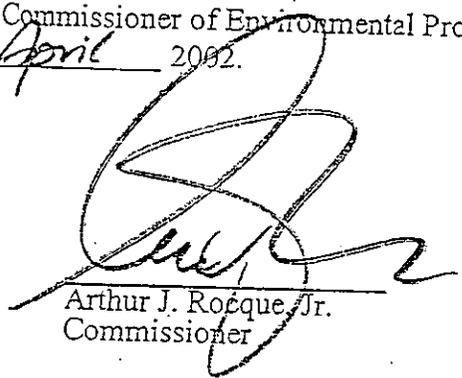
BY: Signature: 

Type Name: Larry G. Schilling

Type Title: University Architect

Date: April 1, 2002

Entered as a final consent order of the Commissioner of Environmental Protection numbered 8115A this 21<sup>st</sup> day of April 2002.

  
Arthur J. Roque, Jr.  
Commissioner

TOWN OF MANSFIELD  
LAND RECORDS

MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED

Certified Document No 7001 0360 0003 0796 2466

Completed 11/17/07

**PROPOSED REVISION  
TO THE STATE IMPLEMENTATION PLAN  
STATE OF CONNECTICUT  
FOR CREATION OF CONTINUOUS EMISSION REDUCTION CREDITS (CERCs)  
THROUGH TRADING AGREEMENT AND ORDER NO. 8201 (CC)**

**United States  
Naval Submarine Base  
Groton, CT**

**Trading Agreement and Order No. 8201 (CC)**

**Boiler No. 1S**

**July 2002**

United States Naval Submarine Base  
Groton, CT  
Trading Agreement and Order No. 8201 (CC)  
Boiler No. 1S

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**EXHIBITS**

- Exhibit 1 Notice of Hearing and Hearing Certification
- Exhibit 2 Designation of Hearing Officer
- Exhibit 3 Trading Agreement and Order to Create CERCs
- Exhibit 4 Hearing Report

## **PART 1. ECONOMIC INCENTIVE PLAN ELEMENTS**

The following elements were developed using U. S. Environmental Protection Agency (EPA)'s State Implementation Plan (SIP) Completeness criteria found in Appendix V to 40 Code of Federal Regulations, Part 51, and using the requirements of the Economic Incentive Program (EIP) Final Rule, 40 Code of Federal Regulations Part 51.493, published April 7, 1994, 59 FR 16690.

### **A. PROGRAM SCOPE**

The present scope of this program is to approve creation of specific continuous emission reductions from a single source, the Naval Submarine Base, Groton, Connecticut (SUBASENLON), and thereby define them as continuous emission reduction credits (CERCs) for use by SUBASENLON or other sources as emission offsets for new or modified sources for compliance with the requirements of Sections 22a-174-3a(1)(4) and 3a(1)(5) of the Regulations and/or for other purposes as approved by the Commissioner.

Other sources have requested that the Department of Environmental Protection (Department or DEP) approve emission reductions for the same purpose and these reductions may be presented to EPA as CERCs at a later time. Other sources are requesting to use CERCs for compliance purposes. Record keeping and monitoring by the Department, as described below, will allow an accurate retrospective assessment of the number of major sources creating and/or using NOx CERCs as a method of compliance.

### **B. STATEMENT OF GOALS AND RATIONALE**

This creation of CERCs for use in compliance with Section 22a-174-3a and possibly with Section 22a-174-22 of the Regulations will not interfere with reasonable further progress (RFP) demonstrations filed with EPA by the State of Connecticut. The state inventory will reflect SUBASENLON's actual emissions and the creation of CERCs as determined from an approved baseline of emissions as determined in Trading Agreement and Order No. 8201. The DEP will monitor the eventual use of SUBASENLON CERCs. This creation and subsequent use of CERCs should be viewed as a program that operates within the known constraints of RFP, the NSR rule, and other SIP requirements. The state will ensure that any future RFP or attainment plans account for this use of CERCs.

### **C. BASELINE**

The program baseline is the Connecticut 1990 base year ozone emission inventory. This inventory is the benchmark against which early emission reductions will be measured by the state and will serve as the starting point from which to generate a projected inventory for the ozone season to be used in the ozone attainment demonstration analysis required for 1996 and later years. Finally, it is the basis for the evaluation of potential control strategies to meet the Clean Air Act mandates to reduce emissions.

On April 30, 1998 boiler No. 1S was permanently shutdown and the Navy has requested to use the resulting permanent reduction in NOx emissions from that unit to create continuous emission reduction credits ("CERCs") for use or trade.

The baseline years of 1995-1996 were used for this creation of offsets. During 1995 - 1996, Boiler No. 1S emitted an annual average of 8.29 tons of NO<sub>x</sub> while burning No. 6 oil. SUBASENLON is proposing to use the shutdown of boiler No. 1S to create 8 tons of CERCs.

#### **D. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS**

An accounting of the use, including transfers to others, of all CERCs created by SUBASENLON and approved by the Department will be provided to the Commissioner no later than March 1 of every year for the preceding calendar year. This reporting will be in a form prescribed by the Commissioner and will be used by the Department to audit the program, to assure that CERCs are used only once, and to represent the CERCs and their use in required EPA modeling, demonstration and reporting requirements.

Records will be maintained for a minimum of five (5) years, and will be made available during normal working hours for review by the Department upon request.

For tracking purposes, the Department assigned these approved reductions of NO<sub>x</sub> emissions with the credit creation serial number CT98/8201(CC)P-038NOX(1-8). The Commissioner has provided notice to air pollution control agencies of all adjacent states of this SIP revision and creation of CERCs.

#### **E. IMPLEMENTATION SCHEDULE**

The Trading Agreement and Order No. 8201 (CC) was signed by the Commissioner on July 12, 2002. CERCs created from the shutdown of boiler No. 1S may be used for approved purposes for new source offsets and possibly for compliance with the NO<sub>x</sub> rule.

#### **F. ADMINISTRATIVE PROCEDURES**

This action will be submitted to EPA for their review and approval as a revision to the State Implementation Plan (SIP) for air quality, as required by the Clean Air Act. The authority to adopt this revision is granted by Section 22a-6 of the Connecticut General Statutes (CGS). Public notice has been provided as required in CGS Sections 22a-6, 4-168 and 40 Code of Federal Regulations Part 51.102.

#### **G. ENFORCEMENT MECHANISMS**

For the purposes of this CERC creation and use, as documented in Trading Agreement and Order No. 8201 (CC), boiler No. 1S permit 070-038 was made null and void, and SUBASENLON waived the right, if any to the administrative proceedings pursuant to Section 22a-3a-5(d) of the Regulations. Pursuant to paragraph C.2 of Trading Agreement and Order NO. 8201 (CC) the Commissioner approved 8 tons of CERCs from the actual reductions in NO<sub>x</sub> emissions from the shutdown of boiler No. 1S.

Compliance is determined based upon CERC ownership and use records. Conditions of the CERC Trading Agreement and Order (Exhibit 3) will be subject to enforcement procedures and penalties under Sections 22a-174-12 and 22a-174-22 of the Regulations.

## H. AUDIT AND RECONCILIATION

The State of Connecticut will monitor the effects of this specific creation and subsequent use of CERCs by using the reporting procedures required herein. A summary of the creation and use of CERCs will be prepared each year. Because CERCs are not usable until after they are approved by the DEP, it is not expected that additional controls or program changes will be required.

## PART 2. DESCRIPTION OF CERC CREATION. (By Trading Agreement and Order No. 8201 (CC))

### A. Administering Agency:

The State of Connecticut  
Department of Environmental Protection, Bureau of Air Management

### B. Pollutant and Regulatory Standard Affected:

NOx: Regulations of Connecticut State Agencies (R.C.S.A.) Section 22a-174-22 and the creation and use of Continuous Emission Reduction Credits (CERCs) Sections 22a-174-3a (1)(4) and 3a(1)(5) of the Regulations.

### C. Source and Identifiers: Client 800 Sequence 1 Town # 70 Premise # 28

United States Naval Submarine Base  
Rt. 12 & Crystal Road  
Groton, CT 06349

### D. Designated Representative:

Mr. Michael Brown, Environmental Engineer. Tel: (860) 694 -5159  
Fax: (860) 694 -4899

### E. CT Non-attainment Area Classification: Serious

### F. Summary of Creation: Order: Trading Order and Agreement No. 8201 (CC)

**Time Period:** Continuous - unless subject to future restriction.

**Purpose:** Create New Source Review NOx emissions offsets to be used with new or modified sources for compliance with the requirements of Sections 22a -174-3a (1)(4) and 3a(1)(5) of the Regulations and/or for other purposes as approved by the Commissioner in accordance with the Regulations.

**Continuous Emissions Credits (CERCs):** Serial number CT98/8201(CC)P-038NOX(1-8).

## G. DESCRIPTION OF CREATION

The following is a summary of United States Naval Submarine facility at Groton ("SUBASENLON") plans to create Continuous Emission Reduction Credits (CERCs) to be used in accordance with Sections 22a-174-3a (1)(4) and 3a(1)(5) of the Regulations. These requirements are formally contained in Trading Agreement and Order No. 8201 (CC) (See attachment).

SUBASENLON is a branch of the United States government that owns and operates a Naval Submarine facility at Groton, Connecticut. The facility is primarily a submarine training school and minor repair/maintenance facility. This has been in operation since 1868 and currently employs approximately 12,500 civilian and military personnel.

At the facility, SUBASENLON operated a Keeler Company steam boiler No. 1S, ("boiler") which burned #2 oil and natural gas and was subject to Section 22a-174-22, Regulations of Connecticut State Agencies ("Regulations") pertaining to the control of nitrogen oxide ("NOx") emissions. On April 30, 1998 boiler No. 1S was permanently shut down and the Navy has requested to use the resulting permanent reduction in NOx emissions from that unit to create continuous emission reduction credits ("CERCs") for use or trade.

The average annual NOx emissions from the equipment was 8.29 tons, based on the two year period, 1995 and 1996, shown to be most representative of normal source operations prior to dismantling the subject equipment, in accordance with the U.S. Environmental Protection Agency's "Emissions Trading Policy Statement", published December 4, 1986, (Federal Register Volume 51, Number 233), as determined by the Department of Environmental Protection based on the Air Bureau's Emission Inventory data.

In this case a special arrangement existed in that Boiler No. 1S and boilers Nos. 1, 2 and 3 were used to generate emission reductions offsets for SUBASENLON's heat recovery gas turbine permit No. P-0096 by using a permit limit restricting the heat input from these boilers to a maximum of 836,284 MMBtu per year. Therefore, prior to using boiler No. 1S to create CERCs for purposes other than described in Permit No. P-0096 above, SUBASENLON was required to obtain a permit modification to continue to maintain its emission offsets after removing boiler No. 1S (for creating CERCs) by reducing the maximum heat input for boilers Nos. 1, 2 and 3 from 836,284 MMBtu per year to 725,750 MMBtu per year. Pursuant to this requirement, Permit #0096 was modified by the DEP to remove boiler No. 1S from the permit and modify the permit limit restricting the heat input for boilers Nos. 1, 2 and 3 to 725,750 MMBtu per year.

As documented in Trading Agreement and Order No. 8201 (CC), boiler No. 1S permit 070-038 was made null and void, and SUBASENLON has waived the right, if any to the administrative proceedings pursuant to Section 22a-3a-5(d) of the Regulations. Subject to paragraph C.2 of Trading Agreement and Order NO. 8201 (CC) the Commissioner approved 8 tons of CERCs from the actual reductions in NO<sub>x</sub> emissions from the shutdown of boiler No. 1S. For tracking purposes, the Department assigned these approved reductions of NOx emissions with the credit creation serial number CT98/8201(CC)P-038NOX(1-8).

**H. SOURCE OF CERCs**

The eight (8) tons of CERCs were created on April 30, 1998 by the permanent shut down of boiler No. 1S. CERCs approved under this Trading Agreement and Order shall remain valid until they are used; however, if the NOx RACT limits are adjusted downward in later revisions of Section 22a-174-22 of the Regulations and these CERCs have not been used, these CERCs may also be adjusted downwardly.



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of	)	
The State of Connecticut	)	Trading Agreement
and	)	and Order
	)	No.8201(CC)
US Naval Submarine Base	)	
New London	)	

Whereas, the Commissioner of Environmental Protection ("Commissioner") and the United States Naval Submarine Base New London ("SUBASENLON"), agree that it is in the public interest that they work cooperatively to improve the air quality within the State of Connecticut and that the use of emission reduction trading will achieve this result in a timely and cost-effective manner:

A. At the request and with the agreement of SUBASENLON, the Commissioner finds the following:

1. SUBASENLON is a branch of the United States government that owns and operates a Naval Submarine training and maintenance facility at Route 12, Crystal Lake Road in Groton, Connecticut ("facility"). Groton, Connecticut is a serious non-attainment area for ozone.
2. At the facility, SUBASENLON operated a Keeler Company steam boiler No. 1S, ("boiler") which burned #2 oil and natural gas and was subject to Section 22a-174-22, Regulations of Connecticut State Agencies ("Regulations") pertaining to the control of nitrogen oxide ("NOx") emissions.
3. On April 30, 1998 boiler No. 1S was permanently shut down and the Navy has requested to use the resulting permanent reduction in NOx emissions from that unit to create continuous emission reduction credits ("CERCs") for use or trade.
4. The average annual NOx emissions from the equipment was 8.29 tons, based on the two year period, 1995 and 1996, shown to be most representative of normal source operations prior to dismantling the subject equipment, in accordance with the U.S. Environmental Protection Agency's "Emissions Trading Policy Statement", published December 4, 1986, (Federal Register Volume 51, Number 233), as determined by the Department of Environmental Protection based on the Air Bureau's Emission Inventory data.

Initials RWR

Date 6-25-02

5. Boiler No. 1S and boilers Nos. 1, 2 and 3 were used to generate emission reductions offsets for SUBASENLON's heat recovery gas turbine permit No. P-0096 (hereby incorporated into this Trading Agreement and Order by reference) by using a permit limit restricting the heat input from these boilers to a maximum of 836,284 MMBtu per year.
6. Prior to using boiler No. 1S to create CERCs for purposes other than described in Permit No. P-0096 above, SUBASENLON must obtain a permit modification to maintain its emission offsets after removing boiler No. 1S by reducing the maximum heat input for boilers Nos. 1, 2 and 3 from 836,284 MMBtu per year to 725,750 MMBtu per year.
7. Permit #0096 was modified by the DEP to remove boiler No. 1S from the permit and contains a permit limit restricting the heat input for boilers Nos. 1, 2 and 3 to 725,750 MMBtu per year.
8. As properly documented by SUBASENLON, and approved by the Commissioner, the reductions in NOx emissions identified above, and as computed in accordance with the terms of this Trading Agreement and Order, conform with the provisions of the U.S. Environmental Protection Agency's "Emission Trading Policy Statement", published December 4, 1986, (Federal Register Volume 51, Number 233, pertaining to the creation of CERCs. Specifically, the reductions are:

Real because they result in a reduction of actual emissions released into the air. The emission reductions are properly measured, recorded and reported.

Quantifiable because they are based on Emissions Inventory Data derived from AP-42 factors.

Surplus because they are not required by any Connecticut statute or regulation mandated by a current State Implementation Plan ("SIP"), and are not currently relied upon in any applicable attainment plan, any reasonable further progress plan or milestone demonstration.

Permanent because the boiler has been shut down and will not be operated in the future.

Enforceable because the CERCs are approved by the Commissioner under this Trading Agreement and Order.

- B. The Commissioner has determined and SUBASENLON agrees to the following:

1. The boiler No. 1S permit 070-038 is hereby null and void, and SUBASENLON hereby waives the right, if any to the administrative

proceedings pursuant to Section 22a-3a-5(d) of the Regulations.

2. Subject to paragraph C.2 of this Trading Agreement and Order the Commissioner hereby approves 8 tons of CERCs from the actual reductions in NO<sub>x</sub> emissions from the shutdown of boiler No. 1S. The Department has assigned these approved reductions of NO<sub>x</sub> emissions with the credit creation serial number CT98/8201(CC)P-038NOX(1-8).
  3. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-3a of the Regulations, will allow approved sources within Connecticut to use a total of 8 tons of NO<sub>x</sub> CERCs as emission offsets for new or modified sources for compliance with the requirements of Subdivision (4) of Subsection (l) of Section 22a-174-3a of the Regulations and/or for other purposes as approved by the Commissioner in accordance with the Regulations.
  4. CERCs approved under this Trading Agreement and Order shall remain valid until they are used; however, if the NO<sub>x</sub> RACT limits are adjusted downward in later revisions of Section 22a-174-22 of the Regulations and these CERCs have not been used, these CERCs may also be adjusted downwardly.
- C. With the agreement of SUBASENLON, the Commissioner, acting under Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes, orders SUBASENLON as follows:
1. SUBASENLON shall not exceed the maximum heat input limitation of 725,750 MMBtu per year for boilers Nos. 1, 2 and 3.
  2. SUBASENLON shall not operate boiler No. 1S.
  3. No later than 30 days after a sale, or other transfer or use, SUBASENLON shall submit a record of each sale or other transfer, or use of any and all CERCs (including serial numbers, if assigned) approved within this Trading Agreement and Order to the DEP. These reports shall be on a form prescribed by the Commissioner.
  4. No later than March 1 of every year after issuance of this Trading Agreement and Order, SUBASENLON shall include with the "Annual Approved CERC Sales and Use Report" to the Commissioner, a record of each sale or other transfer, and use by SUBASENLON (including serial numbers if assigned) of any and all of the CERCs approved within this Trading Agreement and Order for the previous calendar year until all such CERCs have been used. These reports shall be on a form prescribed by the Commissioner. This reporting may cease if a central registry is approved by the Commissioner.

5. SUBASENLON shall retain records and supporting documentation as described in this Trading Agreement and Order for a minimum of five years, commencing on the date such records were created. SUBASENLON shall provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
6. Approvals. SUBASENLON shall use best efforts to submit to the Commissioner all documents required by this Trading Agreement and Order in a complete and approvable form. If the Commissioner notifies SUBASENLON that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and SUBASENLON shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within 30 days of the Commissioner's notice of deficiencies. In approving any document or other action under this Trading Agreement and Order, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this Trading Agreement and Order. Nothing in this paragraph shall excuse noncompliance or delay.
7. Definitions. As used in this Trading Agreement and Order, "Commissioner" means the Commissioner or a representative of the Commissioner; "Ozone season" means the period from May 1 through September 30 in any given calendar year, and "NOx RACT" means NOx Reasonably Available Control Technology. The date of "issuance" of this Trading Agreement and Order is the date the Trading Agreement and Order is deposited in the U.S. mail or personally delivered, whichever is earlier.
8. Dates. The date of submission to the Commissioner of any document required by this Trading Agreement and Order shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this Trading Agreement and Order, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is deposited in the U.S. mail or is personally delivered, whichever is earlier. Except as otherwise specified in this Trading Agreement and Order, the word "day" as used in this Trading Agreement and Order means calendar day. Any document or action which is required by this Trading Agreement and Order to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed by the next day which is not a Saturday, Sunday or Connecticut or federal holiday.
9. Certification of documents. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this Trading Agreement and Order shall be signed by SUBASENLON's chief

executive officer or a duly authorized representative of such officer, as those terms are defined in §22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual(s) responsible for actually preparing such document, and SUBASENLON or SUBASENLON's chief executive officer and each such individual shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law."

10. Noncompliance. This Trading Agreement and Order is a final order of the Commissioner with respect to the matters addressed herein, and is nonappealable and immediately enforceable. Failure to comply with this Trading Agreement and Order may subject SUBASENLON to an injunction and penalties.
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13. Commissioner's powers. Nothing in this Trading Agreement and Order shall affect the Commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for past, present, or future violations of law. If at any time the Commissioner determines that the actions taken by SUBASENLON pursuant to this Trading Agreement and Order have not successfully corrected all violations, fully characterized the extent or degree of any pollution, or successfully abated or prevented pollution, the Commissioner may institute any proceeding to require SUBASENLON to undertake further investigation or further action to prevent or abate violations or pollution.

14. SUBASENLON's obligations under law. Nothing in this Trading Agreement and Order shall relieve SUBASENLON of other obligations under applicable federal, state and local law.
15. No assurance by Commissioner. No provision of this Trading Agreement and Order and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by SUBASENLON pursuant to this Trading Agreement and Order will result in compliance or prevent or abate pollution.
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18. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to these CERCs.
19. Notice to Commissioner of changes. Within 15 days of the date SUBASENLON becomes aware of a change in any information submitted to the Commissioner under this Trading Agreement and Order, or that any such information was inaccurate or misleading or that any relevant information was omitted, SUBASENLON shall submit the correct or omitted information to the Commissioner.
20. Notification of noncompliance. In the event that SUBASENLON becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this Trading Agreement and Order or of any document required hereunder, SUBASENLON shall immediately notify by telephone the individual identified in the next paragraph and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. Within five (5) days of the initial notice, SUBASENLON shall submit in writing the date, time, and duration of the noncompliance and the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and SUBASENLON shall comply with any dates which may be approved in writing by the Commissioner. Notification by SUBASENLON shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.

21. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in this Trading Agreement and Order or in writing by the Commissioner, be directed to:

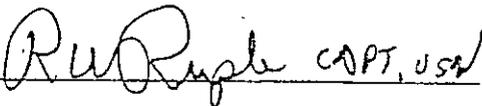
Mr. Roland L. Severance Jr., PE  
Department of Environmental Protection  
Bureau of Air Management  
Compliance and Field Operations Division  
Emissions and Credit Trading Section  
79 Elm Street, 5th Floor  
Hartford, Connecticut 06106-5127

SUBASENLON

Trading Agreement and Order 8201 (CC)

SUBASENLON consents to the issuance of this Trading Agreement and Order without further notice. The undersigned certifies that he/she is fully authorized to enter into this Trading Agreement and Order and to legally bind SUBASENLON to the terms and conditions of the Trading Agreement and Order.

By the United States Naval Submarine Base New London ("SUBASENLON")

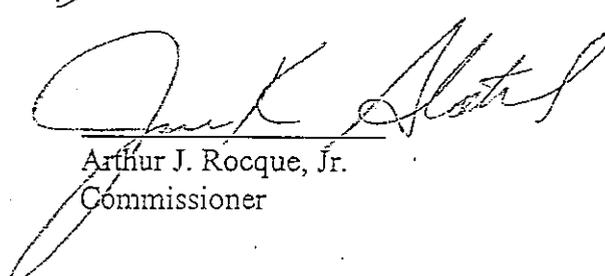
BY: Signature:  CAPT, USN

Type Name: R. W. RUPLE, CAPTAIN USN

Type Title: COMMANDING OFFICER

Date: 25 JUNE 2002

Entered as a final consent order of the Commissioner of Environmental Protection numbered 8201(CC) this 12<sup>th</sup> day of July 2002.

  
Arthur J. Rocque, Jr.  
Commissioner

MAILED CERTIFIED MAIL,  
RETURN RECEIPT REQUESTED  
Certified Document No.