



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



In the matter of)
State of Connecticut) TRADING AGREEMENT
and) AND ORDER No. 8116
the Connecticut Resources)
Recovery Authority)

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 emission reduction trading 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. The CRRA is a public instrumentality and political subdivision of the state of Connecticut established to provide solid waste management services to Connecticut's municipalities. The CRRA owns and has contracted with Ogden Martin ("Ogden") to operate a resource recovery facility located on Reserve Road, Hartford, Connecticut ("facility").
2. At the facility, Ogden operates three (3) waterwall municipal waste combustor/boilers capable of combusting both refuse derived fuel (RDF) and coal ("boilers"). These boilers, designated as units 11, 12 and 13, are identified as follows:

<u>Unit #</u>	<u>Town</u>	<u>Premise</u>	<u>Stack</u>	<u>Permit #</u>
11	075	158	101	0044
12	075	158	102	0045
13	075	158	103	0046

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The maximum allowed firing rate for each of the boilers, is 326 million BTU per hour (mmBTU/hour) when burning RDF and 249.9 mmBTU/hr when burning 100% coal. Separate continuous emissions monitors ("CEMs") measure nitrogen oxides ("NO_x") emissions from each boiler.

3. During the year 1994, the facility emitted a total of 1121 tons of NO_x based upon CEMs data. In 1994, the daily maximum NO_x emission rates for Units 11, 12, and 13, were 0.40, 0.46, and 0.44 lb/mmBTU heat input, respectively. On a monthly average, the maximum NO_x emission rates for Units 11, 12, and 13, were 0.35, 0.39, and 0.38 lb/mmBTU heat input, respectively. These actual emission rates are below the maximum allowable rate of 0.6 lb/mmBTU stated in the facility's permits to operate. Pursuant to Section 22a-174-22, Regulations of Connecticut State Agencies ("Regulations"), the boilers must meet a NO_x emissions limitation of 0.38 lb/mmBTU (24-hour average) after May 31, 1995.
4. By carefully monitoring and controlling the combustion process, CRRA has represented that it can minimize NO_x emissions, so that emissions frequently can be kept below the NO_x emission limitations established by Section 22a-174-22(e) of the Regulations. In accordance with the terms and conditions of this Trading Agreement and Order, CRRA may obtain approval of actual reductions in NO_x emissions generated through combustion control for use as emission reduction credits ("ERCs").
5. On May 31, 1995, CRRA, through its contractors, completed installation and began to test and make fully operational, a Selective Non-Catalytic Reduction ("SNCR") system on Unit 13, thereby reducing that unit's NO_x emissions rate below its actual 1994 emissions rates. Pursuant to Section 22a-174-22(e)(2)

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of the Regulations actual emissions reductions achieved through the installation of the SNCR below 0.38 pounds/mmBTU are eligible, in the same manner as for other sources, to be used as surplus emissions reductions for purposes of generating ERCs.

6. Pursuant to Section 22a-174-22(j) of the Regulations, CRRA intends both to acquire and generate approved ERCs until May 1, 1999, at the facility. Approved ERCs are defined for purposes of this trading order as those for which the Commissioner has provided written authorization for use in compliance with Section 22a-174-22 of the Regulations.
7. Prior to receipt of approval for ERCs generated at the facility, CRRA will acquire up to 100 tons of approved ERCs from other sources for use at the facility. The ERCs will be obtained monthly on an as-needed basis, as determined by actual NO_x emissions. CRRA will provide an accounting of actual NO_x emissions to the Department, based on data recorded by the CEMs.
8. Ten (10) percent of the ERCs generated at the facility shall be retired and permanently removed from all calculations to assure a benefit to the environment. A five (5) percent uncertainty discount will be removed and permanently retired due to the lack of a flow meter.
9. When properly documented by CRRA, and approved by the Commissioner, the emission reductions identified above, and as computed in accordance with the terms of this trading order, 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.

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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 combustion control and SNCR systems 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 ERCs.

Enforceable because the ERCs are approved by the Commissioner retrospectively after the submission by CRRA of the quarterly report that will document their creation.

10. As calculated in Attachment 1, attached to and incorporated by reference into this trading agreement and order, the baselines for units 11, 12, and 13 for credit creation are, respectively, 0.31, 0.32, and 0.31 lb/mmBTU. Notwithstanding the above, the Commissioner reserves the right to modify such baseline emission rates to meet any requirements established pursuant to Section 129(e) of the Clean Air Act.
11. As documented in Attachment 2, attached to and incorporated by reference into this trading agreement and order, 211.5 ERCs were created at units 11, 12, and 13 between June 1, 1995 and December 31, 1996 (108.0 during the ozone season and 103.5 during the non-ozone season).

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- B. The Commissioner, in accordance with the provisions of this Trading Agreement and Order, pursuant to Section 22a-174-22(d)(4) of the Regulations, will allow approved sources within Connecticut to use 211.5 tons of NOx ERCs described in paragraph A.11. (108.0 during the ozone season and 103.5 during the non-ozone season) for purposes of compliance under Section 22a-174-22(j) or 22a-174-3(1)(5) of the Regulations to achieve a portion of the nitrogen oxide emission reductions required or as emissions offsets for new sources.

Upon sufficient documentation as prescribed below, the Commissioner will provide written approval of additional creation of ERCs by CRRA retrospectively. Approved ERCs created by CRRA may be held or transferred to other sources. Such ERCs shall remain valid until they are used or until April 30, 1999, whichever occurs first. The Commissioner may allow the survival and use of these ERCs beyond April 30, 1999.

- C. 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 CRRA to use approved ERCs, as necessary, to achieve the nitrogen oxide emission reduction required by Section 22a-174-22(e)(1)(B) of the Regulations.
- D. With the agreement of CRRA, the Commissioner, acting under Sections 22a-6, 22a-171, 22a-174, 22a-176, and 22a-177 of the Connecticut General Statutes, orders CRRA as follows:
1. ERC generation. For purposes of generating ERCs from the facility, CRRA shall use an Emissions Trading Baseline for Units 11, 12, and 13, respectively, of 0.31, 0.32, and 0.31 lb/mmBTU. Notwithstanding the above, the Commissioner reserves the right to modify such baseline emission rates to meet any requirements

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established pursuant to Section 129(e) of the Clean Air Act. ERCs shall be calculated using CEM-recorded NO_x emission rates* for each boiler and actual fuel use for each boiler in mmBTU/day. Fifteen (15) percent of the ERCs shall be retired by the facility and permanently removed from all calculations to assure a benefit to the environment and to compensate for uncertainty.

*This rate shall be calculated pursuant to the methodology described in Attachment 3.

- a. CRRA shall maintain records for each boiler showing daily NO_x mass emissions, actual NO_x emission rates (24-hour average), and ERCs generated net of the ten (10) percent environmental discount and a five (5) percent uncertainty discount.
- b. In requesting ERC approval, CRRA shall provide documentation containing monthly operating reports of actual fuel use in mmBTU, daily actual NO_x mass emissions and NO_x emission rates (24-hour average), number of valid data hours in each 24-hour period, number of operating hours per day, and ERCs generated, using the Emissions Trading Baseline, as defined in paragraph D.1 above, net of the fifteen (15) percent discount.
- c. No later than March 1 of every year after issuance of this trading order, CRRA shall provide to the Commissioner a record of each sale or other transfer, and use of any and all of the ERCs approved within and subsequent to issuance of this trading order until all such ERCs have been used. These reports will be on a form prescribed by the Commissioner. This reporting may cease if a central registry is approved by the Commissioner. Should CRRA choose to discontinue the generation of ERCs, CRRA will notify the Commissioner to assist in planning.

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2. ERC Use. ERCs shall be acquired for the period beginning June 1, 1995 until the CRRRA achieves permanent compliance with the emission standards in Section 22a-174-22(e) for all three combustion units or until May 1, 1999, whichever occurs first. CRRRA shall acquire ERCs, and document and record the amounts of NO_x emissions and ERCs used by each boiler each month, and shall maintain and provide such records in accordance with the following and Section 22a-174-4 of the Regulations, until May 1, 1999:

A. Before the first day of each month, calculate projected worst case ERCs required for the same calendar month as follows:

$$\text{ERCs (tons)} = \{ (0.55 * \text{lb/mmBTU} - [(.95) \times (0.38 \text{ lb/mmBTU})]) \times (\text{Estimated fuel use in mmBTU}) \} \div 2000 \text{ pounds.}$$

*Full-load-Emission-Rate

B. Acquire sufficient approved ERCs no later than the first of each calendar month to assure compliance for, at a minimum, that calendar month. Excess credits from previous months can be applied to subsequent months.

C. No later than the twentieth day of each month, calculate ERCs used in the preceding calendar month, as follows:

(1) For each boiler on each day, determine whether the 24-hour average NO_x emission rate is less than the Emissions Trading Baseline or greater than 95% of the NO_x RACT Limit (.95)(0.38 lb/mmBTU).

(2) For each boiler with daily NO_x emissions

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exceeding the NO_x RACT Limit, calculate the amount of excess emissions, as follows:

Excess emissions (tons) = {((CEM-recorded NO_x daily average emission rate in lb/mmBTU*) - [(0.95) x (0.38 lb/mmBTU)]) x (actual fuel use in mmBTU)} ÷ 2000 pounds.

*This rate shall be calculated pursuant to the methodology described in Attachment 3.

- (3) For each boiler with daily NO_x emissions below the applicable Emissions Trading Baseline, calculate the amount of Reduced emissions, as follows:

Reduced emissions (tons) = {[(Emission Trading Baseline in lb/mmBTU) - (CEM-recorded NO_x daily average emission rate in lb/mmBTU*)] x (actual fuel use in mmBTU/day) ÷ (2000 pounds)} x (.95)**.

ERCs (tons) = (.90)*** x reduced emissions

*This rate shall be calculated pursuant to the methodology described in Attachment 3.

**Five percent uncertainty discount.

***Ten percent environmental discount.

- (4) At the end of each calendar month, the total amount of ERCs used in that month shall be equal to the sum of the Excess and Reduced emissions for the month. If Reduced Emissions as discounted exceed Excess Emissions, ERCs may be generated, and CRRA shall record and document such fact. DEP approval of said ERCs in accordance with paragraph D.1, above, is required before said ERCs are used.

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- (5) In order to consider a Daily NO_x Averaging Period valid for ERC approval, it must contain valid data hours for seventy-five (75%) of the operating hours in that daily period (example: minimum 18 valid hours for a full 24-hour operating day; minimum 12 hours for 16 operating hours, etc.). A Daily NO_x Averaging Period is defined as the total of all operating hours in a day during which municipal solid waste or coal is being fed to the boiler and/or when the boiler load is at least seventy-five (75%) of maximum rated capacity.

Additionally, for a data hour to be considered a valid hour, seventy-five (75%) minimum data capture requirements must be met for each one-hour data block period. All NO_x and CO₂ CEMs must comply with 40 CFR 60 Appendix F drift criteria.

- D. Document and record daily and monthly NO_x emissions and ERCs used.
- E. Maintain documentation to attest to the fact that 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.
3. In addition, pursuant to Section 22a-174-22(e)(2) of the Regulations, actual annual average NO_x emissions from units 11 and 12 shall each not exceed 420 tons per year.
4. No later than March 1, of each year this trading agreement and order is in effect, CRRA shall include with its annual emissions report to the Commissioner, actual NO_x emissions from the facility and each

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boiler, and ERCs used for the previous calendar year, in monthly increments. CRRA shall also include in its annual emissions report, the amount of ERCs generated and/or approved for the previous calendar year.

5. ERCs may be certified for use upon written request by CRRA to the DEEP and subsequent written approval by the Commissioner. Such a written request shall contain all information required by section D of this order for the period of ERC generation.
6. CRRA shall retain records and supporting documentation as described in this trading order for a minimum of five years, commencing on the date such records were created. CRRA shall provide the records specified above to the Commissioner within thirty (30) days of receipt of a written request from the Commissioner.
7. Provided all conditions of this trading order are met, and prior to May 1, 1999, CRRA shall comply during operation of each boiler with a full load emission rate limitation of .55 lb/mmBTU heat input, averaged on a 24-hour basis.
8. As used in this Trading Agreement and Order, "Commissioner" means the Commissioner of Environmental Protection or an agent of the Commissioner.
9. 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 the Commissioner 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. In so notifying the Commissioner, CRRA shall state in writing 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

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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.

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 the chief executive officer of CRRA 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 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, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157 of the Connecticut General Statutes, and in accordance with any other applicable statute."

11. Final Agreement and Order. This Trading Agreement and Order is the final agreement and order by and between the Commissioner and CRRA with respect to the matters addressed herein, and shall not be modified without the written agreement of both parties.

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12. 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-157 of the Connecticut General Statutes.

13. Notice of transfer; liability of CRRA and others. Until May 1, 1999, and in accordance with Public Act 95-218, CRRA shall notify the Commissioner in writing at least thirty (30) days prior to transferring any license held by CRRA to any other party and shall notify the Commissioner in writing no later than fifteen (15) days after transferring all or any portion of the operations, the facility or the business which are the subject of this Trading Agreement and Order, or 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.

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 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 CRRA pursuant to this Trading Agreement and Order have not fully achieved compliance with Section 22a-174-22 of

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the Regulations, the Commissioner may institute any independent proceeding to require CRRA to undertake further investigation or further action.

15. 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.
16. Access to records and facility. Any representative of the Department of Environmental Protection may enter 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.
17. 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.
18. No Creation of Property Rights. This Trading Agreement and Order does not create any property rights with respect to the ERCs created or used pursuant to this Trading Agreement and Order.
19. Notice to Commissioner of changes. Within fifteen (15) days of the date Ogden 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.

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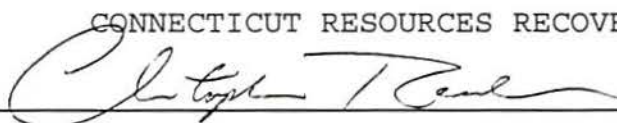
20. Submission of documents. Any document required to be submitted to the Commissioner under this Trading Agreement and Order shall, unless otherwise specified in writing by the Commissioner, be directed to:

Ms. Wendy Jacobs
Department of Environmental Protection
Bureau of Air Management
Engineering and Enforcement Division
79 Elm Street
Hartford, Connecticut 06106

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: _____



Type Name: _____

CHRISTOPHER RECCHIA

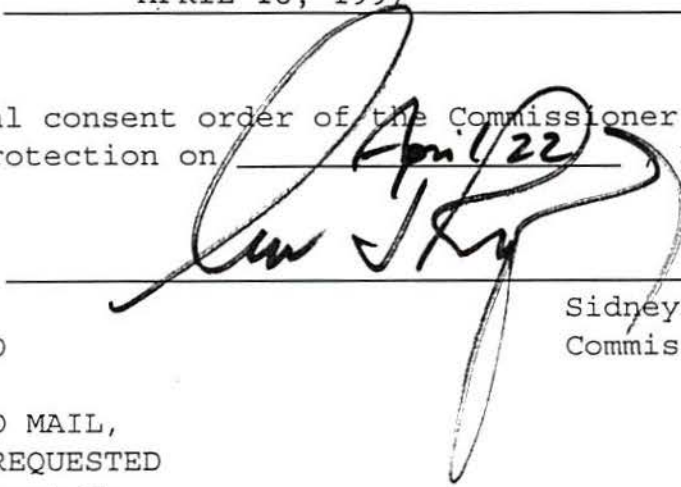
Type Title: _____

DIRECTOR OF ENVIRONMENTAL PROGRAMS

Date: _____

APRIL 18, 1997

Issued as a final consent order of the Commissioner of Environmental Protection on _____ 1997.



Sidney J. Holbrook
Commissioner

CITY OF HARTFORD
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