UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF
AIR AND RADIATION

Mr. Gary Thorne
Vice President
CH Resources, Inc.
110 Main Street
Poughkeepsie, NY 12601

Dear Mr. Thorne,

This letter represents U. S. EPA's official determination of applicability under §72.6(c) of the Acid Rain regulations for Unit 1 at the CH Resources-Syracuse plant ("Syracuse"), ORISPL 010621, Unit 1 at the CH Resources-Beaver Falls plant ("Beaver Falls"), ORISPL 010617, and Unit 1 at the CH Resources-Niagara Falls plant ("Niagara Falls"), ORISPL 050202 in New York, all of which are owned by CH Resources, Inc (CH Resources). This determination is made in response to CH Resources' March 2, 2000 request, in which CH Resources suggests that the units were initially exempt from the Acid Rain Program under §72.6(b)(5) and are still exempt under §72.6(b)(4).

Syracuse

According to CH Resources, Syracuse Unit 1 commenced construction in 1991 or 1992, commenced operation in 1994, and sold electricity and steam. This unit includes a 66 MWe combustion turbine that exhausts into a heat recovery steam generator (HRSG). The HRSG, in turn, uses a duct burner and serves a 37 MWe steam turbine, for a total of 103 MWe nameplate capacity for the unit. Steam is extracted from the steam turbine. Oil is combusted in the combustion turbine, while natural gas is combusted in the HRSG. At commencement of operation, the unit had a power purchase agreement to sell electricity to Niagara Mohawk Power Corporation (Niagara Mohawk) and a steam purchase agreement to sell steam to the New York State Fairgrounds (fairgrounds) for race track and building heat. Before CH Resources purchased the unit in 1998, the unit lost both its power purchase agreement and its steam host. Since July 1997, all electrical output from the unit has been sold to wholesale customers under short-term contracts.

Sections 402(17)(A) and 405(g)(6)(A)of the Clean Air Act include provisions discussing in detail the conditions under which a cogeneration unit is exempt from the Acid Rain Program. See, e.g., 42 U.S.C. 7651d(g)(6)(A) (stating that Clean Air Act title IV does not apply to qualifying cogeneration facility that meets certain conditions as of November 15, 1990, the date of enactment of title IV). EPA interprets these provisions, and §§72.2 and 72.6 of the regulations implementing the provisions, to provide that a cogeneration unit used to produce electricity for sale is a utility unit and thus subject to the Acid Rain Program, unless the unit meets the requirements for an exemption as set

forth in §72.6(b).

CH Resources states that Syracuse Unit 1 was initially exempt from the Acid Rain Program under §72.6(b)(5), which applies to a qualifying facility with qualifying power purchase commitment. Allegedly, the unit was a qualifying cogeneration facility (under section 3(17)(C) of the Federal Power Act) with a "qualifying power purchase commitment" (as defined under §72.2) to sell electricity to Niagara Mohawk and steam to the fairgrounds and therefore was an unaffected unit. [1] However, the power purchase agreement with Niagara Mohawk was terminated in July 1997, and the steam purchase contract with the fairgrounds was terminated in June 1998. Therefore, EPA finds that the unit has not had a "qualifying power purchase commitment", and has not qualified as an unaffected unit under 40 CFR 72.6(b)(5), since at least July 1997. [2]

CH Resources suggests that Syracuse Unit 1 was and still is exempt under from the Acid Rain Program under §72.6(b)(4), which applies to cogeneration units with limited sales of electricity to the grid. The unit cogenerated electricity and steam after commencing operation in 1994. At least since the unit lost its steam purchase contract in June 1998, the unit has only produced electricity and has not produced steam other than for such electric generation. CH Resources claims that the unit is still a cogeneration unit since the internal piping and valves for extraction of steam from the steam turbine (as well as the pipes connecting the plant to the fairgrounds) are still in place. EPA agrees and finds that the unit has "equipment used to produce electric energy and forms of useful thermal energy (such as heat or steam) for industrial, commercial, heating or cooling purposes, through sequential use of energy" (40 CFR 72.2 (definition of cogeneration unit)) and is a cogeneration unit. [3]

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[1]EPA was not requested to address, and is not addressing, in this letter whether Syracuse Unit 1 ever qualified for an exemption under §72.6(b)(5).

[2]From July 1997 to June 1998, Syracuse Unit 1 had a steam purchase agreement but no electric purchase agreement. However, an electric power purchase obligation is central to the concept of a "qualifying power purchase commitment" and without the former, a unit does not have the latter. In particular, a "power purchase commitment" is defined as a "commitment or obligation of a utility to purchase electric power from a facility under certain types of arrangements. 40 CFR 72.2 (definition of "power purchase commitment"). Further, any change in the terms or conditions of a power purchase commitment that "allow the costs of compliance with the Acid Rain Program to be shifted to the purchaser" means that there no longer is a "qualifying power purchase commitment." 40 CFR 72.2 (definition of "qualifying power purchase commitment"). If the obligation to purchase electricity is eliminated and electricity sales are at market prices, all the terms and conditions associated with electric sales (including sales price) are removed. In that case, it is difficult to see how there can be a basis for concluding that costs cannot be shifted to a new purchaser of electricity, which is the basis for the exemption under §72.6(b)(5). See March 22, 1990 Congressional Record at S3027-28 (statement by Senator Wirth that "[g]randfathering these units is fair" because they are "under contract or have accepted price bids" and so cannot "pass on extra costs of allowances the way a regulated utility can.").

[3]In a prior decision concerning Cayuga Energy, Inc.'s Carthage Energy Facility and South Glens Energy Facility, issued on July 2, 2000, EPA states that a unit that was constructed to cogenerate and that

However, the unit does not meet the other requirements for an exemption under §72.4(b)(4). Under that provision, the exemption is available to a cogeneration unit that commenced construction after November 15, 1990 and that did not provide electricity for sale on an annual basis in an amount more than one-third of its potential electrical output capacity (PEOC) or more than 219,000 MWe-hours. In addition to this initial sales criterion, a unit then must not have sales exceeding this threshold on a rolling three-year average basis.

The PEOC for Syracuse Unit 1 is 78.13 MWe [4], and one-third of the unit's PEOC is 228,140 MWe-hours [5]. In the first year of operation (1994), the unit sold 493,416 MWe-hours, which exceeds the 228,140 MWe-hours threshold. The unit, therefore, failed in 1994 to meet the initial sales criterion for an exemption under §72.6(b)(4) of supplying less than the threshold amount of electricity and, unless exempt under some other provision (e.g., §72.6(b)(5)), became an affected unit.

EPA notes that subsequently, in 1995 through 1998, the unit's annual sales were less than the threshold for initial sales. However, this does not qualify the unit for an exemption under §72.6(b)(4). Section 402(17)(C) of the Clean Air Act, which is the statutory basis for that exemption, states that a cogeneration unit is not an affected utility unit "unless the unit is constructed for the purpose of supplying, or commences construction after [November 15, 1990] and supplies, more than" the threshold amount of electricity. 42 U.S.C. 7651a(17)(C). Consequently, once a unit (such as Syracuse Unit 1) supplies more than the threshold amount of electricity in any year, that unit becomes an affected unit under title IV of the Clean Air Act. Moreover, section 402(17)(C) does not state that a unit that supplies more than the threshold amount in one year can subsequently regain its exempt status by supplying an amount of electricity equal to or less than the threshold. Consistent with section 402(17)(C), EPA interprets §72.6(b)(4) as providing that Syracuse Unit 1 lost the exemption in 1994

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later stopped producing process steam and produced only electricity no longer qualified as a cogeneration unit. EPA has reconsidered and now rejects that approach to applying the definition of "cogeneration facility" in §72.2. That definition (which is quoted above) focuses on the presence of equipment necessary to cogenerate, and Syracuse Unit 1 still has such equipment.
Further, EPA maintains that in general a unit's status under the applicability criteria for the Acid Rain Program should not be based on a factor (i.e., whether the unit is, at a particular time, selling process steam) that can be altered prospectively by a unit's owners and operators. If the owners and operators could change the status of a unit by stopping or restarting a unit's process steam sales, this would make determination of what units are covered by the program much more difficult and therefore could significantly interfere with administration of the program. This approach could also potentially provide opportunities for gaming so that a unit was kept in the program only when its emissions exceeded its allowance allocations.

[4]The PEOC equals the unit's maximum design heat input capacity of 800 x 10^6 Btu/hr. times 1/3 (reflecting the assumed efficiency rate for the unit), divided by 3413 (reflecting the assumed heat rate), and divided by 1000 (converting to MWe). See 40 CFR part 72, appendix D.

[5]This figure is calculated by multiplying the PEOC by 8760 (the number of hours in a year) and then multiplying again by 1/3.

and is an affected unit regardless of its level of electricity sales after 1994. EPA maintains that this approach is reasonable, in addition to being consistent with the statute. Under the approach that once units become affected units, the units remain affected units, owners cannot move their units at will (except for opt-in units) in and out of an exemption and thus in and out of the Acid Rain Program. As discussed above in connection with the definition of "cogeneration facility," to the extent owners and operators have the ability to change the status of a unit under the applicability criteria of the Acid Rain Program, this would make administration of the program much more difficult and could provide opportunities for gaming. For all of the above reasons, EPA concludes that, because of the failure of Syracuse Unit 1 to meet the initial sales criteria, the unit is not exempt under §72.6(b)(4) and is an affected unit under the Acid Rain Program.

Syracuse Unit 1 combusts fossil fuels (natural gas and light oil) and commenced operation in 1994 and therefore is a "new unit" (i.e., a "fossil fuel fired combustion device" that "commences commercial operation on or after November 15, 1990"). 40 CFR 72.2 (definition of "new unit"). As discussed above, the unit has been an affected unit under the Acid Rain Program since at least July 1997, when the agreement to provide electricity to Niagara Mohawk was terminated. As an affected unit, Syracuse Unit 1 must comply with all applicable requirements under the Acid Rain Program, including the requirements to apply for and receive an Acid Rain Permit (under 40 CFR part 72), to monitor and report emissions (under 40 CFR part 75), and to hold allowances to cover sulfur dioxide emissions (under 40 CFR part 72 and 73).

Niagara Falls

Niagara Falls Unit 1 commenced construction in 1989, commenced operation in 1991, and sold electricity and steam. The unit is a circulating fluidized bed boiler serving a 50 MWe steam turbine generator. Steam is extracted from the steam turbine generator. At commencement of operation, it had a power purchase agreement to sell electricity to Niagara Mohawk and a steam purchase agreement to sell steam to Goodyear Tire and Rubber Corporation (Goodyear) for manufacturing purposes. Before CH Resources purchased the unit in 1999, the unit lost both its power purchase agreement with Niagara Mohawk and its steam host. Since July 1997, all electrical output from the unit has been sold to wholesale customers under short-term contracts.

CH Resources states that Niagara Unit 1 was initially exempt from the Acid Rain Program under §72.6(b)(5), which applies to a qualifying facility with qualifying power purchase commitment. Allegedly, the unit was a qualifying cogeneration facility (under section 3(17)(C) of the Federal Power Act) with a "qualifying power purchase commitment" (as defined under §72.2) to sell electricity to Niagara Mohawk and steam to Goodyear and therefore was an unaffected unit. [6] However, the power purchase agreement with Niagara Mohawk was terminated in July 1997, and the steam purchase contract with Goodyear was terminated in August 1997. Therefore, EPA finds that the unit has not had a "qualifying power purchase commitment" and has not qualified as an unaffected unit under

[6]EPA was not requested to address, and is not addressing, in this letter whether Niagara Falls Unit 1 ever qualified for an exemption under §72.6(b)(5).

40 CFR 72.6(b)(5) since at least July 1997. [7]

CH Resources suggests that Niagara Falls Unit 1 was and still is exempt under from the Acid Rain Program under §72.6(b)(4), which applies to cogeneration units with limited sales of electricity to the grid. The unit cogenerated electricity and steam after commencing operation in 1991. At least since the unit lost its steam purchase contract in August 1997, the unit has only produced electricity and has not produced steam other than for such electric generation. CH Resources states that the unit is still a cogeneration unit since the internal piping and valves for extraction of steam at certain stages from the steam turbine generator (but not the pipes connecting the plant to Goodyear) are still in place. EPA agrees and finds that the unit has "equipment used to produce electric energy and forms of useful thermal energy (such as heat or steam) for industrial, commercial, heating or cooling purposes, through sequential use of energy" (40 CFR 72.2 (definition of cogeneration unit)) and is a cogeneration unit. [8]

However, the unit does not meet the other requirements for an exemption under §72.4(b)(4). Under that provision, the exemption is available to a cogeneration unit that commenced construction on or before November 15, 1990 and that was constructed for the purpose of providing electricity for sale on an annual basis in an amount not exceeding one-third of its PEOC or more than 219,000 MWe-hours. In addition to this initial sales criterion, a unit then must not have sales exceeding this threshold on a rolling three-year average basis.

The PEOC for Niagara Falls Unit 1 is 66.90 MWe [9], and one-third of the unit's PEOC is 193,394 MWe-hours [10]. In this case, CH Resources did not provide any direct information on the purpose of the construction of Niagara Unit 1. However, in the first year of operation (1991), the unit sold 79,215 MWe-hours, which is less than the 219,000 MWe-hours threshold. Even assuming, for the sake of argument, that this is sufficient to show the purpose of the unit's construction and that the unit met the initial sales criterion for an exemption under §72.4(b)(4) [11], the unit had annual average

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[7]From July 1997 to August 1997, Niagara Unit 1 had a steam purchase agreement but no electric purchase agreement. However, an electric power purchase obligation is central to the concept of a "qualifying power purchase commitment" and without the former, a unit does not have the latter. See n. 2.

[8]See n. 3.

[9]The PEOC equals the unit's maximum design heat input capacity of 692 x 10^6 Btu/hr. times 1/3 (reflecting the assumed efficiency rate for the unit), divided by 3413 (reflecting the assumed heat rate), and divided by 1000 (converting to MWe). See 40 CFR part 72, appendix D.

[10]See n. 5.

[11]In guidance entitled "Do the Acid Rain SO_2 Regulations Apply to You?", dated February 1994, EPA suggested (at 12) that, when a unit that commenced construction on or before November 15, 1990 began operation after 1985, the first three years of operation will be used to determine the purpose of the unit's construction. Using that approach, Niagara Unit 1 never qualified for the §72.6(b)(4) exemption

sales (270,469 MWe-hours) exceeding the threshold for the three-year period 1991-1993. The unit therefore failed to meet the continuing sales criterion and, unless exempt under some other provision (e.g., §72.6(b)(5)), was an affected unit under the Acid Rain Program. [12] In short, because of the failure to meet the sales criteria, the unit is not exempt under §72.4(b)(4).

Niagara Falls Unit 1 combusts fossil fuels (coal and petroleum coke) and commenced operation in 1991 and therefore is a "new unit" (i.e., a "fossil fuel fired combustion device" that "commences commercial operation on or after November 15, 1990"). 40 CFR 72.2 (definition of "new unit"). The unit thus has been an affected unit since at least July 1997, when the agreement to provide electricity to Niagara Mohawk was terminated. As an affected unit, Niagara Falls Unit 1 must comply with all applicable requirements under the Acid Rain Program, including the requirements to apply for and receive and Acid Rain Permit (under 40 CFR part 72), to monitor and report emissions (under 40 CFR part 75), and to hold allowances to cover sulfur dioxide emissions (under 40 CFR part 72 and 73).

Beaver Falls

Beaver Falls Unit 1 commenced construction in 1993, commenced commercial operation in 1995, and sold electricity and steam. The unit includes a 66 MWe combustion turbine that exhausts into a HRSG. The HRSG, in turn, uses a duct burner and serves a 42 MWe steam turbine, for a total of 108 MWe nameplate capacity for the unit. Steam is extracted after the combustion turbine but before the steam turbine. Oil is combusted in the combustion turbine, while natural gas is combusted in the HRSG. At commencement of operation, the unit had a power purchase agreement to sell electricity to Niagara Mohawk and a steam purchase agreement to sell steam to Interface Solutions, Inc. (Interface Solutions) for use for paper-making and for building heat. Before CH Resources purchased the unit in 1998, the unit lost its power purchase agreement with Niagara Mohawk. Since July 1997, all electrical output from Beaver Falls Unit 1 has been sold to wholesale customers under short-term contracts. The steam purchase agreement has continued in effect.

CH Resources states that Beaver Falls Unit 1 was initially exempt from the Acid Rain Program under §72.6(b)(5), which applies to a qualifying facility with qualifying power purchase commitment. Allegedly, the unit was a qualifying cogeneration facility (under section 3(17)(C) of the Federal Power Act) with a "qualifying power purchase commitment" (as defined under §72.2) to sell electricity to Niagara Mohawk and steam to Interface Solutions and therefore was an unaffected unit. However, the power purchase agreement with Niagara Mohawk was terminated in July 1997. Therefore, the unit has

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since its sales in 1992 and 1993 both exceeded the initial sales threshold.

[12]CH Resources suggests in its March 2, 2000 letter that, since the loss of the power purchase agreement, the unit did not sell more than 219,000 MWe-hours of electricity and that the threshold should not be applied to years before such loss. However, there is no basis in §72.6(b)(4) for disregarding the unit's operation since 1991 and considering only the last few years of operation. Moreover, after the loss of the power purchase agreement, the unit's electricity sales (e.g., in 1998) exceeded the 219,000 MWe-hours threshold.

not had a "qualifying power purchase commitment" and has not qualified as an unaffected unit under 40 CFR 72.6(b)(5) since at least July 1997. [13]

CH Resources suggests that Beaver Falls Unit 1 was and still is exempt under from the Acid Rain Program under §72.4(b)(4), which applies to cogeneration units with limited sales of electricity to the grid. The equipment for extracting steam after the combustion turbine and for providing the steam to Interface Solutions is still in place. In fact, Beaver Falls Unit 1 has continued to generate electricity for sale and then to use some of the same energy used in electric generation (i.e., energy in the combustion turbine exhaust) to produce useful thermal output (i.e., steam) for sale to Interface Solutions. Thus, EPA finds that the unit has "equipment used to produce electric energy and forms of useful thermal energy (such as heat or steam) for industrial, commercial, heating or cooling purposes, through sequential use of energy" (40 CFR 72.2 (definition of cogeneration unit)) and is a cogeneration unit.

Moreover, under §72.6(b)(4), the exemption is available to a cogeneration unit that commenced construction after November 15, 1990 and that did not provide electricity for sale on an annual basis in an amount more than one-third of its potential electrical output capacity (PEOC) or more than 219,000 MWe-hours. In addition to this initial sales criterion, a unit then must not have sales exceeding this threshold on a rolling three-year average basis.

In the first year of operation (1995), Beaver Falls Unit 1 sold less than one-third of its PEOC or 219,000 MWe-hours. The PEOC for Beaver Falls Unit 1 is 78.13 MWe [14], and one-third of the unit's PEOC is 228,140 MWe-hours [15]. In 1995, the unit sold 32,556 MWe-hours, which is less than the initial sales threshold. The unit thus qualified for the exemption under §72.6(b)(4). Further, the unit's highest rolling three-year average annual sales after 1995 has been 144,181 MWe-hours (for 1998-2000), which is less than the continuing sales threshold. Therefore, the unit continues to qualify for the exemption under §72.6(b)(4).

EPA's determinations in this letter rely on the accuracy and completeness of the information provided by CH Resources and its consultant, Epsilon Associates, Inc., in submissions dated March 2, October 31, November 20, and December 11, 2000 and February 27, March 2 and 22, and May 11, 2001 and is appealable under 40 CFR part 78. The applicable regulations require you to send copies of this letter to each owner and operator of Syracuse, Niagara Falls, and Beaver Falls (40 CFR 72.6(c)(1)). If you have any further questions

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[13]Beaver Falls Unit 1 did not lose its steam purchase contract. However, an electric power purchase obligation is central to the concept of a "qualifying power purchase commitment" and without the former, a unit does not have the latter. See n. 2.

[14] The PEOC equals the unit's maximum design heat input capacity of 800 x 10^6 Btu/hour. times 1/3 (reflecting the assumed efficiency rate for the unit), divided by 3413 (reflecting the assumed heat rate), and divided by 1000 (converting to MWe). See 40 CFR part 72, appendix D.

[15]See n. 4.

regarding the Acid Rain Program, please contact Martin Husk of EPA's Clean Air Markets Division at (202) 564-9165.

Sincerely,

Brian J. McLean, Director
Clean Air Markets Division

cc: Reggie Parker, New York State DEP
Gerald DeGaetano, U.S. EPA Region 2