



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
AIR AND RADIATION

James T. Stewart
Chief Executive Officer
Mobile Energy Services Company, LLC
P.O. Box 2747
Mobile, AL 36652

Dear Mr. Stewart:

This letter is U.S. EPA's determination of applicability under 40 CFR 72.6(c) of the Acid Rain regulations for the Mobile Energy Services Company, LLC ("MESC") facility (Facility ID (ORISPL) 50407), located at the Kimberly-Clark Corporation's (Kimberly-Clark) manufacturing facility in Mobile, Alabama. This determination is made in response to your letter of April 10, 2003 requesting a determination.

Background

Beginning in 1955, Scott Paper Company ("Scott") constructed, and owned and operated in Mobile, pulp, paper, and tissue mills, as well as cogeneration units, interconnecting distribution and synchronizing buses, and ancillary structures. The mills and other equipment and structures were operated as a fully integrated manufacturing facility, with the cogeneration units producing about 98% of the electricity and 100% of the steam used at the mills. In December 1994, MESC purchased from Scott five cogeneration units, the interconnecting distribution buses and synchronizing bus, and the ancillary structures at the facility.¹ MESC continues to own the units and related equipment and structures and to meet the electricity and steam requirements of the manufacturing facility. In December 1994, South African Pulp and Paper Inc. (SAPPI) purchased the paper mill from Scott. Kimberly-Clark acquired the pulp and tissue

¹ MESC is a wholly owned subsidiary of Mobile Energy Services Holdings, Inc., which is in turn wholly owned by Southern Company. Southern Company also owns Alabama Power Company ("APCo"), whose system is interconnected with the manufacturing facility.

mills from Scott in 1995 and shut down the pulp mill in 1999. Finally, in 2002, Kimberly-Clark acquired the paper mill from SAPPI.

Of the five cogeneration units owned and operated by MESC, Power Boilers 5 and 6 (Units PB5 and PB6) commenced operation in 1960 and 1964 and have been in standby mode since 2001 and 2000 respectively. Power Boiler 5 burns natural gas only, while Power Boiler 6 burns natural gas and biomass. The two boilers produce medium-pressure steam that, through a common steam header, is used to produce electricity at Steam Turbine 3TG. The steam turbine has a nameplate capacity of 12.5 MW, commenced operation in 1960, and has been in standby mode since 2001. Steam was, and still can be, drawn off Steam Turbine 3TG to be used for industrial purposes in the manufacturing operations.

Power Boiler 7 (Unit PB7) commenced operation in 1985 and continues to operate, burning coal, natural gas, sludge, and wood waste. Power Boiler 8 (Unit PB8) was originally designated as Recovery Furnace 7 when it commenced operation in 1985. It burned black liquor and natural gas until 1999; since then it has burned only natural gas and continues to operate. Recovery Furnace 8 (Unit RF8) commenced operation in 1994, has been in standby mode since 2000, and burns black liquor and natural gas. Power Boiler 7, Power Boiler 8, and Recovery Furnace 8 produce steam used, through a common steam header, to produce electricity at Steam Turbines 5TG, 6TG, and 7TG, which have nameplate capacities of 43.1 MW, 35.7 MW, and 35.3 MW and which commenced operation in 1985, 1986, and 1999 respectively. These units also can serve Steam Turbine 3TG. As with Steam Turbine 3TG, steam was, and still can be, drawn off of Steam Turbines 5TG, 6TG, and 7TG to be used for industrial purposes in the manufacturing operations.

The power distribution system for the integrated manufacturing facility comprises lines, transformers, and other electrical equipment owned by APCo, Kimberly-Clark, or MESC. The site is connected physically to APCo's transmission and distribution system via two 115 kV transmission lines that are owned and operated by APCo. The two 115kV transmission lines are interconnected by 115kV tie-line equipment and connect to three 30,000 kVA transformers that are leased by Kimberly-Clark from APCo. These transformers represent the only path by which electricity can flow between APCo's system and the integrated manufacturing facility. Otherwise, there is no direct physical connection between MESC's equipment and APCo's system.

Electricity produced using MESC's units is distributed via MESC's distribution buses and 13.8 kV synchronizing bus to Kimberly-Clark's step-down transformers. These transformers are located throughout the facility and are connected to lower voltage lines that serve the various Kimberly-Clark (and, during 1994-2002, SAPPI) loads.

An automated control program assists in regulating the amount of electricity produced by MESC to prevent power generated by MESC's units from inadvertently exceeding total Kimberly-Clark (and SAPPI) load requirements and flowing through Kimberly-Clark's leased transformers onto APCo's system. This control program meters the electricity flowing into and out of Kimberly-Clark's leased

transformers via the tie line equipment and adjusts the electrical output of Steam Turbine 5TG such that MESC's electrical output falls approximately 1 MW below total Kimberly-Clark (and SAPPI) load, allowing about 1 MW of electricity to flow consistently from APCo's system for use in the integrated manufacturing facility. The control program was initially installed in 1985 by Scott in order to prevent generation by the units then on-site from flowing into APCo's system.

However, Scott sold some electricity to APCo (e.g., in 1990-1994) when generation by the units exceeded electricity needs at the facility. Further, in 1999 and 2000, MESC was authorized by Kimberly-Clark to use the leased 30,000 kVA transformers in order to sell electricity to power marketers, Southern Company Energy Marketing, L.P. and Enron Power Marketing, Inc. MESC made these sales, and the electricity was resold (to Alabama Electric Cooperative) using APCo's system.

EPA Determination

Units PB5, PB6, PB7, PB8, and RF8 are "units," as defined in §72.2, because they are all combustion devices that burn fossil fuel. Further, these units are "cogeneration units," as defined in §72.2. Each unit, along with the associated steam turbines, produced or is producing electricity and process steam through the sequential use of energy, i.e., by using energy to produce steam first for generation of electricity and then for use in the production of pulp, paper, or tissue. The units have "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 are therefore cogeneration units.²

The Clean Air Act includes 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. 7651a(17)(C) (stating that a cogeneration unit is not a utility unit if it meets certain requirements concerning the purpose of its construction and the amount of electricity that it sells); and 42 U.S.C. 7651d(g)(6)(A) (stating that Clear Air Act title IV does not apply to a qualifying cogeneration facility that meets certain conditions as of November 15, 1990). 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 under §72.6(b).

1. Initial qualification for exemption from the Acid Rain Program

Under §72.6(b)(4)(i), an exemption from the Acid Rain Program applies to a cogeneration unit that commenced construction on or before November 15, 1990 and that "was constructed for the purpose of

² Although Units PB5, PB6, and RF8 are not operating, the units are in standby mode and still have the equipment necessary to sequentially produce electricity and useful thermal energy.

supplying equal to or less than one-third of its potential electrical output capacity [PEOC] or equal to or less than 219,000 MWe-hrs actual electric output on an annual basis to any utility power distribution system for sale (on a gross basis).” 40 CFR 72.6(b)(4)(i). If a unit meets this initial criterion and qualifies for the exemption, the unit then must not exceed the electricity sales threshold on a rolling three-year average basis after November 15, 1990 in order to retain the exemption.

Unit PB5 commenced operation in 1960 and so obviously commenced construction before November 15, 1990. The unit had a maximum design heat input capacity of 310 mmBtu/hr and a PEOC of 30.3 MWe.³ One-third of the unit’s PEOC is 88,476 MWe-hrs.⁴ Since the exemption under §72.6(b)(4)(i) allows annual (or average annual) electricity sales of up to one-third of a unit’s PEOC or 219,000 MWe-hrs, whichever is greater, the electricity sales threshold for the exemption for Unit PB5 is 219,000 MWe-hrs.

Unit PB6 commenced operation in 1964 and so obviously commenced construction before November 15, 1990. The unit had a maximum design heat input capacity of 494 mmBtu/hr and a PEOC of 48.2 MWe.⁵ One-third of the unit’s PEOC is 140,744 MWe-hrs.⁶ Under §72.6(b)(4)(i), the electricity sales threshold for the exemption for Unit PB6 is 219,000 MWe-hrs.

Unit PB7 commenced operation in 1985 and so obviously commenced construction before November 15, 1990. The unit had a maximum design heat input capacity of 980 mmBtu/hr and a PEOC of 95.7 MWe.⁷ One-third of the unit’s PEOC is 279,444 MWe-hrs.⁸ Since the exemption under §72.6(b)(4)(i) allows annual (or average annual) electricity sales of up to one-third of a unit’s PEOC or 219,000 MWe-hrs, whichever is greater, the electricity sales threshold for the exemption for Unit PB7 is 279,444 MWe-hrs.

³ PEOC for the unit is calculated by starting with the maximum design heat input capacity of the boiler (310 x 10⁶ Btu/hr for Unit PB5), dividing by 3 (reflecting the assumed efficiency of the unit), dividing by 3,413 (reflecting the assumed heat rate), and dividing by 1,000 (converting to MWe). See 40 CFR part 72, appendix D.

⁴ This figure is calculated by multiplying the PEOC by 8,760, the number of hours in a year, and then dividing by 3. See 40 CFR 72.6(b)(4)(ii).

⁵ See n. 3.

⁶ See n. 4.

⁷ See n. 3.

⁸ See n. 4.

Unit PB8 commenced operation in 1985 and so obviously commenced construction before November 15, 1990. The unit had a maximum design heat input capacity of 1,155 mmBtu/hr and a PEOC of 112.8 MWe.⁹ One-third of the unit's PEOC is 329,376 MWe-hrs.¹⁰ Under §72.6(b)(4)(i), the electricity sales threshold for the exemption for Unit PB8 is 329,376 MWe-hrs.

Section 72.6(b)(4)(i) provides that, if the purpose of construction of a cogeneration unit is not known, then its actual operation during 1985-87 will be assumed to be "consistent" with that purpose. 40 CFR 72.6(b)(4)(i). The MESC units were originally constructed by Scott as part of a fully integrated pulp, paper, and tissue manufacturing facility in order to provide the electricity and steam needs of the facility and apparently not to sell electricity. This is supported by the following factors asserted by MESC: (1) since 1985 the facility has had in place a automated control program to prevent electricity generated on site from flowing to APCo's transmission and distribution system; and (2) no sales were made by the facility (e.g., to APCo) in 1985-1987.¹¹ EPA therefore finds that each of these units meets the initial criterion for the exemption under §72.6(b)(4)(i), i.e., construction for the purpose of supplying one-third or less of the unit's PEOC or less than 219,000 MWe-hrs to an electric utility system for sale.

Under 40 CFR 72.6(b)(4)(ii), an exemption from the Acid Rain Program applies to a cogeneration unit that commenced construction after November 15, 1990 and "supplies equal to or less than one-third of its [PEOC] or equal to or less than 219,000 MWe-hrs actual electric output on an annual basis to any utility power distribution system for sale (on a gross basis)." 40 CFR 72.6(b)(4)(ii). If a unit meets this initial criterion for the year in which it commenced commercial operation and thereby qualifies for the exemption, then the unit must continue to meet the electricity sales threshold on a three-year rolling average basis in order to retain the exemption.

Construction commenced on Unit RF8 in 1992. The unit commenced operation in 1994 and had a maximum design heat input capacity of 809 mmBtu/hr and a PEOC of 79.0 MWe.¹² One-third of Unit 1's PEOC is 230,680 MWe-hrs.¹³ Since the exemption under §72.6(b)(4)(ii) allows annual (or average annual) electricity sales of up to one-third of a unit's PEOC or 219,000 MWe-hrs, whichever is greater, the electricity sales threshold for the exemption for Unit 1 is 230,680 MWe-hrs. In the unit's first year of

⁹ See n. 3.

¹⁰ See n. 4.

¹¹ For purposes of this applicability determination, EPA is assuming - - and conditioning the finding on the qualification of the MESC units for the exemption under §72.6(b)(4)(i) and (ii) on - - the correctness of MESC's assertions concerning sales by Scott in 1985-1987.

¹² See n. 3.

¹³ See n. 4.

operation, Scott owned the unit, used all of its electricity generation, and made no electricity sales. EPA therefore finds that the unit meets the initial criterion for the exemption under §72.6(b)(4)(ii), i.e., supplies one-third or less of the unit's PEOC or less than 219,000 MWe-hrs to an electric utility system for sale.

2. On-going qualification for exemption from the Acid Rain Program

Having determined that each of the MESC units meets the initial criterion for a cogeneration unit exemption under §72.6(b)(4)(i) or (ii), U.S. EPA must determine whether each unit meets the on-going electricity sales criterion for the exemption, i.e., the supplying, on a three- year rolling average basis, of one-third or less of the PEOC or less than 219,000 MWe-hrs to a utility power distribution system for sale. Before MESC's purchase of the cogeneration units in December 1994, Scott owned the pulp, paper, and tissue mills as well as the cogeneration units. Electricity generated at the units and used at the mills was not sold; the only electricity sales apparently were the amounts sold by Scott to APCo. However, with MESC's purchase of the cogeneration units in December 1994, the entity that owns the industrial host (i.e., Scott, Kimberly-Clark, or SAPPI, depending on the time period) is different than the entity that owns the cogeneration units (i.e., MESC), and all the electricity produced, but not used, by the cogeneration units is sold by MESC. U.S. EPA must determine whether all of these sales constitute the supplying of electricity to a "utility power distribution system" for sale under §72.6(b)(4). 40 CFR 72.6(b)(4)(i) and (ii); see also 42 U.S.C 7651a(17)(C).

In prior applicability determinations for cogeneration units, U.S. EPA treated all electricity produced and sold by a cogeneration unit as the supplying of electricity to a "utility power distribution system" for sale, without considering what lines were used to make the sale, and considered all such electricity in determining whether a cogeneration unit met the on-going electricity sales criterion. In contrast, amounts of electricity produced by an owner at its cogeneration unit for use in its industrial facility were not considered sales to a "utility power distribution system." For example, all electric generation by a cogeneration unit that was provided to a party that was not an owner of the cogeneration unit -- or that exceeded a partial cogeneration-unit owner's proportionate share of the unit's electric generation -- was considered in applying the electricity sales criterion.¹⁴ However, MESC contends that electricity sold to the industrial host of a cogeneration unit should not be treated as sales to a utility power distribution system and so should be excluded in applying the electricity sales threshold under the cogeneration unit exemption.

¹⁴ See, e.g., letter to Conoco Global Inc. (Feb. 26, 1999) (not considering as sales the portion of electric generation used by a partial owner and not exceeding that owner's percent ownership interest); letter to Cleco Corporation (Ap. 16, 1999) (considering as sales the portion of electric generation used by a partial owner and exceeding that owner's percent ownership interest); letter to Saudi Refining, Inc. (Aug. 14, 1997) (not considering as sales any portion of electric generation because a single entity operates and controls both the unit and the industrial facility and owns the electricity).

Upon reconsideration of this issue, U.S. EPA now believes that electricity sold by a cogeneration unit owner to an industrial facility owner who takes both electricity and steam for internal use from the unit should not be automatically considered sales to a “utility power distribution system.” Instead, U.S. EPA maintains, for the reasons discussed below, that the issue should be examined on a case-by-case basis to determine whether the lines used for the sales qualify as part of a “utility power distribution system” and whether such sales qualify as electricity supplied to a “utility power distribution system” for sale. First, U.S. EPA is concerned that the approach of automatically treating all sales to a non-owner of a cogeneration unit -- or sales exceeding a partial owner’s proportionate share -- as electricity supplied “to a utility power distribution system” for sale would have the effect of reading that phrase out of the regulations. For example, if all such sales were treated as automatically qualifying as “utility power distribution system” sales, then any line over which the electricity involved flows to the purchaser would in effect be assumed to be a “utility power distribution system.” This would result in interpreting the regulatory (and the statutory) language of the cogeneration exemption the same even if that language did not include the phrase “to a utility power distribution system.” In other words, if any line on which electricity flows to a purchaser automatically qualified as a “utility power distribution system” without any further inquiry, then it would be impossible for there to be any sale that was not a sale to such a system. The phrase referring to such a system would add nothing to the cogeneration exemption language.

Second, U.S. EPA’s concern that its prior approach in interpreting “utility power distribution system” in the §72.6(b)(4) exemption seems overbroad is supported by prior interpretations made by U.S. EPA of similar language in subpart Da of part 60. Subpart Da applies -- to all units and not just cogeneration units -- language that, like that in §72.6(b)(4), refers to the supplying of electricity to a “utility power distribution system” for sale. Specifically, §60.41a defines “electric utility steam generating unit” as “any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale.” 40 CFR 60.41a. Under §60.40a, such a unit that is capable combusting more than 250 mmBtu/hr and for which construction or modification commenced after September 18, 1978 is subject to subpart Da. A boiler that does not meet the “electric utility steam generating unit” definition is subject to other requirements under part 60, e.g., subpart D or Db.

U.S. EPA has issued some determinations addressing whether particular boilers met that definition under §60.41a and were subject to subpart Da. In those determinations, U.S. EPA stated that units were not subject to subpart Da because “their power will not be sold to or through a general distribution system for further re-sale of electricity” (Letter to Howard R. Heim, Jr. from Edward E. Reich at 2 (Dec. 7, 1978)) and that the sales threshold was intended to cover “electric power generated by the cogeneration unit minus the industrial on-site consumption” (Letter to Marshall Lee Miller from Edward E. Reich at 2 (May 15, 1981)). While these interpretations were made in an entirely different regulatory context than the instant case and do not necessarily apply here in full, they support the approach that every line on which electricity flows to a purchaser does not necessarily qualify as a “utility power distribution system.” U.S. EPA therefore today rejects the approach of treating every such line automatically as a “utility power

distribution system” and is instead applying in the instant case the approach of determining on a case-by-case basis whether such treatment is appropriate.

In the instant case starting with MESC’s purchase of the cogeneration units in December 1994, electricity produced from generators served by Units PB5, PB6, PB7, PB8, and RF8 flowed through MESC’s interconnecting distribution buses and a synchronizing bus to lines owned by Scott, Kimberly-Clark, or SAPPI and then to the mills for industrial use. None of the lines involved in MESC’s sales to Scott, Kimberly-Clark, and SAPPI (i.e., MESC’s buses and Scott’s, Kimberly-Clark’s, or SAPPI’s lines) were used to make electricity sales to the general public, i.e., to all customers in a specified geographic area. The owners of these lines had no obligation to sell electricity to the general public and did not make any sales to the general public.¹⁵

However, in contrast to the sales to Scott, Kimberly-Clark, and SAPPI, MESC’s sales to the wholesale marketers after December 1994 utilized some lines that were also used to make electricity sales to the general public. For purposes of the sales to the wholesale marketers, electricity from MESC’s units and generators flowed through MESC’s buses, the APCo transformers leased by Kimberly-Clark, and certain APCo lines to APCo’s system. APCo uses its system to make electricity sales to the general public in its franchise service area. Based on all of these circumstances, EPA concludes that the electricity sold to Scott, Kimberly-Clark, and SAPPI is not -- but the electricity sold to the wholesale marketers is -- electricity supplied to a “utility power distribution system” for sale under §72.6(b)(4).¹⁶

As a result, the only sales by MESC that count against the thresholds for purposes of applying the on-going electricity sales criterion for the cogeneration unit exemption under §72.6(b)(4) are MESC’s sales to the wholesale marketers. The only sales that MESC made to the wholesale marketers were 10,587 MWe-hrs in 1999 and 5,265 MWe-hrs in 2000.¹⁷ As discussed above, in order to maintain their

¹⁵ Before MESC’s purchase of the cogeneration units in December 1994, all of these lines were owned by Scott. It is EPA’s understanding that none of the lines were used during that period to make electricity sales to the general public. EPA is assuming - - and conditioning the finding on the qualification of the MESC units for the exemption under §72.6(b)(4)(i) and (ii) on - - the correctness of this understanding.

¹⁶ Similarly, before MESC’s purchase of the cogeneration units in December 1994, electricity sold by Scott to APCo used APCo’s system and was electricity supplied to a “utility power distribution system” for sale.

¹⁷ According to Kimberly-Clark, Scott sold some electricity to APCo during 1990-1994, i.e., 8,425 MWe-hrs, 4,374 MWe-hrs, 6,301 MWe-hrs, 3,022 MWe-hrs, and 4,106 MWe-hrs in 1990, 1991, 1992, 1993, and 1994 respectively. For purposes of this applicability determination, EPA is assuming - - and conditioning the finding on the qualification of the MESC units for the exemption under §72.6(b)(4)(i) and (ii) on - - the correctness of these figures as representing Scott’s total annual sales of

exemptions from the Acid Rain Program, Units PB5, PB6, PB7, PB8, and RF8 must not exceed three-year-rolling-average thresholds of 219,000 MWe-hrs, 219,000 MWe-hrs, 279,444 MWe-hrs, 329,376 MWe-hrs, and 230,680 MWe-hrs respectively. Even if the entire amount of annual sales by MESC during 1999-2000 (and by Scott during 1990-1994)¹⁸ were attributed to only one of these units, the threshold would not be exceeded through 2002. Consequently, regardless of the factor (e.g., steam production) used to attribute such sales to the individual units, each of the units met the on-going electricity sales criterion and continues to be exempt from the Acid Rain Program under §72.6(b)(4).

If any of MESC's units exceeds the on-going electricity sales threshold (e.g., sells to wholesale marketers more than 219,000 MWe-hrs and more than one-third of its PEOC on a three-year rolling average basis), that unit must comply with all applicable requirements of the Acid Rain Program, including the requirements to apply for and receive an Acid Rain permit (under part 72), to monitor and report emissions (under part 75) within the earlier of 90 unit operating days, or 180 calendar days, of becoming an affected unit,¹⁹ and to hold allowances to cover sulfur dioxide emissions (under parts 72 and 73).

This determination relies, and is contingent, on the accuracy and completeness of the representations in the April 10, 2003 petition, in submissions provided on November 21 and December 17, 2002 and March 26, 2003, and in comments provided on June 25, 2003. The determination is appealable under 40 CFR part 78. The applicable regulations require you to send copies of this letter to each owner or operator of MESC's units (40 CFR 72.6(c)(1)). If you have further questions regarding the Acid Rain Program, please contact Robert Miller of EPA's Clean Air Markets Division at (202) 564-9077.

Sincerely,

/s/ (August 8, 2003)

Sam Napolitano, Acting Director
Clean Air Markets Division

cc: Jeff Kitchens, Alabama DEP
Art Hofmeister, U.S. EPA Region 4

electricity from the units (whether to APCo or to any other party) during 1990-1994.

¹⁸ See n.15, n.16, and n.17.

¹⁹ See 40 CFR 75.4(c) (2001).