

**CHATTANOOGA-HAMILTON COUNTY AIR POLLUTION CONTROL BUREAU**

Tennessee Valley Authority – Sequoyah Nuclear Plant  
 P.O. Box 2000 Mail Stop SB-2A  
 Soddy-Daisy, Tennessee 37384-2000  
 2600 Igou Ferry Road  
 Soddy-Daisy, Tennessee 37379-3624  
 Telephone: 843-6700 or 843-6713  
 Telefax: 843-7080  
 Contacts: Stephanie Howard, Lynne Koby

J. Alan Frazier  
 Engineer  
 June 3, 2010  
 (Next inspection report due: July 17, 2010)

**Applicable Certificates:**

Certificate No.	Description	Expiration Date	Renewal Fee
4150-30600701-01C	Unit #1 Cooling Tower	July 17, 2012	\$685
4150-30600701-03C	Unit #2 Cooling Tower		\$685
4150-30700804-06C	Insulation Saws A and B		\$200
4150-10200501-08C*	Auxiliary Boilers A and B		\$415
4150-30703099-09C	Carpenter Shop		\$200
4150-30900203-10C	Abrasive Blasting Operation		\$200
4150-20200102-11C*	Emergency Generators 1A, 1B, 2A, and 2B and Blackout Generators 1 and 2		\$285
<b>Total Fees:</b>			<b>\$2,670</b>

\*Federally Enforceable Certificate

**Compliance:**

Description	Date	Status
Boilers and Generators Usage Report	Received: May 13, 2009	In full operational and enforcement compliance
Annual Onsite Inspection	Performed: June 3, 2010	
Full Compliance Evaluation	Completed: June 3, 2010	

Purpose

The above listed certificates of operation for Tennessee Valley Authority (TVA) are due to expire on July 17, 2012. An annual inspection of the equipment that is covered by the certificates was made at Sequoyah Nuclear Plant on June 2, 2010. The observations that were made during the inspection are summarized in this report. This report also includes discussions of the operation of the permitted equipment, the air pollutant emissions, and the applicable regulations.

## Process Description

TVA Sequoyah uses two nuclear reactors, which are referred to as Reactor Units #1 and #2, to heat pressurized water. For each reactor unit, this pressurized water, which circulates in a closed loop, is used as a source of heat to produce steam inside of four parallel steam generators. The resulting steam from the four steam generators of each unit is sent to a common header and is then used in a high-pressure turbine followed by three low-pressure turbines in series to power a generator that produces electricity. The steam is condensed after it exits the four turbines, and the water, whether in the liquid or gaseous (steam) state, circulates in a closed loop for each unit. This water is circulated by two parallel feedwater pumps that are each driven by a turbine. These two turbines for each unit are powered by “extraction” steam that is diverted from the initial high-pressure turbine.

Water from the adjacent Tennessee River is used to condense the steam. Reintroduction of this water into the river cannot result in the downstream temperature of the river being raised by more than 5.4°F during the months of April through October and 9.0°F during the months of November through March as averaged over a 24-hour period. The temperature of the water that is discharged into the river also cannot fluctuate by more than 3.6°F during any hour. Holding ponds are sometimes sufficient to cool the water to the desired temperature. However, it is often necessary to cool this water further in either of two cooling towers, which are designated as the Unit #1 cooling tower (**Certificate -01C**) and the Unit #2 cooling tower (**Certificate -03C**). In addition, reintroduction of the water into the river cannot result in the downstream river temperature exceeding an average of 86.9°F over a 24-hour period unless the water is being cooled in one cooling tower per operating reactor unit. Water mist that is emitted from the two cooling towers contains entrained particulate matter. These particulate emissions are uncontrolled and originate from dirt, silt, etc. in the river water.

For each of the two reactor units, the initial high-pressure turbine and the two feedwater pump turbines are each supplied with lubricating oil by an oil recirculation system. In addition, the electricity generator of each unit is supplied with seal oil by an oil recirculation system. Each of these eight recirculation systems includes an oil reservoir that is equipped with an oil vapor extractor. The extractors serve to vent oil vapor from the air space above the oil reservoirs. Each of the eight oil vapor extractors also serves to remove water from the oil that results from inadvertent contact between the oil and steam. Hydrogen gas is used to cool the bearings of the two electricity generators, and the oil vapor extractor for the seal oil reservoir of each generator also serves to remove dissolved hydrogen from the oil. Hydrogen is not considered to be an air pollutant. Particulate emissions of oil mist, which is a VOC, result from each of the eight oil vapor extractors. The oil mist emissions from the extractor for the oil reservoir of the initial high-pressure turbine of each unit are controlled by a demister, and the oil mist emissions from the other six oil vapor extractors are uncontrolled. Oil vapor extractors for coal-fired steam generating facilities are classified as insignificant activities in accordance with §8(a)(1)a. However, because such extractors for nuclear-powered steam generating facilities are not specifically listed as insignificant activities, TVA has been informed that installation permits and initial certificates of operation will be issued for the Unit #1 and Unit #2 oil vapor extractors.

If both nuclear reactor units are not in operation, either Auxiliary Boiler A or B (**Certificate -08C**) could be used to preheat water for the steam generators in preparation for starting up one of the reactor units. The boiler would then be shut off when the reactor comes on line. In addition, either of these two identical boilers could be used as needed to heat the turbine building in order to keep water in pipes from freezing during the winter months if both reactor units are not in operation. The auxiliary boilers are not normally used, however, because at least one of the two reactor units should be in operation at any time. The two boilers are fueled exclusively by low-sulfur diesel fuel (No. 2 fuel oil), and emissions that result from fuel combustion in them are uncontrolled. They are vented to a single exhaust stack.

Emergency Generators 1A, 1B, 2A, and 2B (**Certificate -11C**) are available to provide electric power for safely shutting down the nuclear reactors in the unlikely event of a loss of off-site power to the plant. In addition, "Blackout" Generators 1 and 2 are available for a similar purpose. Only one emergency generator would be needed per operating reactor. Emergency Generators 1A and 1B serve Reactor Unit #1, and Reactor Unit #2 is served by Emergency Generators 2A and 2B. Each of the four identical emergency generators and two identical blackout generators is powered by an internal-combustion engine that is fueled exclusively by low-sulfur diesel fuel, and emissions that result from fuel combustion in them are uncontrolled. Each of the engines for the four emergency generators is equipped with two exhaust stacks. There has never been an unintended loss of power that required the use of any of the six generators, although they are periodically operated for test purposes.

In the event of a loss of power to the plant, seven other generators are available to provide electric power for specific needs. These seven generators, along with four water pumps, are each powered by a small internal-combustion engine that is fueled exclusively by low-sulfur diesel fuel. Most of them are periodically operated for test purposes, and emissions that result from fuel combustion in them are uncontrolled. Diesel fuel is burned in the largest of these eleven engines at a maximum rate of 31.1 gal/hr (4.26 MMBtu/hr), and each of them is not required to be permitted in accordance with §4-8(d)(3).

Two band saws (**Certificate -06C**) are used to cut insulation to fit various components at the plant. These components include piping and pressure vessels. The two saws are primarily used to cut calcium silicate (CaSiO<sub>3</sub>) insulation, but they can also be used to cut other types of insulation material, such as rubber. No material containing asbestos is ever cut by either of these saws. Insulation Saw A is used primarily. Insulation Saw B is not currently used, but it is available for use as a backup unit. For Saw A, particulate emissions from a large suction hose that is mounted near the working section of the band saw blade are controlled by a prefilter followed by a HEPA (high-efficiency particulate air) filter. Particulate emissions from a hood that is over this saw are also controlled by a prefilter followed by a HEPA filter. These two HEPA filters are vented to a single exhaust hose. For Saw B, three prefilters in parallel followed by three HEPA filters in parallel are used to control particulate emissions from a large suction hose that is positioned near the working section of the band saw blade. In addition, for each of Saws A and B, a settling drum followed by a bag filter is used to control particulate emissions from each of two suction vents that are both located under the work table and adjacent to the band saw blade.

A carpenter shop (**Certificate -09C**) contains two radial-arm saws, a table saw, a band saw, and a planer. Particulate emissions of sawdust from all of these pieces of woodworking equipment are controlled by a baghouse. This baghouse is also used to control particulate emissions from two floor vents that sawdust is swept into.

Abrasive blasting (**Certificate -10C**) of sheet metal is performed within a large enclosed room using a manual nozzle. Boiler slag, under the trade name of Black Beauty<sup>®</sup>, is used as the abrasive. Particulate emissions from this operation are controlled by a filter panel.

Ten test welding booths are occasionally used for training purposes. Stick, TIG (tungsten inert gas), and MIG (metal inert gas) welding is performed in these booths, and uncontrolled particulate emissions from these booths are vented to a single exhaust stack. In addition, a saw is used to cut small sections of steel pipe that have been welded in the booths in order to test the integrity of the welds. Particulate emissions of steel dust from this saw are controlled by a HEPA filter. Maintenance welding is an insignificant activity, and because the test welding booths and saw are used only in conjunction with training workers to perform maintenance welding, they are also classified as insignificant activities in accordance with §8(a)(1)a.

### Evaluation

4150-30600701-01C     Unit #1 Cooling Tower  
4150-30600701-03C     Unit #2 Cooling Tower

The Unit #1 and Unit #2 cooling towers were not in operation at the time of the inspection. Reactor Unit #1 was on line, and Reactor Unit #2 was down for a week-long outage. Both cooling towers appeared to be in good condition.

Each of the two cooling towers was used for 4,737 hours during calendar year 2008. The estimated particulate emissions from each of these towers are given in Table I at the end of this section. The potential emissions are based on continuous operation.

Installation of the Unit #1 and #2 cooling towers was completed in 1980. The particulate emissions from each of the two cooling towers are limited by Rule 10.3 (Schedule 2) to 115.2 lbs/hr, based on a process weight of 139,690 tons/hr. This limitation is more stringent than the Rule 10.7 particulate emission limit of 0.25 gr/scf (85,760 lbs/hr) for each tower. However, a more stringent particulate emission limitation of 7.2 lbs/hr has been previously established for each tower because it has been determined that operation at the Rule 10.3 allowable emission rate would result in the creation of a particulate non-attainment area.

4150-30700804-06C     Insulation Saws A and B

Insulation Saw A was not in operation at the time of the inspection, and Insulation Saw B is not currently in use. Saw A and its two prefilters, two HEPA filters, two settling drums, and

two bag filters and Saw B and its three prefilters and three HEPA filters appeared to be in good condition. The two settling drums and two bag filters for use with Saw B were not in place, and they will be reinstalled before the saw is ever used again.

Saw A is used for an average of 4 hrs/day, 5 days/wk, and 6 wks/yr. Saw B was last operated no later than in 2003. Each HEPA filter has an estimated particulate control efficiency of 99.9%. Each settling drum and bag filter in series is estimated to be 94% efficient in controlling particulate emissions.

The estimated particulate emissions from each of the two saws are given in Table I. These emissions are conservatively based on control only by a settling drum followed by a bag filter. The potential emissions are based on continuous operation.

Insulation Saw A was installed in 1989. The particulate emissions from this saw are limited by Rule 10.3 (Schedule 2) to 0.49 lb/hr, based on a process weight of 80 lbs/hr. In addition, the particulate emissions from each of the exhaust points of this saw are limited by Rule 10.7 to 0.25 gr/scf. This limitation is equivalent to 0.39 lb/hr for each of the two bag filters. This limitation cannot be converted into units of lbs/hr for the set of HEPA filters because the exhaust flow rate through the filters is not available at this time.

Insulation Saw B was installed in about 1988. However, as of 2005, Insulation Saw B went for two years without being operated, and it was no longer considered to be an existing source at that time, in accordance with §8(c)(1). Potential particulate emissions from Saw B, before being controlled, are estimated to be 9.7 tons/yr. Therefore, the particulate emissions from this saw are subject to Rule 27.3. Control of these emissions by a settling drum followed by a bag filter has been determined to be reasonable and proper, in accordance with Rule 27.3. An appropriate reasonable and proper limitation for the particulate emissions from Saw B has been previously determined to be 0.20 lb/hr. This limitation is more stringent than both the Rule 10.3 (Schedule 2) particulate emission limit of 0.49 lb/hr, based on a process weight of 80 lbs/hr, and the Rule 10.7 particulate emission limit of 0.25 gr/scf, which is equivalent to 0.39 lb/hr for each of the two bag filters of this saw. The Rule 10.7 limit cannot be converted into units of lbs/hr for the set of HEPA filters of this saw because the exhaust flow rate through the filters is not available at this time.

#### 4150-10200501-08C      Auxiliary Boilers A and B

Auxiliary Boilers A and B are not currently in use. These two boilers appeared to be in good condition. The required certifications of diesel fuel sulfur content and the required logs of daily hours of operation and monthly diesel fuel usage for each boiler were being maintained.

Each of the two boilers has a rated capacity of 54.5 MMBtu/hr. They are normally not in use. Boiler A was last operated briefly (22 minutes) for test purposes on September 16, 2004, and Boiler B was last operated on November 14, 2000. They are fueled exclusively by diesel fuel that has average and maximum sulfur contents of 0.05% and 0.06% by weight, respectively.

The estimated emissions of particulate (PM<sub>2.5</sub>, PM<sub>10</sub>, and total), NO<sub>x</sub>, SO<sub>x</sub>, CO, VOCs, and methane that result from diesel fuel combustion in the two boilers combined are given in Table II at the end of this section. These emissions were calculated by using AP-42 (1998) emission factors. The potential emissions are based on simultaneous operation of the two boilers at their rated capacities while burning diesel fuel that has the maximum sulfur content. The potential emissions are also based on the sum of the total amount of time that Boiler A is in operation and the total amount of time that Boiler B is in operation being equal to 2,000 hrs/yr.

47.0% and 69.7% of the particulate emissions that result from burning diesel fuel in the boilers are PM<sub>2.5</sub> and PM<sub>10</sub>, respectively. The VOC emissions that result from diesel fuel combustion in the boilers consist of up to 28.4% formaldehyde (methanal, H<sub>2</sub>CO), which is a HAP. All of these percentages were determined by using AP-42 (1998) emission factors.

Auxiliary Boilers A and B were installed in 1976. However, as of November 15, 2002, the two boilers went for two years without being operated, and they were no longer considered to be existing sources at that time, in accordance with §8(c)(1). These boilers are therefore subject to the provisions of "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units" [40 CFR Part 60, Subpart Dc (§60.40c-48c)], as adopted at Rule 15. §60.42c(d) of Subpart Dc stipulates that no fuel shall be burned in either boiler that has a sulfur content of greater than 0.5% by weight. Reporting and recordkeeping requirements are given in §60.48c of this subpart.

Potential NO<sub>x</sub> emissions from each of Boilers A and B are estimated to be 7.956 lbs/hr. An appropriate NO<sub>x</sub> emission limitation for each of the two boilers has been previously determined to be 9.0 lbs/hr. An appropriate limitation has also been previously determined to be that the sum of the total amount of time during which Boiler A is in operation and the total amount of time during which Boiler B is in operation shall not exceed 2,000 hrs/yr. These NO<sub>x</sub> emission and operational limitations result in an appropriate NO<sub>x</sub> emission limitation of 9.0 tons/yr for the two boilers combined. TVA requested all of these limitations in order to qualify as a synthetic minor source. The potential emissions that are given in Table II are based upon the operational limitation.

Potential particulate emissions from each of Boilers A and B are estimated to be 1.313 lbs/hr and 5.7 tons/yr, based on continuous operation. Therefore, the particulate emissions from these boilers are subject to Rule 27.3. An appropriate reasonable and proper limitation, in accordance with Rule 27.3, for the particulate emissions from each of Boilers A and B has been previously determined to be 0.030 lb/MMBtu, which is equivalent to 1.64 lbs/hr for each boiler while it is operating at its rated capacity. No controls are necessary in order to achieve this limitation for either boiler. This limitation is equivalent to the particulate emission limit that, although not applicable to the two boilers, is stipulated by §60.43c(e)(1) of Subpart Dc. This limitation is more stringent than the Rule 8.2 (Schedule 2) particulate emission limit of 12.72 lbs/hr for each boiler. This limitation is also more stringent than the Rule 26.6 (RACT) particulate emission limit of 0.15864 lb/MMBtu, which, although it is not applicable to the two boilers, is equivalent to 8.65 lbs/hr for each boiler while it is operating at its rated capacity.

An appropriate sulfur content limitation for the diesel fuel that is burned in Boilers A and B has been previously determined to be 0.06% by weight. TVA requested this limitation in order to qualify as a synthetic minor source. Combustion of diesel fuel with the maximum allowable sulfur content in either boiler at its rated capacity results in potential SO<sub>x</sub> emissions of 3.44 lbs/hr. This SO<sub>x</sub> emission rate is the effective SO<sub>x</sub> emission limitation for each boiler. This limitation is more stringent than the Rule 13.2 SO<sub>2</sub> emission limit of 4 lbs/MMBtu, which is equivalent to 218.0 lbs/hr for each of the two boilers while they are operating at their rated capacities.

The VOC emissions from Boilers A and B are subject to BACT (Rule 25.3). It has been determined that no controls are necessary in order to satisfy BACT for these emissions, and no quantitative BACT VOC emission limitations are necessary. No limitations are applicable for the emissions of CO and methane from either of the two boilers.

#### 4150-30703099-09C Carpenter Shop

None of the equipment of the carpenter shop was in operation at the time of the inspection. The two radial-arm saws, table saw, band saw, planer, two floor vents, and baghouse appeared to be in good condition.

The carpenter shop is operated for approximately 4 hrs/day, 5 days/wk, and 6 wks/yr. The baghouse has an estimated particulate control efficiency of 99%. The estimated particulate emissions from this carpenter shop are given in Table I. The potential emissions are based on continuous operation.

The carpenter shop was installed in May 1995. The particulate emissions from this carpenter shop are limited by Rule 10.3 (Schedule 2) to 1.42 lbs/hr, based on a process weight of 450 lbs/hr. This limitation is more stringent than the Rule 10.7 particulate emission limit of 0.25 gr/scf (3.43 lbs/hr).

#### 4150-30900203-10C Abrasive Blasting Operation

Abrasive blasting was not being performed at the time of the inspection. The room that it is performed in and the filter panel appeared to be in good condition.

The abrasive blasting operation is used for approximately 3 hrs/day, 5 days/wk, and 8 wks/yr. Abrasive is blasted at a rate of approximately 500 lbs/hr. The filter panel has an estimated particulate control efficiency of 95%.

The estimated particulate emissions from this operation are given in Table I. These emissions were calculated by using an AP-42 (1997) uncontrolled particulate emission factor of 0.027 pound per pound of sand multiplied by (0.010 pound per pound of abrasive)/(0.041 pound

per pound of sand), which is a ratio of SCAQMD uncontrolled particulate emission factors. The potential emissions are based on continuous operation.

The abrasive blasting operation began to be used in 1996, and potential particulate emissions from it, before being controlled, are estimated to be 14.4 tons/yr. Therefore, the particulate emissions from this operation are subject to Rule 27.3. Control of these emissions by a filter panel has been determined to be reasonable and proper, in accordance with Rule 27.3. An appropriate reasonable and proper limitation for the particulate emissions from this operation has been previously determined to be 0.30 lb/hr. This limitation is more stringent than both the Rule 10.3 (Schedule 2) particulate emission limit of 1.52 lbs/hr and the Rule 10.7 particulate emission limit of 0.25 gr/scf (55.71 lbs/hr).

4150-20200102-11C      Emergency Generators 1A, 1B, 2A, and 2B and Blackout Generators 1 and 2

Emergency Generators 1A, 1B, 2A, and 2B and Blackout Generators 1 and 2 were not in operation at the time of the inspection. These six generators all appeared to be in good condition. The required certifications of diesel fuel sulfur content and the required log of daily hours of operation for each of the generators were being maintained.

The four emergency generators each have a rated capacity of 38.4 MMBtu/hr, and they are each normally tested at a heat input rate of about 34.25 MMBtu/hr. Each of the two blackout generators is normally tested at 50% of its rated capacity of 18.5 MMBtu/hr. The six generators are fueled exclusively by diesel fuel that has average and maximum sulfur contents of 0.05% and 0.06% by weight, respectively.

The six generators are normally operated only during testing. During the twelve-month period from April 1, 2008, through March 31, 2009, annual testing times were 64.5 hours for Generator 1A, 59.8 hours for Generator 1B, 42.1 hours for Generator 2A, 36.5 hours for Generator 2B, 7.7 hours for Blackout Generator 1, and 7.1 hours for Blackout Generator 2.

The estimated emissions of particulate (PM<sub>2.5</sub>, PM<sub>10</sub>, and total), NO<sub>x</sub>, SO<sub>x</sub>, CO, VOCs, and methane that result from diesel fuel combustion in the six generators combined are given in Table II. These emissions were calculated by using emission factors from AP-42 (1996) Table 3.4-2 for particulate; AP-42 (1996) Table 3.4-1 for NO<sub>x</sub>, CO, VOCs, and methane; and AP-42 (1998) Table 1.3-1 for SO<sub>x</sub>. The potential emissions are based on simultaneous operation of the six generators at their rated capacities for 204 hrs/yr while burning diesel fuel that has the maximum sulfur content. According to AP-42 (1996) emission factors, 79.8% and 82.2% of the particulate emissions that result from burning diesel fuel in the generators are PM<sub>2.5</sub> and PM<sub>10</sub>, respectively.

Emergency Generators 1A, 1B, 2A, and 2B were installed in 1972, and Blackout Generators 1 and 2 were installed in 2004. Potential NO<sub>x</sub> emissions are estimated to be 122.880 lbs/hr from each of the four emergency generators and 59.200 lbs/hr from each of the two

blackout generators. An appropriate NO<sub>x</sub> emission limitation for each of the four emergency generators has been previously determined to be 140.0 lbs/hr (2,242 ppm). An appropriate limitation for the NO<sub>x</sub> emissions from each of the two blackout generators has been previously determined to be 68.0 lbs/hr (1,687 ppm). An appropriate limitation has also been previously determined to be 204 hrs/yr for the time of operation of each of the six generators. This operational limitation is more stringent than the Rule 2.7 limit of 20 days/yr (480 hrs/yr) for the operation of any generator that emits more than 1,500 ppm of NO<sub>x</sub>. Rule 2.7 also limits the operation of such generators to no more than 5 consecutive days. The NO<sub>x</sub> emission limitations and operational limitation result in an appropriate NO<sub>x</sub> emission limitation of 70.992 tons/yr for the six generators combined. TVA requested all of these limitations in order to qualify as a synthetic minor source. The potential emissions that are given in Table III are based upon the operational limitation.

Potential NO<sub>x</sub> emissions from the combined eleven small internal-combustion engines that are not required to be permitted are estimated to be 16.145 tons/yr, based on operation for 480 hrs/yr (the Rule 2.7 limitation). These emissions were calculated by using emission factors from AP-42 (1996) Table 3.3-1. The sum of these potential NO<sub>x</sub> emissions, the allowable NO<sub>x</sub> emissions of 9.0 tons/yr for Auxiliary Boilers A and B combined (Certificate -08C), and the allowable NO<sub>x</sub> emissions of 70.992 tons/yr for the six permitted generators combined is 96.137 tons/yr, which is below the Part 70 major source threshold for NO<sub>x</sub> emissions of 100 tons/yr.

Potential particulate emissions from each of Emergency Generators 1A, 1B, 2A, and 2B are estimated to be 2.676 lbs/hr. The particulate emissions from each of these generators are limited by Rule 10.2 (Schedule 1) to 4.07 lbs/hr, based on a process weight for each generator of 1,976 lbs/hr (38.4 MMBtu/hr ÷ 0.137 MMBtu/gal × 7.05 lbs/gal). This limitation is more stringent than the Rule 10.7 particulate emission limit of 0.25 gr/scf (18.75 lbs/hr) for each emergency generator.

Potential particulate emissions from each of Blackout Generators 1 and 2 are estimated to be 1.289 lbs/hr and 0.31 ton/yr, based on operation for 480 hrs/yr (the Rule 2.7 limitation). Therefore, the particulate emissions from these generators are subject to Rule 27.3. An appropriate reasonable and proper limitation, in accordance with Rule 27.3, for the particulate emissions from each of Blackout Generators 1 and 2 has been previously determined to be 1.80 lbs/hr. No controls are necessary in order to achieve this limitation for either generator. This limitation is more stringent than both the Rule 10.3 (Schedule 2) particulate emission limit of 2.27 lbs/hr, based on a process weight for each blackout generator of 952 lbs/hr (18.5 MMBtu/hr ÷ 0.137 MMBtu/gal × 7.05 lbs/gal), and the Rule 10.7 particulate emission limit of 0.25 gr/scf (12.10 lbs/hr) for each blackout generator.

An appropriate limitation for the sulfur content of the diesel fuel that is burned in the six generators has been previously determined to be 0.06% by weight. TVA requested this limitation in order to qualify as a synthetic minor source. Combustion of diesel fuel with the maximum allowable sulfur content in the six generators at their rated capacities results in potential SO<sub>x</sub> emissions of 2.422 lbs/hr for each of the four emergency generators and 1.17 lbs/hr for each of the two blackout generators. These SO<sub>x</sub> emission rates are the effective SO<sub>x</sub>

emission limitations for the six generators. These limitations are more stringent than the Rule 13.1 SO<sub>2</sub> emission limits of 500 ppm (43.5 lbs/hr) for each emergency generator and 500 ppm (28.1 lbs/hr) for each blackout generator.

The VOC emissions from the two blackout generators are subject to BACT (Rule 25.3). It has been determined that no controls are necessary in order to satisfy BACT for these emissions, and no quantitative BACT VOC emission limitations are necessary. The emissions of CO and methane from the two blackout generators are subject to Rule 23. It has been determined that no controls are necessary in order to satisfy reasonable and proper control technology, in accordance with Rule 23, for these emissions of CO and methane, and no quantitative reasonable and proper limitations are necessary for these emissions. In addition, no limitations are applicable for the emissions of CO, VOCs, and methane from any of the four emergency generators.

*Table I. Facility-Wide Process Emissions of Particulate Matter*

Emission Source	Actual Emissions <i>tons/yr</i>	Potential Emissions		Allowable Emissions <i>lbs/hr</i>
		<i>lbs/hr</i>	<i>tons/yr</i>	
Unit #1 Cooling Tower (-01C)	16.864	7.120	31.186	7.2
Unit #2 Cooling Tower (-03C)	16.864	7.120	31.186	7.2
Insulation Saw A (-06C)	0.0080	0.133	0.583	0.49
Insulation Saw B (-06C)	-0-	0.133	0.583	0.20
Carpenter Shop (-09C)	0.0054	0.090	0.394	1.42
Abrasive Blasting (-10C)	0.010	0.165	0.721	0.30
<b>Total Particulate</b>	<b>33.751</b>	<b>14.761</b>	<b>64.652</b>	<b>16.81</b>

Table II. Emissions from the Two Auxiliary Boilers and Six Generators

Pollutant	Actual Emissions tons/yr	Potential Emissions		Allowable Emissions	
		lbs/hr	tons/yr	lbs/hr	tons/yr
<b>Particulate Matter ≤ 2.5 μm (PM<sub>2.5</sub>)</b>					
Two Auxiliary Boilers (-08C)	-0-	1.233	0.617*	3.28	1.64
Four Emergency Generators (-11C)	0.193	8.540	0.871†	16.28	1.66
Two Blackout Generators (-11C)	0.0038	2.057	0.210†	3.60	0.37
<b>Total PM<sub>2.5</sub></b>	<b>0.197</b>	<b>11.831</b>	<b>1.698</b>	<b>23.16</b>	<b>3.67</b>
<b>Particulate Matter ≤ 10 μm (PM<sub>10</sub>)</b>					
Two Auxiliary Boilers (-08C)	-0-	1.830	0.915*	3.28	1.64
Four Emergency Generators (-11C)	0.199	8.801	0.898†	16.28	1.66
Two Blackout Generators (-11C)	0.0039	2.120	0.216†	3.60	0.37
<b>Total PM<sub>10</sub></b>	<b>0.203</b>	<b>12.751</b>	<b>2.029</b>	<b>23.16</b>	<b>3.67</b>
<b>Total Particulate Matter</b>					
Two Auxiliary Boilers (-08C)	-0-	2.626	1.313*	3.28	1.64
Four Emergency Generators (-11C)	0.242	10.706	1.092†	16.28	1.66
Two Blackout Generators (-11C)	0.0048	2.579	0.263†	3.60	0.37
<b>Total Particulate</b>	<b>0.247</b>	<b>15.910</b>	<b>2.668</b>	<b>23.16</b>	<b>3.67</b>
<b>Nitrogen Oxides (NO<sub>x</sub>)</b>					
Two Auxiliary Boilers (-08C)	-0-	15.912	7.956*	18.0	9.00
Four Emergency Generators (-11C)	11.119	491.520	50.135†	560.0	57.12
Two Blackout Generators (-11C)	0.219	118.400	12.077†	136.0	13.87
<b>Total NO<sub>x</sub></b>	<b>11.338</b>	<b>625.832</b>	<b>70.168</b>	<b>714.0</b>	<b>79.99</b>
<b>Sulfur Oxides (SO<sub>x</sub>)</b>					
Two Auxiliary Boilers (-08C)	-0-	6.874	3.437*	6.88	3.44
Four Emergency Generators (-11C)	0.183	9.687	0.988†	9.69	0.99
Two Blackout Generators (-11C)	0.0036	2.333	0.238†	2.34	0.24
<b>Total SO<sub>x</sub></b>	<b>0.186</b>	<b>18.894</b>	<b>4.663</b>	<b>18.91</b>	<b>4.67</b>

\*Based on sum of operation of Boiler A and operation of Boiler B of 2,000 hrs/yr

†Based on operation for 204 hrs/yr

Table II. Emissions from the Two Auxiliary Boilers and Six Generators (continued)

Pollutant	Actual Emissions tons/yr	Potential Emissions		Allowable Emissions	
		lbs/hr	tons/yr	lbs/hr	tons/yr
<b>Carbon Monoxide (CO)</b>					
Two Auxiliary Boilers (-08C)	-0-	3.978	1.989*	n/a	n/a
Four Emergency Generators (-11C)	2.953	130.560	13.317†	n/a	n/a
Two Blackout Generators (-11C)	0.058	31.450	3.208†	n/a	n/a
<b>Total CO</b>	<b>3.012</b>	<b>165.988</b>	<b>18.514</b>	<b>n/a</b>	<b>n/a</b>
<b>Volatile Organic Compounds (VOCs)</b>					
Two Auxiliary Boilers (-08C)	-0-	0.159	0.080*	n/a	n/a
Four Emergency Generators (-11C)	0.285	12.580	1.283†	n/a	n/a
Two Blackout Generators (-11C)	0.0056	3.030	0.309†	n/a	n/a
<b>Total VOCs</b>	<b>0.290</b>	<b>15.769</b>	<b>1.672</b>	<b>n/a</b>	<b>n/a</b>
<b>Methane</b>					
Two Auxiliary Boilers (-08C)	-0-	0.041	0.021*	n/a	n/a
Four Emergency Generators (-11C)	0.028	1.244	0.127†	n/a	n/a
Two Blackout Generators (-11C)	0.00055	0.300	0.031†	n/a	n/a
<b>Total Methane</b>	<b>0.029</b>	<b>1.585</b>	<b>0.178</b>	<b>n/a</b>	<b>n/a</b>

\*Based on sum of operation of Boiler A and operation of Boiler B of 2,000 hrs/yr

†Based on operation for 204 hrs/yr

### Conclusions

The Unit #1 cooling tower (Certificate -01C) and Unit #2 cooling tower (Certificate -03C) were determined to be in compliance with §41, Rule 3 (visible emissions), Rule 10 (particulate emissions), and Rule 12 (odor) of the Hamilton County Air Pollution Control Regulation (the Regulation).

Insulation Saw A (Certificate -06C) and the carpenter shop (Certificate -09C) were determined to be in compliance with §41, Rule 3 (visible emissions) and Rule 10 (particulate emissions) of the Regulation.

Insulation Saw B (Certificate -06C) and the abrasive blasting operation (Certificate -10C) were determined to be in compliance with §41, Rule 27.3 (reasonable and proper particulate and visible emissions) of the Regulation.

Auxiliary Boilers A and B (Certificate -08C) were determined to be in compliance with §41, Rule 12 (odor), Rule 13 (SO<sub>2</sub> emissions), Rule 15 (“Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units”), Rule 25.3 (BACT VOC emissions), and Rule 27.3 (reasonable and proper particulate and visible emissions) of the Regulation.

Emergency Generators 1A, 1B, 2A, and 2B (Certificate -11C) were determined to be in compliance with §41, Rule 2 (NO<sub>x</sub> emissions), Rule 3 (visible emissions), Rule 10 (particulate emissions), Rule 12 (odor), and Rule 13 (SO<sub>2</sub> emissions) of the Regulation.

Blackout Generators 1 and 2 (Certificate -11C) were determined to be in compliance with §41, Rule 2 (NO<sub>x</sub> emissions), Rule 12 (odor), Rule 13 (SO<sub>2</sub> emissions), Rule 23 (reasonable and proper gaseous emissions), Rule 25.3 (BACT VOC emissions), and Rule 27.3 (reasonable and proper particulate and visible emissions) of the Regulation.

Recommendations (from September 24, 2007, annual inspection report)

I recommend that Certificates of Operation No. -01C, -03C, -06C, -08C, -09C, -10C, and -11C be renewed. TVA Sequoyah Nuclear Plant is a synthetic minor source, and Certificates No. -08C and -11C are federally enforceable. Each of these certificates should be valid for a period of five years and should expire on July 17, 2012. The following special conditions should apply.

4150-30600701-01C

1. The maximum allowable emissions of particulate matter from the Unit #1 cooling tower are 7.2 pounds/hour.
2. Visible emissions from the Unit #1 cooling tower shall not exceed twenty (20) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours, in accordance with §41, Rule 3, the Hamilton County Air Pollution Control Regulation (the Regulation).
3. Testing of the Unit #1 cooling tower to determine the opacity of the emissions may be required by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau). If required, this test shall, at a minimum, consist of and be performed in accordance with EPA Test Method 9, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §3, the Regulation.
4. If the Unit #1 cooling tower operates in such a manner as to violate any of the requirements contained in these special conditions, the owner or operator shall promptly notify the Bureau Director within twenty-four hours of the onset of the violation, and a written report shall be submitted to the Bureau Director within seven (7) days of the onset, in accordance with §12(e), the Regulation.

4150-30600701-03C

1. The maximum allowable emissions of particulate matter from the Unit #2 cooling tower are 7.2 pounds/hour.
2. Visible emissions from the Unit #2 cooling tower shall not exceed twenty (20) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours, in accordance with §41, Rule 3, the Hamilton County Air Pollution Control Regulation (the Regulation).
3. Testing of the Unit #2 cooling tower to determine the opacity of the emissions may be required by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau). If required, this test shall, at a minimum, consist of and be performed in

accordance with EPA Test Method 9, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §3, the Regulation.

4. If the Unit #2 cooling tower operates in such a manner as to violate any of the requirements contained in these special conditions, the owner or operator shall promptly notify the Bureau Director within twenty-four hours of the onset of the violation, and a written report shall be submitted to the Bureau Director within seven (7) days of the onset, in accordance with §12(e), the Regulation.

4150-30700804-06C

1. The particulate matter emission sources of Insulation Saw A are two saw blade suction vents, a suction hose, and a ventilation hood. The maximum allowable emissions of particulate matter from all of these emission sources combined are 0.49 pound/hour, in accordance with §41, Rule 10.3, the Hamilton County Air Pollution Control Regulation (the Regulation).
2. The maximum allowable emissions of particulate matter from Insulation Saw A are 0.25 grain per standard cubic foot (gr/scf), in accordance with §41, Rule 10.7, the Regulation.
3. The particulate matter emission sources of Insulation Saw B are two saw blade suction vents and a suction hose. Particulate matter emissions from each of these emission sources shall be vented to and controlled by a settling drum followed by a bag filter or other piece or pieces of control equipment that have an equivalent or greater particulate matter control efficiency. The control equipment shall be used and maintained in accordance with the manufacturers' recommendations. For each of the three emission sources of the saw, the source shall not be operated if its control equipment is not in use. These requirements are reasonable and proper, as determined by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau), in accordance with §41, Rule 27.3, the Regulation.
4. The maximum allowable emissions of particulate matter from all of the emission sources combined of Insulation Saw B are 0.20 pound/hour. This emission limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.
5. Visible emissions from Insulation Saw A shall not exceed twenty (20) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours, in accordance with §41, Rule 3, the Regulation.
6. Visible emissions from Insulation Saw B shall not exceed ten (10) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is reasonable and

proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.

7. Testing of either Insulation Saw A or B to determine the emissions of particulate matter and to determine the opacity of the emissions may be required by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau). If required, these tests shall, at a minimum, consist of and be performed in accordance with EPA Test Methods 1, 2, 3, 4, 5, and 9, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §3, the Regulation.
8. If Insulation Saw A or B is used in such a manner as to violate any of the requirements contained in these special conditions, the owner or operator shall promptly notify the Bureau Director within twenty-four hours of the onset of the violation, and a written report shall be submitted to the Bureau Director within seven (7) days of the onset, in accordance with §12(e), the Regulation.

4150-10200501-08C

1. Only diesel fuel (No. 2 fuel oil) may be burned in Auxiliary Boilers A and B. The sulfur content of the diesel fuel that is burned in the two boilers shall not exceed 0.06 (zero point zero six) percent by weight. (Each of these boilers has a heat input capacity of  $54.5 \times 10^6$  Btu/hour.)
2. Boilers A and B are subject to and the permittee shall comply with "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," Title 40 *Code of Federal Regulations* Part 60, Subpart Dc (§60.40c-48c), as adopted at §41, Rule 15, the Hamilton County Air Pollution Control Regulation (the Regulation).
3. For each shipment of diesel fuel that is received at the facility for combustion in either Boiler A and B, a certification from the supplier shall document its sulfur content and shall verify that it complied with the specifications for No. 2 fuel oil as defined by the American Society for Testing and Materials in ASTM Standard D396. These certifications shall be kept on the premises and be available for inspection by representatives of the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau) upon request during normal business hours. Each certification shall be maintained for a period of two (2) years after it is received. In addition, a semiannual report shall be submitted to the Bureau Director that consists of records of the fuel supplier certifications for all of the diesel fuel that was received at the facility for combustion in either boiler during each reporting period of six (6) calendar months. The reporting periods are January 1 through June 30 and July 1 through December 31 of each year. Each semiannual report is due by the 30th day following the end of each reporting period. These requirements are in accordance with "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," Title 40 *Code of Federal*

*Regulations* Part 60, Subpart Dc, §60.42c(d) and (h) and §60.48c(d), (e), (f), (i), and (j), as adopted at §41, Rule 15, the Regulation.

4. A log shall be maintained in which the quantity of diesel fuel that is burned in Boilers A and B during each calendar month is recorded. This log shall be kept on the premises and be available for inspection by Bureau representatives upon request during normal business hours. The information in this log shall be maintained for a period of two (2) years after its date of entry. These requirements are in accordance with “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units,” Title 40 *Code of Federal Regulations* Part 60, Subpart Dc, §60.48c(g) and (i), as adopted at §41, Rule 15, the Regulation.
5. Emissions of nitrogen oxides (NO<sub>x</sub>) from Boilers A and B combined shall not exceed 9.0 tons during any period of 365 consecutive days. Compliance with this emission limitation shall be accomplished by adherence to the following limitations:
  - a. The maximum allowable emissions of NO<sub>x</sub> from each of the two boilers are 9.0 pounds/hour.
  - b. The sum of the total amount of time during which Boiler A is in operation and the total amount of time during which Boiler B is in operation shall not exceed 2,000 hours during any period of 365 consecutive days.
6. A log shall be maintained in which the daily hours of operation for each of Boilers A and B are recorded. This log shall be kept on the premises and be available for inspection by Bureau representatives upon request during normal business hours. The information in this log shall be maintained for a period of two (2) years after its date of entry.
7. A written report shall be submitted by May 17 of each year notifying the Bureau Director of the total number of hours that each of Boilers A and B were operated during the preceding twelve (12) months.
8. The maximum allowable emissions of particulate matter from each of Boilers A and B are 0.030 pound per 10<sup>6</sup> Btu. This emission limitation is equivalent to 1.64 pounds/hour for the operation of each boiler at its heat input capacity. This emission limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.
9. Visible emissions from Boilers A and B shall not exceed ten (10) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.

10. Visible emissions from Boilers A and B shall not exceed twenty (20) percent opacity on average in any period of six (6) minutes, except for one six (6)-minute period in any period of one hour in which visible emissions shall not exceed twenty-seven (27) percent opacity on average. This limitation is in accordance with "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," Title 40 *Code of Federal Regulations* Part 60, Subpart Dc, §60.43c(c), as adopted at §41, Rule 15, the Regulation.
11. Testing of either Boiler A or B to determine the emissions of particulate matter, sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and carbon monoxide (CO) and to determine the opacity of the emissions may be required by the Bureau Director. If required, these tests shall, at a minimum, consist of and be performed in accordance with EPA Test Methods 1, 2, 3, 4, 5, 6, 7, 9, and 10, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §3, the Regulation.
12. If Boiler A or B operates in such a manner as to violate any of the requirements contained in these special conditions, the owner or operator shall promptly notify the Bureau Director within twenty-four hours of the onset of the violation, and a written report shall be submitted to the Bureau Director within seven (7) days of the onset, in accordance with §12(e), the Regulation.
13. The Tennessee Valley Authority and the Bureau mutually agree to reopen this federally enforceable certificate of operation upon promulgation of any new federal requirement that would be applicable to either of the two auxiliary boilers if the effective date of the requirement is not later than the date on which this certificate is due to expire.
14. This federally enforceable certificate of operation is not transferable from one person to another person, or from one air pollutant source to another air pollutant source, or from one location to another location.

4150-30703099-09C

1. The particulate matter emission sources of the carpenter shop are two radial-arm saws, a table saw, a band saw, a planer, and two floor vents. The maximum allowable emissions of particulate matter from all of these emission sources combined are 1.42 pounds/hour, in accordance with §41, Rule 10.3, the Hamilton County Air Pollution Control Regulation (the Regulation).
2. Visible emissions from the carpenter shop shall not exceed twenty (20) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours, in accordance with §41, Rule 3, the Regulation.

3. Testing of any of the emission sources of the carpenter shop to determine the emissions of particulate matter and to determine the opacity of the emissions may be required by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau). If required, these tests shall, at a minimum, consist of and be performed in accordance with EPA Test Methods 1, 2, 3, 4, 5, and 9, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §3, the Regulation.
4. If the carpenter shop is used in such a manner as to violate any of the requirements contained in these special conditions, the owner or operator shall promptly notify the Bureau Director within twenty-four hours of the onset of the violation, and a written report shall be submitted to the Bureau Director within seven (7) days of the onset, in accordance with §12(e), the Regulation.

4150-30900203-10C

1. Particulate matter emissions from the abrasive blasting operation shall be contained within an enclosure and vented to and controlled by a filter that completely covers any exhaust intake or by another piece of control equipment that has an equivalent or greater particulate matter control efficiency. The blasting operation shall not be used if the filter for any exhaust intake is not in place. These requirements are reasonable and proper, as determined by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau), in accordance with §41, Rule 27.3, the Hamilton County Air Pollution Control Regulation (the Regulation).
2. The maximum allowable emissions of particulate matter from the abrasive blasting operation are 0.30 pound/hour. This emission limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.
3. Visible emissions from any exhaust stack that serves the abrasive blasting operation shall not exceed ten (10) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.
4. Visible emissions from the building or other enclosure that the abrasive blasting operation is performed in shall not exceed five (5) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.
5. Testing of the abrasive blasting operation, as controlled, to determine the emissions of particulate matter and to determine the opacity of the emissions may be required by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau). If required, these tests shall, at a minimum, consist of and be performed in accordance

with EPA Test Methods 1, 2, 3, 4, 5, and 9, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §3, the Regulation.

6. If the abrasive blasting operation is performed in such a manner as to violate any of the requirements contained in these special conditions, the owner or operator shall promptly notify the Bureau Director within twenty-four hours of the onset of the violation, and a written report shall be submitted to the Bureau Director within seven (7) days of the onset, in accordance with §12(e), the Regulation.

4150-20200102-11C

1. Only diesel fuel (No. 2 fuel oil) may be burned in Emergency Generators 1A, 1B, 2A, and 2B and Blackout Generators 1 and 2. The sulfur content of the diesel fuel that is burned in the six generators shall not exceed 0.06 (zero point zero six) percent by weight. (The heat input capacities are  $38.4 \times 10^6$  Btu/hour for each of the four emergency generators and  $18.5 \times 10^6$  Btu/hour for each of the two blackout generators.)
2. The sulfur content of each shipment of diesel fuel that is received at the facility for combustion in any of the six generators shall be documented by a written certification from the supplier. These certifications shall be kept on the premises and be available for inspection by representatives of the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau) upon request during normal business hours. Each certification shall be maintained for a period of two (2) years after it is received.
3. Emissions of nitrogen oxides (NO<sub>x</sub>) from the six generators combined shall not exceed 70.992 tons during any period of 365 consecutive days. Compliance with this emission limitation shall be accomplished by adherence to the following limitations:
  - a. The maximum allowable emissions of NO<sub>x</sub> from each of Emergency Generators 1A, 1B, 2A, and 2B are 140.0 pounds/hour.
  - b. The maximum allowable emissions of NO<sub>x</sub> from each of Blackout Generators 1 and 2 are 68.0 pounds/hour.
  - c. The six generators shall each be operated for no more than 204 hours during any period of 365 consecutive days.
4. The six generators shall each be continuously operated for a period of no more than five (5) consecutive days, in accordance with §41, Rule 2.7, the Hamilton County Air Pollution Control Regulation (the Regulation).
5. A log shall be maintained in which the daily hours of operation for each of the six generators are recorded. This log shall be kept on the premises and be available for inspection by Bureau representatives upon request during normal business hours. The

information in this log shall be maintained for a period of two (2) years after its date of entry.

6. A written report shall be submitted by May 17 of each year notifying the Bureau Director of the total number of hours that each of the six generators were operated during the preceding twelve (12) months.
7. The maximum allowable emissions of particulate matter from each of Emergency Generators 1A, 1B, 2A, and 2B are 4.07 pounds/hour, in accordance with §41, Rule 10.2, the Regulation.
8. The maximum allowable emissions of particulate matter from each of Blackout Generators 1 and 2 are 1.80 pounds/hour. This emission limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.
9. Visible emissions from Emergency Generators 1A, 1B, 2A, and 2B shall not exceed twenty (20) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours, in accordance with §41, Rule 3, the Regulation.
10. Visible emissions from Blackout Generators 1 and 2 shall not exceed ten (10) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.
11. Testing of any of the six generators to determine the emissions of particulate matter, sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and carbon monoxide (CO) and to determine the opacity of the emissions may be required by the Bureau Director. If required, these tests shall, at a minimum, consist of and be performed in accordance with EPA Test Methods 1, 2, 3, 4, 5, 6, 7, 9, and 10, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §3, the Regulation.
12. If any of the six generators operates in such a manner as to violate any of the requirements contained in these special conditions, the owner or operator shall promptly notify the Bureau Director within twenty-four hours of the onset of the violation, and a written report shall be submitted to the Bureau Director within seven (7) days of the onset, in accordance with §12(e), the Regulation.
13. The Tennessee Valley Authority and the Bureau mutually agree to reopen this federally enforceable certificate of operation upon promulgation of any new federal requirement that would be applicable to any of the six generators if the effective date of the requirement is not later than the date on which this certificate is due to expire.

14. This federally enforceable certificate of operation is not transferable from one person to another person, or from one air pollutant source to another air pollutant source, or from one location to another location.

## CHATTANOOGA-HAMILTON COUNTY AIR POLLUTION CONTROL BUREAU

Tennessee Valley Authority – Sequoyah Nuclear Plant  
Special Conditions for  
Certificate of Operation No. 4150-30600701-01C  
Expiration Date: July 17, 2012

The owner and operator of this source shall adhere to all provisions of the Chattanooga Air Pollution Control Ordinance (the Ordinance) in addition to the following conditions and limitations of this certificate of operation throughout its term. Any violation of the Ordinance or the following conditions and limitations may lead to enforcement action by the Chattanooga-Hamilton County Air Pollution Control Bureau or Board or by the U.S. Environmental Protection Agency. Provided, however, in the event that the following conditions or limitations are more stringent than any provision of the Ordinance, the conditions and limitations of this certificate shall control.

1. The maximum allowable emissions of particulate matter from the Unit #1 cooling tower are 7.2 pounds/hour.
2. Visible emissions from the Unit #1 cooling tower shall not exceed twenty (20) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours, in accordance with §41, Rule 3, the Hamilton County Air Pollution Control Regulation (the Regulation).
3. Testing of the Unit #1 cooling tower to determine the opacity of the emissions may be required by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau). If required, this test shall, at a minimum, consist of and be performed in accordance with EPA Test Method 9, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §3, the Regulation.
4. If the Unit #1 cooling tower operates in such a manner as to violate any of the requirements contained in these special conditions, the owner or operator shall promptly notify the Bureau Director within twenty-four hours of the onset of the violation, and a written report shall be submitted to the Bureau Director within seven (7) days of the onset, in accordance with §12(e), the Regulation.

## CHATTANOOGA-HAMILTON COUNTY AIR POLLUTION CONTROL BUREAU

Tennessee Valley Authority – Sequoyah Nuclear Plant  
Special Conditions for  
Certificate of Operation No. 4150-30600701-03C  
Expiration Date: July 17, 2012

The owner and operator of this source shall adhere to all provisions of the Chattanooga Air Pollution Control Ordinance (the Ordinance) in addition to the following conditions and limitations of this certificate of operation throughout its term. Any violation of the Ordinance or the following conditions and limitations may lead to enforcement action by the Chattanooga-Hamilton County Air Pollution Control Bureau or Board or by the U.S. Environmental Protection Agency. Provided, however, in the event that the following conditions or limitations are more stringent than any provision of the Ordinance, the conditions and limitations of this certificate shall control.

1. The maximum allowable emissions of particulate matter from the Unit #2 cooling tower are 7.2 pounds/hour.
2. Visible emissions from the Unit #2 cooling tower shall not exceed twenty (20) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours, in accordance with §41, Rule 3, the Hamilton County Air Pollution Control Regulation (the Regulation).
3. Testing of the Unit #2 cooling tower to determine the opacity of the emissions may be required by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau). If required, this test shall, at a minimum, consist of and be performed in accordance with EPA Test Method 9, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §3, the Regulation.
4. If the Unit #2 cooling tower operates in such a manner as to violate any of the requirements contained in these special conditions, the owner or operator shall promptly notify the Bureau Director within twenty-four hours of the onset of the violation, and a written report shall be submitted to the Bureau Director within seven (7) days of the onset, in accordance with §12(e), the Regulation.

## CHATTANOOGA-HAMILTON COUNTY AIR POLLUTION CONTROL BUREAU

Tennessee Valley Authority – Sequoyah Nuclear Plant  
Special Conditions for  
Certificate of Operation No. 4150-30700804-06C  
Expiration Date: July 17, 2012

Page 1 of 2

The owner and operator of this source shall adhere to all provisions of the Chattanooga Air Pollution Control Ordinance (the Ordinance) in addition to the following conditions and limitations of this certificate of operation throughout its term. Any violation of the Ordinance or the following conditions and limitations may lead to enforcement action by the Chattanooga-Hamilton County Air Pollution Control Bureau or Board or by the U.S. Environmental Protection Agency. Provided, however, in the event that the following conditions or limitations are more stringent than any provision of the Ordinance, the conditions and limitations of this certificate shall control.

1. The particulate matter emission sources of Insulation Saw A are two saw blade suction vents, a suction hose, and a ventilation hood. The maximum allowable emissions of particulate matter from all of these emission sources combined are 0.49 pound/hour, in accordance with §41, Rule 10.3, the Hamilton County Air Pollution Control Regulation (the Regulation).
2. The maximum allowable emissions of particulate matter from Insulation Saw A are 0.25 grain per standard cubic foot (gr/scf), in accordance with §41, Rule 10.7, the Regulation.
3. The particulate matter emission sources of Insulation Saw B are two saw blade suction vents and a suction hose. Particulate matter emissions from each of these emission sources shall be vented to and controlled by a settling drum followed by a bag filter or other piece or pieces of control equipment that have an equivalent or greater particulate matter control efficiency. The control equipment shall be used and maintained in accordance with the manufacturers' recommendations. For each of the three emission sources of the saw, the source shall not be operated if its control equipment is not in use. These requirements are reasonable and proper, as determined by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau), in accordance with §41, Rule 27.3, the Regulation.
4. The maximum allowable emissions of particulate matter from all of the emission sources combined of Insulation Saw B are 0.20 pound/hour. This emission limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.
5. Visible emissions from Insulation Saw A shall not exceed twenty (20) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours, in accordance with §41, Rule 3, the Regulation.

6. Visible emissions from Insulation Saw B shall not exceed ten (10) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.
7. Testing of either Insulation Saw A or B to determine the emissions of particulate matter and to determine the opacity of the emissions may be required by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau). If required, these tests shall, at a minimum, consist of and be performed in accordance with EPA Test Methods 1, 2, 3, 4, 5, and 9, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §3, the Regulation.
8. If Insulation Saw A or B is used in such a manner as to violate any of the requirements contained in these special conditions, the owner or operator shall promptly notify the Bureau Director within twenty-four hours of the onset of the violation, and a written report shall be submitted to the Bureau Director within seven (7) days of the onset, in accordance with §12(e), the Regulation.

## CHATTANOOGA-HAMILTON COUNTY AIR POLLUTION CONTROL BUREAU

Tennessee Valley Authority – Sequoyah Nuclear Plant  
Special Conditions for  
Federally Enforceable Certificate of Operation No. 4150-10200501-08C  
Expiration Date: July 17, 2012

Page 1 of 3

The owner and operator of this source shall adhere to all provisions of the Chattanooga Air Pollution Control Ordinance (the Ordinance) in addition to the following conditions and limitations of this federally enforceable certificate of operation throughout its term. Any violation of the Ordinance or the following conditions and limitations may lead to enforcement action by the Chattanooga-Hamilton County Air Pollution Control Bureau or Board or by the U.S. Environmental Protection Agency. Provided, however, in the event that the following conditions or limitations are more stringent than any provision of the Ordinance, the conditions and limitations of this certificate shall control. Each of the following conditions is federally enforceable for the purpose of synthetic minor source status.

1. Only diesel fuel (No. 2 fuel oil) may be burned in Auxiliary Boilers A and B. The sulfur content of the diesel fuel that is burned in the two boilers shall not exceed 0.06 (zero point zero six) percent by weight. (Each of these boilers has a heat input capacity of  $54.5 \times 10^6$  Btu/hour.)
2. Boilers A and B are subject to and the permittee shall comply with “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units,” Title 40 *Code of Federal Regulations* Part 60, Subpart Dc (§60.40c-48c), as adopted at §41, Rule 15, the Hamilton County Air Pollution Control Regulation (the Regulation).
3. For each shipment of diesel fuel that is received at the facility for combustion in either Boiler A and B, a certification from the supplier shall document its sulfur content and shall verify that it complied with the specifications for No. 2 fuel oil as defined by the American Society for Testing and Materials in ASTM Standard D396. These certifications shall be kept on the premises and be available for inspection by representatives of the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau) upon request during normal business hours. Each certification shall be maintained for a period of two (2) years after it is received. In addition, a semiannual report shall be submitted to the Bureau Director that consists of records of the fuel supplier certifications for all of the diesel fuel that was received at the facility for combustion in either boiler during each reporting period of six (6) calendar months. The reporting periods are January 1 through June 30 and July 1 through December 31 of each year. Each semiannual report is due by the 30th day following the end of each reporting period. These requirements are in accordance with “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units,” Title 40 *Code of Federal Regulations* Part 60, Subpart Dc, §60.42c(d) and (h) and §60.48c(d), (e), (f), (i), and (j), as adopted at §41, Rule 15, the Regulation.

4. A log shall be maintained in which the quantity of diesel fuel that is burned in Boilers A and B during each calendar month is recorded. This log shall be kept on the premises and be available for inspection by Bureau representatives upon request during normal business hours. The information in this log shall be maintained for a period of two (2) years after its date of entry. These requirements are in accordance with “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units,” Title 40 *Code of Federal Regulations* Part 60, Subpart Dc, §60.48c(g) and (i), as adopted at §41, Rule 15, the Regulation.
5. Emissions of nitrogen oxides (NO<sub>x</sub>) from Boilers A and B combined shall not exceed 9.0 tons during any period of 365 consecutive days. Compliance with this emission limitation shall be accomplished by adherence to the following limitations:
  - a. The maximum allowable emissions of NO<sub>x</sub> from each of the two boilers are 9.0 pounds/hour.
  - b. The sum of the total amount of time during which Boiler A is in operation and the total amount of time during which Boiler B is in operation shall not exceed 2,000 hours during any period of 365 consecutive days.
6. A log shall be maintained in which the daily hours of operation for each of Boilers A and B are recorded. This log shall be kept on the premises and be available for inspection by Bureau representatives upon request during normal business hours. The information in this log shall be maintained for a period of two (2) years after its date of entry.
7. A written report shall be submitted by May 17 of each year notifying the Bureau Director of the total number of hours that each of Boilers A and B were operated during the preceding twelve (12) months.
8. The maximum allowable emissions of particulate matter from each of Boilers A and B are 0.030 pound per 10<sup>6</sup> Btu. This emission limitation is equivalent to 1.64 pounds/hour for the operation of each boiler at its heat input capacity. This emission limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.
9. Visible emissions from Boilers A and B shall not exceed ten (10) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.

10. Visible emissions from Boilers A and B shall not exceed twenty (20) percent opacity on average in any period of six (6) minutes, except for one six (6)-minute period in any period of one hour in which visible emissions shall not exceed twenty-seven (27) percent opacity on average. This limitation is in accordance with “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units,” Title 40 *Code of Federal Regulations* Part 60, Subpart Dc, §60.43c(c), as adopted at §41, Rule 15, the Regulation.
11. Testing of either Boiler A or B to determine the emissions of particulate matter, sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and carbon monoxide (CO) and to determine the opacity of the emissions may be required by the Bureau Director. If required, these tests shall, at a minimum, consist of and be performed in accordance with EPA Test Methods 1, 2, 3, 4, 5, 6, 7, 9, and 10, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §3, the Regulation.
12. If Boiler A or B operates in such a manner as to violate any of the requirements contained in these special conditions, the owner or operator shall promptly notify the Bureau Director within twenty-four hours of the onset of the violation, and a written report shall be submitted to the Bureau Director within seven (7) days of the onset, in accordance with §12(e), the Regulation.
13. The Tennessee Valley Authority and the Bureau mutually agree to reopen this federally enforceable certificate of operation upon promulgation of any new federal requirement that would be applicable to either of the two auxiliary boilers if the effective date of the requirement is not later than the date on which this certificate is due to expire.
14. This federally enforceable certificate of operation is not transferable from one person to another person, or from one air pollutant source to another air pollutant source, or from one location to another location.

## CHATTANOOGA-HAMILTON COUNTY AIR POLLUTION CONTROL BUREAU

Tennessee Valley Authority – Sequoyah Nuclear Plant  
Special Conditions for  
Certificate of Operation No. 4150-30703099-09C  
Expiration Date: July 17, 2012

The owner and operator of this source shall adhere to all provisions of the Chattanooga Air Pollution Control Ordinance (the Ordinance) in addition to the following conditions and limitations of this certificate of operation throughout its term. Any violation of the Ordinance or the following conditions and limitations may lead to enforcement action by the Chattanooga-Hamilton County Air Pollution Control Bureau or Board or by the U.S. Environmental Protection Agency. Provided, however, in the event that the following conditions or limitations are more stringent than any provision of the Ordinance, the conditions and limitations of this certificate shall control.

1. The particulate matter emission sources of the carpenter shop are two radial-arm saws, a table saw, a band saw, a planer, and two floor vents. The maximum allowable emissions of particulate matter from all of these emission sources combined are 1.42 pounds/hour, in accordance with §41, Rule 10.3, the Hamilton County Air Pollution Control Regulation (the Regulation).
2. Visible emissions from the carpenter shop shall not exceed twenty (20) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours, in accordance with §41, Rule 3, the Regulation.
3. Testing of any of the emission sources of the carpenter shop to determine the emissions of particulate matter and to determine the opacity of the emissions may be required by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau). If required, these tests shall, at a minimum, consist of and be performed in accordance with EPA Test Methods 1, 2, 3, 4, 5, and 9, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §3, the Regulation.
4. If the carpenter shop is used in such a manner as to violate any of the requirements contained in these special conditions, the owner or operator shall promptly notify the Bureau Director within twenty-four hours of the onset of the violation, and a written report shall be submitted to the Bureau Director within seven (7) days of the onset, in accordance with §12(e), the Regulation.

## CHATTANOOGA-HAMILTON COUNTY AIR POLLUTION CONTROL BUREAU

Tennessee Valley Authority – Sequoyah Nuclear Plant  
Special Conditions for  
Certificate of Operation No. 4150-30900203-10C  
Expiration Date: July 17, 2012

Page 1 of 2

The owner and operator of this source shall adhere to all provisions of the Chattanooga Air Pollution Control Ordinance (the Ordinance) in addition to the following conditions and limitations of this certificate of operation throughout its term. Any violation of the Ordinance or the following conditions and limitations may lead to enforcement action by the Chattanooga-Hamilton County Air Pollution Control Bureau or Board or by the U.S. Environmental Protection Agency. Provided, however, in the event that the following conditions or limitations are more stringent than any provision of the Ordinance, the conditions and limitations of this certificate shall control.

1. Particulate matter emissions from the abrasive blasting operation shall be contained within an enclosure and vented to and controlled by a filter that completely covers any exhaust intake or by another piece of control equipment that has an equivalent or greater particulate matter control efficiency. The blasting operation shall not be used if the filter for any exhaust intake is not in place. These requirements are reasonable and proper, as determined by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau), in accordance with §41, Rule 27.3, the Hamilton County Air Pollution Control Regulation (the Regulation).
2. The maximum allowable emissions of particulate matter from the abrasive blasting operation are 0.30 pound/hour. This emission limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.
3. Visible emissions from any exhaust stack that serves the abrasive blasting operation shall not exceed ten (10) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.
4. Visible emissions from the building or other enclosure that the abrasive blasting operation is performed in shall not exceed five (5) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.

5. Testing of the abrasive blasting operation, as controlled, to determine the emissions of particulate matter and to determine the opacity of the emissions may be required by the Director, the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau). If required, these tests shall, at a minimum, consist of and be performed in accordance with EPA Test Methods 1, 2, 3, 4, 5, and 9, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §3, the Regulation.
6. If the abrasive blasting operation is performed in such a manner as to violate any of the requirements contained in these special conditions, the owner or operator shall promptly notify the Bureau Director within twenty-four hours of the onset of the violation, and a written report shall be submitted to the Bureau Director within seven (7) days of the onset, in accordance with §12(e), the Regulation.

## CHATTANOOGA-HAMILTON COUNTY AIR POLLUTION CONTROL BUREAU

Tennessee Valley Authority – Sequoyah Nuclear Plant  
Special Conditions for  
Federally Enforceable Certificate of Operation No. 4150-20200102-11C  
Expiration Date: July 17, 2012

Page 1 of 3

The owner and operator of this source shall adhere to all provisions of the Chattanooga Air Pollution Control Ordinance (the Ordinance) in addition to the following conditions and limitations of this federally enforceable certificate of operation throughout its term. Any violation of the Ordinance or the following conditions and limitations may lead to enforcement action by the Chattanooga-Hamilton County Air Pollution Control Bureau or Board or by the U.S. Environmental Protection Agency. Provided, however, in the event that the following conditions or limitations are more stringent than any provision of the Ordinance, the conditions and limitations of this certificate shall control. Each of the following conditions is federally enforceable for the purpose of synthetic minor source status.

1. Only diesel fuel (No. 2 fuel oil) may be burned in Emergency Generators 1A, 1B, 2A, and 2B and Blackout Generators 1 and 2. The sulfur content of the diesel fuel that is burned in the six generators shall not exceed 0.06 (zero point zero six) percent by weight. (The heat input capacities are  $38.4 \times 10^6$  Btu/hour for each of the four emergency generators and  $18.5 \times 10^6$  Btu/hour for each of the two blackout generators.)
2. The sulfur content of each shipment of diesel fuel that is received at the facility for combustion in any of the six generators shall be documented by a written certification from the supplier. These certifications shall be kept on the premises and be available for inspection by representatives of the Chattanooga-Hamilton County Air Pollution Control Bureau (the Bureau) upon request during normal business hours. Each certification shall be maintained for a period of two (2) years after it is received.
3. Emissions of nitrogen oxides ( $\text{NO}_x$ ) from the six generators combined shall not exceed 70.992 tons during any period of 365 consecutive days. Compliance with this emission limitation shall be accomplished by adherence to the following limitations:
  - a. The maximum allowable emissions of  $\text{NO}_x$  from each of Emergency Generators 1A, 1B, 2A, and 2B are 140.0 pounds/hour.
  - b. The maximum allowable emissions of  $\text{NO}_x$  from each of Blackout Generators 1 and 2 are 68.0 pounds/hour.
  - c. The six generators shall each be operated for no more than 204 hours during any period of 365 consecutive days.

4. The six generators shall each be continuously operated for a period of no more than five (5) consecutive days, in accordance with §41, Rule 2.7, the Hamilton County Air Pollution Control Regulation (the Regulation).
5. A log shall be maintained in which the daily hours of operation for each of the six generators are recorded. This log shall be kept on the premises and be available for inspection by Bureau representatives upon request during normal business hours. The information in this log shall be maintained for a period of two (2) years after its date of entry.
6. A written report shall be submitted by May 17 of each year notifying the Bureau Director of the total number of hours that each of the six generators were operated during the preceding twelve (12) months.
7. The maximum allowable emissions of particulate matter from each of Emergency Generators 1A, 1B, 2A, and 2B are 4.07 pounds/hour, in accordance with §41, Rule 10.2, the Regulation.
8. The maximum allowable emissions of particulate matter from each of Blackout Generators 1 and 2 are 1.80 pounds/hour. This emission limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.
9. Visible emissions from Emergency Generators 1A, 1B, 2A, and 2B shall not exceed twenty (20) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours, in accordance with §41, Rule 3, the Regulation.
10. Visible emissions from Blackout Generators 1 and 2 shall not exceed ten (10) percent opacity for an aggregate of more than five (5) minutes in any period of one hour or more than twenty (20) minutes in any period of twenty-four hours. This limitation is reasonable and proper, as determined by the Bureau Director, in accordance with §41, Rule 27.3, the Regulation.
11. Testing of any of the six generators to determine the emissions of particulate matter, sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and carbon monoxide (CO) and to determine the opacity of the emissions may be required by the Bureau Director. If required, these tests shall, at a minimum, consist of and be performed in accordance with EPA Test Methods 1, 2, 3, 4, 5, 6, 7, 9, and 10, Title 40 *Code of Federal Regulations* Part 60, Appendix A and in accordance with §3, the Regulation.

12. If any of the six generators operates in such a manner as to violate any of the requirements contained in these special conditions, the owner or operator shall promptly notify the Bureau Director within twenty-four hours of the onset of the violation, and a written report shall be submitted to the Bureau Director within seven (7) days of the onset, in accordance with §12(e), the Regulation.
13. The Tennessee Valley Authority and the Bureau mutually agree to reopen this federally enforceable certificate of operation upon promulgation of any new federal requirement that would be applicable to any of the six generators if the effective date of the requirement is not later than the date on which this certificate is due to expire.
14. This federally enforceable certificate of operation is not transferable from one person to another person, or from one air pollutant source to another air pollutant source, or from one location to another location.