

**Wheelabrator Sherman Energy Co.)
Penobscot County)
Sherman Station, Maine)
A-67-70-A-I)**

**Departmental
Findings of Fact and Order
Part 70 Air Emission License**

After review of the Initial Part 70 License application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	Wheelabrator Sherman Energy Company (WSEC)
LICENSE NUMBER	A-67-70-A-I
LICENSE TYPE	Initial Part 70 License
SIC CODES	4911 – Electrical Generation
NATURE OF BUSINESS	Electric Generating Station
FACILITY LOCATION	Mill Street, Sherman Station
DATE OF LICENSE ISSUANCE	October 16, 2000
LICENSE EXPIRATION DATE	October 16, 2005

B. Emission Equipment

The following emission units are addressed by this Part 70 License:

EMISSION UNIT ID	UNIT CAPACITY	UNIT TYPE
Boiler #1	315 MMBtu/hr	Wood boiler

WSEC has additional insignificant activities which do not need to be listed in the emission equipment table above. The list of insignificant activities can be found in the Part 70 license application, submitted in October of 1997, and in Appendix B of Chapter 140 of the Department's Regulations.

C. Application Classification

The application for WSEC does not include the licensing of increased emissions or the installation of new or modified equipment, therefore the license is considered to be an Initial Part 70 License issued under Chapter 140 for a Part 70 source.

II. EMISSION UNIT DESCRIPTION

A. Process Overview

WSEC is a wood-fired electric generating facility in Sherman Station, Maine which sells electricity to the Maine Public Service Company. The facility includes a 315 MMBtu/hr wood-fired boiler. The boiler system includes fuel metering bins, traveling stoker, induced draft, forced draft, and overfire air fans, a mechanical dust collector, and an electrostatic precipitator (ESP). The fuel consists of wood chips, sawdust, bark, and other wood residue from logging and lumbering operations in the region. WSEC is also licensed to use alternative wood as a fuel, including railroad ties and telephone poles. The wood fuel is delivered to WSEC by truck and dumped into a hopper.

The wood fuel is transferred by conveyor to a scalper, a hog, and then to storage, either outside or in the covered fuel building. The fuel is then reclaimed and fed by conveyor to four metered boiler feeder bins which measure the amount of wood fuel conveyed to the boiler, using variable speed screws. Wood fuel is fed from individual screw feeder bins directly to the spreader stoker where fuel is blown across a trajectory plate and into the furnace portion of the boiler. Fuel is distributed on the traveling grate (both front to rear and laterally) via high pressure transport air settings and the trajectory plate angle setting. Heavier particles are spread evenly on the back of the travelling grate surface while fine particles are rapidly burned in suspension. The boiler is sized and constructed to provide the time, temperature, and turbulence necessary to provide good combustion of wood fuel.

B. Emission Equipment

WSEC was issued a Chapter 115 Air Emission License A-67-71-K-A/R on April 9, 1999, permitting the operation of emission sources associated with their 315 MMBtu/hr boiler. WSEC is authorized to operate the following air emission units:

Equipment	Date of Construction	Maximum Capacity (MMBtu/hr)	Fuel Type, % Sulfur	Post Combustion Control Equipment	Stack #
Boiler #1	1985	315 28.4	Wood waste #2 fuel oil, 0.5%	Cyclone, ESP	1
Boiler #2 *	1985	2.52	#2 fuel oil, 0.5%	none	2

* Boiler #2 is now considered insignificant in this Title V license per Chapter 140 Appendix B section B (6). WSEC also operates several fuel burning units which have heat input capacities less than 1.0 MMBtu/hr, and are therefore noted for inventory purposes only.

Boiler #1 is a wood fired 315 MMBtu/hr boiler, which powers a turbine capable of producing approximately 20 gross megawatts of power. Boiler #1 shall not exceed a heat input rate of 315 MMBtu/hr from wood firing on a 24 hour block average basis demonstrated by a steam production limit of 200,000 lbs/hr at 1324 psia measured at the throttle. Number 2 fuel oil is used for start-up, flame stabilization and emergency back-up purposes only. WSEC is currently limited to less than ten percent (10%) of the annual fuel usage from fuel oil, which equates to 91,000 gallons/year of #1 and #2 fuel oil with a sulfur content not to exceed 0.5% by weight.

Boiler #1 is subject to New Source Performance Standards (NSPS) 40 CFR Part 60 Subpart Db, Standards of Performance for Industrial-Commercial Steam generating units proposed on June 19, 1984, promulgated on November 25, 1986, and affecting facilities constructed after June 19, 1984.

C. Alternative Wood Fuels

WSEC burns alternative wood fuels in Boiler #1 in addition to conventional wood fuel. WSEC shall limit the firing of alternative wood fuels to no more than 78.7 MMBtu/hr, which equates to 25% of the maximum potential heat input limit of 315 MMBtu/hr, on a 30 day rolling average basis. Alternative wood fuels may include utility poles, railroad ties, and construction/demolition wood, or any other alternative wood fuel which is determined by the Department to be substantially equivalent to the composition of those alternative wood fuels currently listed here. WSEC shall maintain records of the type and quantity, in tons, of alternative wood fuels combusted within Boiler #1, and shall make the records available to the Department upon request.

D. BPT for the regulated pollutants is as follows:

PM and PM₁₀

WSEC will meet Best Practical Treatment (BPT) for the control of particulate matter emissions by using a mechanical dust collector (cyclone) followed by a 2 field, electrostatic precipitator (ESP). For opacity, WSEC has a continuous opacity monitor. Also, visible emissions shall not exceed 20% (based on 6-minute averages) except for one 6-minute period per hour of not more than 27% opacity.

All potential sources of fugitive PM emissions, including all wood chip storage piles and unpaved roads and parking areas, are controlled with water and/or calcium chloride as necessary to prevent visible emissions. All ash handling is accomplished within the boiler building or covered conveyors. Ash from the

precipitators, multicyclones, soot hoppers, and the grates is sufficiently wet at the point of discharge to prevent visible emissions. All ash transported to off site locations is transported in covered trucks or containers. The ash handling system meets the definition of BPT.

SO₂

WSEC will meet BPT for the control of sulfur dioxide emissions by firing wood only, except for start-up, flame stabilization, and emergency back-up situations, when #1 and #2 fuel oil is burned. The sulfur content of the #2 fuel oil shall not exceed 0.5% by weight.

NO_x, CO, and VOC

WSEC will maintain good combustion practices to ensure proper residence time, temperature, and turbulence as BPT for the control of NO_x, CO, and VOC emissions. For NO_x and CO, WSEC shall use continuous emission monitoring systems to show compliance with applicable emission limits.

E. Streamlining

1. 40CFR Part 60.43b(c)(1), (f), (g) and MEDEP Chapter 103 regulate particulate matter (PM) emission limits. However, Best Practical Treatment (BPT) is more stringent.
2. Chapter 101 is applicable for visible emissions. However, 40 CFR Part 60.43b(f) is more stringent.
3. 40 CFR Part 60 and Chapter 117 require the use of Continuous Opacity Monitors (COM). However, Chapter 117 is at least as stringent as 40 CFR Part 60. The SIP approved Chapter 117 has been streamlined into the “new” revised Chapter 117.
4. 40 CFR Part 60.13 and Chapter 117 detail the sampling frequency of the CEM and COM. However, Chapter 117 is at least as stringent as 40 CFR Part 60.
5. 40 CFR 60.11(d) has been streamlined into Condition #7.
6. 40 CFR 60.11 (g) has been streamlined into Condition #14.

F. Periodic Monitoring

1. *Particulate matter from main stack*

Stack testing is required for particulate matter emission rates once every two years. Periodic monitoring for particulate matter emissions shall be the following, taken once per shift:

- a. Mechanical dust collector (cyclone) gas pressure drop.
- b. ESP primary and secondary voltages on each field.

2. *General Process*

General process particulate matter sources at WSEC include wood chip conveyors, transfer points and a portable wood chipper, which may or may not be on site. Any conveyor totally within a building shall be considered enclosed. Wheelabrator has made a minor change to the wood conveying system since the issuing of the original permit. In 1995 the facility installed and temporarily operated a collector to collect fine wood particles or dust generated during the hogging process. The dust collector consist of a small pulse jet fabric filter and fan, the fine particulates captured by the fabric filter are collected in the fabric filter hopper and returned to the wood conveying system via a rotary valve, which discharges to a wood conveyor. The dust collector has not proven to be very effective and/or necessary and has not operated for many years, however, it should be noted in the license. Wheelabrator is subject to the visible emissions limit set in Condition (28) whether or not the dust collector is running or not.

Based on best management practices, general process emission sources should not exceed the opacity limits. Therefore, periodic monitoring for opacity in the form of visible emissions is not required. However, neither the EPA nor the DEP is precluded from performing its own testing and may take enforcement action for any violations discovered.

3. *Fugitive Emissions*

Fugitive particulate matter sources at WSEC includes material stockpiles and roadways.

Based on best management practices, fugitive emission sources should not exceed the opacity limits. Therefore, periodic monitoring for opacity in the form of visible emissions is not required. However, neither the EPA nor the DEP is precluded from performing its own testing and may take enforcement action for any violations discovered.

G. Emission Standards

The Department has determined that the emission limits in the table below reflect the capability of the controls proposed as BPT for Boiler #1 in this initial Title V license.

Pollutant	Emission limit (lb/MMBtu)	Averaging Period	Emission Limit (lb/hr)	Compliance Method	Boiler (TPY)
PM	0.036 lb/MMBtu	--	11.4	Stack test EPA Method 1-5	49.7
PM10	0.036 lb/MMBtu	--	11.4	Stack test	49.7
SO ₂	--	--	38.9 ^b (3-hr)	Stack test EPA Method 6 (c)	170.3
NO _x	0.25 lb/MMBtu	30 day rolling	--	CEMS	345.8
	0.30 lb/MMBtu ^a	24 hour block	--	CEMS	
	--	--	94.4 ^b (24-hr)	Stack test EPA Method 7 (e)	
CO	0.45 lb/MMBtu	30 day rolling	--	CEMS	622.2
	--	--	142.1 ^b (8-hr)	Stack test EPA Method 10	
VOC	--	--	9.45	EPA Method 25A	41.4
^a This emission limit is at least as stringent as the Chapter 138 NO _x RACT requirement.					
^b Compliance with the SO ₂ , NO _x , VOC and CO lb/hour emission limits shall be demonstrated by stack testing upon Department request. Should stack testing be required, the stack test will be conducted under normal boiler operating conditions. Operation during periods of startup, shutdown, and malfunctions shall not constitute normal operating conditions. Minimum stack test run times would be as follows: SO ₂ (3-hour), NO _x (24-hour), and CO (8-hour).					

Continuous Monitoring

For NO_x and CO, WSEC shall use continuous emission monitoring systems to show compliance with applicable emission limits. Also WSEC shall continue to use a continuous opacity monitor to demonstrate compliance with the applicable opacity limit. Demonstrated NO_x, CO and opacity limits through CEM/COM data provides reasonable assurance the VOC emissions are being met.

WSEC is required to provide documentation that all CEMs are continuously accurate, reliable and operated in accordance with Chapter 117, 40 CFR Part 51 Appendix P, and 40 CFR Part 60 Appendices B and F.

Parameter Monitoring

WSEC shall monitor and record the following as specified for Boiler #1:

Parameter	Monitor	Record
fuel oil firing rate *	continuously	continuously
total steam production **	continuously	continuously

* monitored with a fuel flow totalizer or continuous fuel flow meter

** monitored with a differential pressure flow meter

H. Facility Emissions

The following total licensed annual emissions for the facility are based on the following restrictions/raw materials used. All usages are based on a 12 month rolling total.

- Boiler #1 shall not exceed a heat input rate of 315 MMBtu/hr from wood firing on a 24 hour block average basis demonstrated by a steam production limit of 200,000 lb/hour at 1325 psia measured at the throttle. This limit corresponds to approximately 318,269 tons/year of wood fuel at a 4335 Btu/lb basis.
- WSEC shall limit Boiler #1's use of #2 fuel oil to more than 91,000 gallons/year.
- WSEC shall not burn more than 10,000 gallons per year of waste oil in Boiler 1.

Total Allowable Annual Emissions for the Facility
(used to calculate the annual license fee)

Pollutant	TPY
PM	51.0
PM ₁₀	51.0
SO ₂	175.9
NO _x	349.1
CO	625.5
VOC	42.5

III. AIR QUALITY ANALYSIS

There have been no modifications to the facility, therefore the existing analysis performed for WSEC's 1999 Chapter 115 Air Emission License A-67-71-K-A/R, which demonstrated compliance with MAAQS and increments, is sufficient for this initial Part 70 license.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

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**Departmental
Findings of Fact and Order
Part 70 Air Emission License**

The Department hereby grants the Part 70 License A-67-70-A-I, subject to the following conditions:

For each condition that is State Enforceable only, it is designated so with the following statement: **Enforceable by State Only**. All other conditions are federally enforceable.

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emission units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions and this license;
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 140;
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both;
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request; **Enforceable by State-only**
- (5) The licensee shall pay the annual air emissions license fee to the Department, calculated pursuant to Title 38 MRSA §353;
- (6) The Part 70 license does not convey any property rights of any sort, or any exclusive privilege;
- (7) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions; **Enforceable by State-only**
- (8) The licensee shall maintain sufficient records, to accurately document compliance with emission standards and license conditions and shall maintain such records for a

minimum of six (6) years. The records shall be submitted to the Department upon written request or in accordance with other provisions of this license;

- (9) The licensee shall comply with all terms and conditions of the air emission license. The submission of notice of intent to reopen for cause by the Department, the filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for the renewal of a Part 70 license or amendment shall not stay any condition of the Part 70 license.
- (10) All terms and conditions are enforceable by EPA and citizens under the CAA unless specifically designated as state enforceable.
- (11) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license;
- (12) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
 - (a) perform stack testing under circumstances representative of the facility's normal process and operating conditions:
 - (i) within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions;
 - (ii) to demonstrate compliance with the applicable emission standards; or
 - (iii) pursuant to any other requirement of this license to perform stack testing.
 - (b) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emissions testing; and
 - (c) submit a written report to the Department within thirty (30) days from the date of test completion.

Enforceable by State-only

- (13) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicates emissions in excess of the applicable standards, then:
- (a) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - (b) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - (c) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

Enforceable by State-only

- (14) Notwithstanding any other provision in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (15) Compliance with the conditions of this Part 70 license shall be deemed compliance with any Applicable requirement as of the date of license issuance and is deemed a permit shield, provided that:
- (a) Such Applicable and state requirements are included and are specifically identified in the Part 70 license, except where the Part 70 license term or condition is specifically identified as not having a permit shield; or
 - (b) The Department, in acting on the Part 70 license application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the Part 70 license includes the determination or a concise summary, thereof.

Nothing in this section or any Part 70 license shall alter or effect the provisions of Section 303 of the CAA (emergency orders), including the authority of EPA under Section 303; the liability of an owner or operator of a source for any violation of Applicable requirements prior to or at the time of permit issuance; or the ability of EPA to obtain information from a source pursuant to section 114 of the CAA.

- (16) The licensee shall retain records of all required monitoring data and support information for a period of at least six (6) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Part 70 license.
- (17) The licensee shall maintain records of all deviations from license requirements. Such deviations shall include, but are not limited to malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emission unit itself that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next working day, whichever is later, of such occasions and shall report the probable cause, corrective action, and any excess emissions in the units of the applicable emission limitation;
- (18) Upon the written request of the Department, the licensee shall establish and maintain such records, make such reports, install, use, and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.
- (19) The licensee shall submit semiannual reports of any required periodic monitoring. All instances of deviations from Part 70 license requirements must be clearly identified in such reports. All required reports must be certified by a responsible official.
- (20) The licensee shall submit a compliance certification to the Department and EPA at least annually, or more frequent if specified in the Applicable requirement by the Department. The compliance certification shall include the following:
 - (a) The identification of each term or condition of the Part 70 license that is the basis of the certification;
 - (b) The compliance status;

- (c) Whether compliance was continuous or intermittent;
 - (d) The method(s) used for determining the compliance status of the source, currently and over the reporting period; and
 - (e) Such other facts as the Department may require to determine the compliance status of the source;
- (21) The Part 70 license shall be reopened for cause by the Department or EPA, prior to the expiration of the Part 70 license, if:
- (a) Additional Applicable requirements under the CAA become applicable to the Part 70 major source with a remaining Part 70 license term of 3 or more years. However, no opening is required if the effective date of the requirement is later than the date on which the Part 70 license is due to expire, unless the original Part 70 license or any of its terms and conditions has been extended pursuant to Chapter 140;
 - (b) Additional requirements (including excess emissions requirements) become applicable to the Title IV source under the acid rain program. Upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the Part 70 license;
 - (c) The Department or EPA determines that the Part 70 license contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms of conditions of the Part 70 license; or
 - (d) The Department or EPA determines that the Part 70 license must be revised or revoked to assure compliance with the Applicable requirements.

The licensee shall furnish to the Department within a reasonable time any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the Part 70 license or to determine compliance with the Part 70 license.

- (22) No license revision or amendment shall be required, under any approved economic incentives, marketable licenses, emissions trading and other similar programs or processes for changes that are provided for in the Part 70 license.

SPECIAL CONDITIONS

(23) Permit Shield for Non-Applicable Requirements

The following requirements have been specifically identified as not applicable based upon information submitted by the licensee in the application dated October 1997.

SOURCE	CITATION	DESCRIPTION	BASIS FOR DETERMINATION
Boiler #2	Chapter 103, Section 2(B)(4)(c)	Particulate emission limit for fuel burning equipment > 3.0 MMBtu/hr.	Not applicable, unit is < 3.0 MMBtu/hr.
Storage Tanks	Chapter 111	Petroleum Liquid Storage Vapor Control	WSEC does not have any petroleum liquids stored in vessels with capacities greater than 39,000 gallons.

(24) Boiler 1 (Condition #24's origin/authority are derived from [MEDEP Chapter 140, BPT])

- A. Boiler #1 shall not exceed a heat input rate of 315 MMBtu/hr from wood firing on a 24 hour block average basis demonstrated by a steam production limit of 200,000 lbs/hr at 1325 psia measured at the throttle.
- B. The sulfur content of the #1 and #2 fuel oil fired in Boiler #1 shall not exceed 0.5% by weight demonstrated by purchase records from the supplier within the accuracy of the test methods used.
- C. WSEC shall limit Boiler #1's use of #1 and #2 fuel oil to no more than 91,000 gallons/year on a 12 month rolling total basis.
- D. Boiler #1 is subject to New Source Performance Standards (NSPS) 40 CFR Part 60 Subpart Db, Standards of Performance for Industrial-Commercial Steam generating units proposed on June 19, 1984, promulgated on November 25, 1986, and affecting facilities constructed after June 19, 1984.
- E. Emissions from Boiler # 1 shall not exceed the following limits:

Pollutant	Emission limit (lb/MMBtu)	Averaging Period	Emission Limit (lb/hr)	Compliance Method	Boiler (TPY)
PM	0.036 lb/MMBtu	--	11.4	Stack test EPA Method 1-5	49.7
PM10	0.036 lb/MMBtu	--	11.4	Stack test	49.7
SO ₂	--	--	38.9 ^b (3-hr)	Stack test EPA Method 6 (c)	170.3
NO _x	0.25 lb/MMBtu	30 day rolling	--	CEMS	345.8
	0.30 lb/MMBtu ^a	24 hour block	--	CEMS	
	--	--	94.4 ^b (24-hr)	Stack test EPA Method 7 (e)	
CO	0.45 lb/MMBtu	30 day rolling	--	CEMS	622.2

	--	--	142.1 ^b (8-hr)	Stack test EPA Method 10	
VOC	--	--	9.45	EPA Method 25A	41.4
^a This emission limit meets the Chapter 138 NOx RACT requirement.					
^b Compliance with the SO ₂ , NO _x , VOC, and CO lb/hour emission limits shall be demonstrated by stack testing upon Department request. Should stack testing be required, the stack test will be conducted under normal boiler operating conditions. Operation during periods of startup, shutdown, and malfunctions shall not constitute normal operating conditions. Minimum stack test run times would be as follows: SO ₂ (3-hour), NO _x (24-hour), and CO (8-hour).					

- F. The 0.30 lb/MMBtu NO_x emission limit is based on a 24 hour daily block average, via CEM. A 24 hour block average basis shall be defined as midnight to midnight. WSEC shall maintain the NO_x CEM in accordance with Chapter 117. The CEM shall meet the monitoring requirements of 40 CFR Part 60.13 as well as 40 CFR Part 60, Appendices B and F.
- G. The 0.45 lb/MMBtu CO emission limit is based on a 30 day rolling average basis via CEM. WSEC shall maintain the CO CEM in accordance with Chapter 117. The CEM shall meet the monitoring requirements of 40 CFR Part 60.13 as well as 40 CFR Part 60, Appendices B and F.
- H. WSEC shall operate Boiler 1 such that the opacity does not exceed 20% over a six minute average except for one six minute period per hour of not more than 27%, subject to the provisions of Title 38 MRSA §349. Compliance with the opacity limits shall be demonstrated on a six minute block average basis, by means of a COMS located as specified in 40 CFR Part 60, Appendix B, Specification 1. WSEC shall maintain the COM in accordance with Chapter 117.
- I. WSEC shall monitor and record the following as specified for Boiler #1:

Parameter	Monitor	Record
fuel oil firing rate *	continuously	continuously
total steam production **	continuously	continuously

* monitored with a fuel flow totalizer or continuous fuel flow meter

** monitored with a differential pressure flow meter

Each parameter monitor must record accurate and reliable data. If the parameter monitor is recording accurate and reliable data less than 98% of the source operating time within any quarter of the calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the parameter monitor was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions.

- J. Emissions from Boiler 1 shall vent to Stack 1 which shall be at least 160 feet AGL and represent greater than 71% of the formula GEP stack height.
- K. Particulate matter (PM, PM₁₀) emissions from Boiler 1 shall be controlled by the operation and maintenance of a mechanical dust collector (cyclone) followed by an electrostatic precipitator (ESP).
Periodic monitoring for particulate matter emissions shall be the following, taken once per shift:
 - 1. Mechanical dust collector (cyclone) gas pressure drop.
 - 2. ESP primary and secondary voltages on each field.
- L. WSEC shall conduct a particulate matter emission stack test once every two years.

(25) Alternative Wood Fuels

- (1) WSEC shall limit the firing of alternative wood fuels to no more than 78.7 MMBtu/hr, which equates to 25% of the maximum potential heat input limit of 315 MMBtu/hr, on a 30 day rolling average basis. Compliance with this limit shall be demonstrated by the following records:
 - a. The number of buckets of the alternative wood fuel fed to the boiler on a daily basis;
 - b. The weight assumed for each bucket load
 - c. The corresponding higher heating value of the alternative wood fuel as measured by a monthly composite of alternative wood fuel samples, collected for every six hour period during which alternative wood fuel is combusted. The composite shall be tested on a monthly basis; and
 - d. WSEC shall calculate the heat input rate from alternative wood fuels from the above records on a daily basis and a 30 day rolling average basis using the latest monthly composite sample's higher heating value.
- (2) Alternative wood fuels may include utility poles, railroad ties, and construction/demolition wood, or any other alternative wood fuel which is determined by the Department to be substantially equivalent to the composition of those alternative wood fuels currently listed here. WSEC shall maintain records of the type and quantity, in tons, of alternative wood fuels combusted within Boiler #1, and shall make the records available to the Department upon request.

(26) WSEC may burn up to a maximum of 10,000 gallons per year of Specification or Off-Specification Waste Oil, as defined by the Bureau of Remediation and Waste Management (BRWM) of the Department, which is generated onsite. A log shall be kept recording the following for the waste oil burned in Boiler #1:

A. Quantity and type (Specification or Off-Specification, etc.)

B. Sulfur content

Note: The sulfur content shall be documented by purchase records from the supplier or by test results performed on a representative sample of onsite generated Specification or Off-Specification waste oil, both within the accuracy of the test methods used.

C. The most recent test results performed on a representative sample

D. The waste oil shall be counted as part of the 91,000 gallons per year fuel oil limitation as specified in Condition 24 (E) of this license.

These logs shall be made available to the Department upon request.

[MEDEP Chapter 140, BPT]

(27) WSEC shall limit on-site ash storage to the ash hut and the emergency ash storage pile. The ash stored at the emergency ash storage pile shall be limited to 30 days. At all times, except during maintenance and upset conditions, ash from the precipitators, multicyclones, and the grates, shall be sufficiently wetted at the point of discharge, so as to prevent the potential for visible emissions. All ash shall be transported to approved utilization sites. All ash transported to off-site locations shall be transported in covered trucks or containers.

[MEDEP Chapter 140, BPT] **Enforceable by State Only**

(28) General Process Sources

At all times, except during maintenance and upset conditions, ash from the precipitators multicyclones, and the gates, shall be sufficiently wetted at the point of discharge, so as to prevent the potential for visible emissions. All ash shall be transported to approved utilization sites. All ash transported to off-site locations shall be transported in covered trucks or containers. WSEC shall control fugitive dust emissions from ash storage and transfer such that visible dust emissions do not occur for more than 5 minutes in any one hour period beyond the plant boundary. Compliance with this condition shall be determined in accordance with Method 22 of Title 40, Part 60, Appendix A of the Federal Regulations.

[MEDEP Chapter 140, BPT] **Enforceable by State Only**

(29) Fugitive Emissions

WSEC shall control fugitive dust emissions from roads and fuel piles at the facility such that visible dust emissions do not occur for more than 5 minutes in any one hour period beyond the plant boundary. Compliance with this condition

shall be determined in accordance with Method 22 of Title 40, Part 60, Appendix A of the Federal Regulations.

[MEDEP Chapter 140, BPT] **Enforceable by State Only**

(30) **CEMS, COMS, and Parameter Monitors**

The CEMS, COMS, and parameter monitors required by this license shall be the primary means of demonstrating compliance with emission standards set by this Order, statute, state or federal regulation, as applicable. WSEC shall comply with the following:

A. **Performance Specifications** [MEDEP Chapter 117]

All CEMS and COMS shall meet the sampling and performance criteria specified in 40 CFR Part 51 Appendix P, and shall be operated in accordance with 40 CFR Part 60 Appendix F and Chapter 117 of the Departments regulations.

1. If the continuous emission monitoring system for the gaseous emissions is recording accurate and reliable data less than 90% of the source-operating time within any quarter of the calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the CEMS was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions.
2. If the continuous opacity monitoring system is recording accurate and reliable data less than 95% of the source-operating time within any quarter of the calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the continuous emission monitoring system was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions.
3. Conduct Relative Accuracy Testing (RATA) and/or Performance Audits in accordance with Chapter 117 of the Department's regulations.
4. Develop and maintain an updated quality assurance plan for all CEMS and COMS in accordance with 40 CFR Part 60 Appendix F and Chapter 117 of the Department's regulations.

B. **Recordkeeping** [MEDEP Chapters 117 and 140, BPT]

For all of the continuous emission monitoring (CEMS), continuous opacity monitor (COM), equipment parameter monitoring and recording, required by this license, the licensee shall maintain records of the most current six year period and the records shall include:

1. Documentation which shows monitor operational status during all source operating time, including specifics for calibration and audits; and
2. A complete data set of all monitored parameters as specified in this license. All parameter records shall be made available to the Bureau of Air Quality upon request.
3. For all CEMS and COM, the records shall include:
 - a. Documentation that all CEMS and COM are continuously accurate, reliable and operated in accordance with Chapter 117, 40 CFR Part 51, Appendix P, and 40 CFR Part 60, Appendices B and F;
 - b. Records of all measurements, performance evaluations, calibration checks, and maintenance or adjustments for each CEMS and COMS as required by 40 CFR Part 51 Appendix P;
 - c. Upon the written request by the Department a report or other data indicative of compliance with the applicable emission standard for those periods when the CEMS or COMS were not in operation or produced invalid data. Methods allowed by 40 CFR Part 75 and/or 40 CFR Part 60 Method 19 may be used to demonstrate compliance with applicable emission standards. Evidence indicating normal operations shall constitute such reports or other data indicative of compliance with applicable emission standards. In the event the Bureau of Air Quality does not concur with the licensee's compliance determination, the licensee shall, upon the Bureau of Air Quality's request, provide additional data, and shall have the burden of demonstrating that the data is indicative of compliance with the applicable standard; and
 - d. A 24-hour block average basis shall be calculated as the arithmetic average of not more than 24 – one hour block periods. Only one 24-hour block average shall be calculated for one day, beginning at midnight. A valid 24-hour block average must contain at least 12 hours during which operation occurred. Hours in which no operation occurs shall not be included in the 24-hr block average calculation.

C. Quarterly Reporting

The licensee shall submit a Quarterly Report to the Bureau of Air Quality within 30 days after the end of each calendar quarter, detailing the following, for the parameter monitors, Continuous Emission Monitoring Systems (CEMS) or Continuous Opacity Monitoring Systems (COMS) required by this license:

1. All control equipment downtimes and malfunctions;
2. All CEMS or COMS downtimes and malfunctions;
3. All parameter monitor downtimes and malfunctions;
4. All excess events of emission and operational limitations set by this Order, Statute, state or federal regulations, as appropriate. The following information shall be reported for each excess event;
 - a. Standard exceeded;
 - b. Date, time, and duration of excess event;
 - c. A description of what caused the excess event;
 - d. Maximum and average values of the excess event, reported in the units of the applicable standard, and copies of pertinent strip charts and printouts when requested;
 - e. The strategy employed to minimize the excess event; and
 - f. The strategy employed to prevent reoccurrence.
5. A report certifying there were no excess emissions, if that is the case.
[MEDEP Chapter 117]

(31) **Semiannual Reporting**

The licensee shall submit semiannual reports every six months to the Bureau of Air Quality. The semiannual reports are due with every other quarterly report, the semiannual reports are due Jan 30th and July 30 of each year.

- A. Each semiannual report shall include a summary of the periodic monitoring required by this license.
- B. All instances of deviations from license requirements and the corrective action taken must be clearly identified and provided to the Department in summary form for each six-month interval.

[MEDEP Chapter 140]

(32) **Annual Compliance Certification**

WSEC shall submit an annual compliance certification to the Department in accordance with Condition (20) of this license. The initial annual compliance certification is due Jan 30, 2001.

[MEDEP Chapter 140]

(33) **Annual Emission Statement**

The licensee shall annually report to the Department, in a specified format, fuel use, operating rates, use of materials and other information necessary to accurately update the State's emission inventory.

[MEDEP Chapter 137]

(34) Miscellaneous Insignificant Emission Unit

Emission Unit	Origin and Authority	Requirement Summary
Boiler #2	Chapter 101, Section 2(A), Chapter 140, BPT	Visible emissions shall not exceed an opacity of 20 percent on a six (6) minute block average basis, for more than two (2) six (6) minute block averages in a 3-hour period.

[MEDEP Chapter 140, BPT]

(35) The licensee is subject to the State and Federal regulations listed below:

Chapter 102	Open Burning
Chapter 109	Emergency Episode Regulation
Chapter 110	Ambient Air Quality Standard
Chapter 113	Growth Offset Regulation

(36) **Certification by a Responsible Official**

All documents and reports (including quarterly reports, semiannual reports, and annual compliance certifications) required by this license to be submitted to the Bureau of Air Quality must be signed by a responsible official.

[MEDEP Chapter 140]

(37) This term of this license shall be five (5) years from the signature date below.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2000.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

**Wheelabrator Sherman Energy Co.)
Penobscot County)
Sherman Station, Maine)
A-67-70-A-I 21**

**Departmental
Findings of Fact and Order
Part 70 Air Emission License**

Date of initial receipt of application 10/28/1997

Date of application acceptance 10/28/1997

Date filed with Board of Environmental Protection _____

This Order prepared by Edwin Cousins, Bureau of Air Quality