

**FOSSIL FUELS COMBUSTION EQUIPMENT
INSTRUCTIONS FOR COMPLETING FORM APC 5-0 (Rev. 10/04/05)**

The term "Criteria" refers to the "New York City Engineering Criteria Fuel Oil Burning Equipment" effective July 1, 1973.

**This criteria is available at the
Department of Environmental Protection
59-17 Junction Boulevard, 9th Floor, Flushing, New York 11373-5108
Telephone Number: (718) 595-3855**

ITEM NUMBER	NAME	SPECIFIC INSTRUCTIONS
1	OWNER'S NAME	Full legal name of owner of premise.
2-5	NUMBER & STREET ADDRESS	Complete mailing address of owner of premise.
6	FACILITY CLASSIFICATION	Check Appropriate Box e.g.: Hospital owned residence; check residential. College owned dormitory; check residential College owned power plant; check utility.
7	OWNER OR OFFICER'S NAME & TITLE	Owner or Officer of firm responsible for authorizing P.E. or R.A. to file application.
8	OWNER OR OFFICER'S SIGNATURE	The Signatory shall be the proprietor where the business is a sole proprietorship. If the business is a partnership, the signatory shall be a partner. In the case of a corporation, the signatory shall be an officer of the corporation. In all instances, the signatory must indicate his title after his signature.
9	TELEPHONE	Telephone number of person named in Item # 7 - Include area code.
10	NAME OF P.E. OR R.A.	Full name of Professional Engineer or Registered Architect engaged by person named in Item # 7 to file APC 5-0 form.
11	TELEPHONE	Telephone number of person named in Item # 10 - Include area code.
12-15	NUMBER AND STREET ADDRESS	Complete business address of person named in Item # 10.
16		Professional Engineer or Registered Architect named in Item # 10 must place his seal to the left of the certification statement.
17	NEW YORK STATE P.E. OR R.A. LICENSE NUMBER	New York State Professional Engineer's or Registered Architect's License number of person named in Item # 10.
18	SIGNATURE OF PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT	Note certification in Item # 16. Signature must correspond with person in Item # 10. Professional Engineer's or Registered Architect's seal and signature must be affixed before application will be processed.
19	FACILITY NAME (IF ANY)	If subject premise has a name which is displayed on a storefront sign or is commonly known (e.g. "ABCD" Garden Apartments) indicate such name in item # 19. If no such name exists indicate "none".
20-22	FACILITY LOCATION	Complete premises address of combustion equipment being filed for. Do not abbreviate street address (Item # 20). Be sure to include Borough, Tax Block and Lot numbers, and Zip Code (Items #'s 21-22).
23	BUILDING SECTION OR NUMBER	If premise identified in Item # 20 is part of housing or commercial complex where buildings have identifying numbers and/or letters, provide same.
24	EQUIPMENT LOCATION	Identify physical location, by floor number, of combustion equipment within premise.
24A	NO. OF FLOORS	Total number of floors in subject premise.
	NO. OF APARTMENTS	Total number of apartments in subject premise.
	NO. OF ROOMS	Total number of rooms in subject premise.

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ITEM NUMBER	NAME	SPECIFIC INSTRUCTIONS
	TYPICAL FLOOR AREA	Area in square feet of a typical floor in subject premise.
25-26		For Department use only
28	FACILITY NEW / EXISTING	Check "New" if building, housing boiler was completed on or after July 1, 1973 and submit heat load calculation. Check "Existing" if building, housing boiler, was completed prior to July 1, 1973. Refer to Part III, Section 1.2 of the Criteria (Refer to Item #'s 49 and 59).
29	EMISSION POINT I.D. NUMBER	For Department Use Only.
29A	CHIMNEY NEW / EXISTING	Check "New" if chimney has been installed on or after July 1, 1973. Check "Existing" If chimney is existing (i.e. Installed prior to July 1, 1973).
29B	TYPE OF CHIMNEY RESIDENTIAL / COMMERCIAL	Refer to Appendix I, pages 24 and 26 of the Criteria for definitions of residential and commercial chimneys.
29C	CLEANOUT CHAMBER YES / NO	Refer to Part III, section 5.7.1 of the Criteria.
30	ELEVATION AT GROUND LEVEL (FT).	Specify elevation above sea level to the centerline of the entrance of the combustion gases into the chimney.
32	CHIMNEY HEIGHT (FEET)	Refer to Appendix 1, Page 24 of the Criteria for definition.
33	CHIMNEY INSIDE DIMENSIONS AT OUTLET (IN.)	Specify inside dimension of chimney outlet in inches.
34	LEAVE BLANK	
34A	RAINCAP OR COVER NO	A pre-answered question in which the filing engineer confirms that no raincap or cover exists at chimney outlet.
35	EXIT VELOCITY(FT/SEC)	Chimney gas exit velocity in feet per second.
36	EXIT FLOW RATE (SCFM)	Chimney gas exit flow rate in standard cubic feet per minute (SCFM). Calculate the flow rate according to the following formula: $\text{SCFM} = (\text{gph}) \left[24.2 + \frac{(\% \text{ excess air}) (22.9)}{100} \right] \frac{(\text{Te} + 460)}{520}$ where, gph = burner oil delivery rate in gallons per hour Te = exhaust gas temperature, °F.
37	INDUCED DRAFT FAN YES / NO	Check "Yes" or "No"
38	INDUCED DRAFT FAN NEW / EXISTING	Check "New" if fan installed on or after July 1, 1973 and submit draft calculation. Check "Existing" if fan installed prior to July 1, 1973. Refer to Part III, Section 5.2 of the Criteria.
Item 41, 42, 43, 45, 46, and 47 apply only to installation of 250,000,000 BTU/Hour total heat input or larger. (See Item# 44.)		
41	PARTICULATE EMISSION RATE (Lbs/MILLION BTU)	If application is for a new and/or modified installation, specify anticipated particulate emission rate in Lbs/Million BTU for the total heat input specified in Question #44 based on stack tests performed on pilot, similar full scale installations or from AP-42 emission factors. If application is for an existing installation specify actual emission rate (Lbs/Million BTU) based on accepted stack test(s) of this installation.
42	SO2 EMISSION RATE (Lbs/MILLION BTU)	If application is for a new and/or modified installation specify anticipated SO2 emission rate in Lbs/Million BTU for the total heat input specified in Question #44 based on anticipated sulfur content of fuel to be used specified in Question 66/366, or from AP-42 emission factors. If application is for an existing installation, specify SO2 emission rate (Lbs/Million BTU) based on accepted stack tests, stack monitoring or fuel analysis of the sulfur content in conjunction with the total heat input specified in question # 44.

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ITEM NUMBER	NAME	SPECIFIC INSTRUCTIONS
43	NO _x EMISSION RATE (Lbs/MILLION BTU)	If application is for new and/or modified installation specify anticipated NO _x emission rate in Lbs/Million BTU for the total heat input specified in Question # 44 based on stack tests performed on pilot, similar full scale installations, or from AP-42 emission factors. If application is for an existing installation, specify NO _x emission rate (Lbs/Million BTU) based on accepted stack tests or stack monitoring of this installation.
44	TOTAL HEAT INPUT (MILLION BTU/HR)	If application is for a new and/or modified installation, specify in Million BTU/Hr the total anticipated maximum operating heat input of stationary combustion installation (all units connected to same chimney) i.e. express 12,5000,000 btu/hr as 12.5). If application is for an existing installation, specify the total heat input in million BTU/hr at which the installation (all units connected to the same chimney) is operating. If a stack test was performed, specify heat input during stack tests.
45	NAME OF MANUFACTURER AND MODEL # OF CONTINUOUS SMOKE MONITOR	Specify the name of the manufacturer and model number of the continuous smoke monitor. Also check "Yes" or "No" to indicate whether a device to provide a permanent record is provided for.
46	NAME OF MANUFACTURER AND MODEL # OF CONTINUOUS SO ₂ MONITOR	Specify the name of the manufacturer and model number of the continuous SO ₂ monitor. Also check "Yes" or "No" to indicate whether a device to produce a permanent record is provided for.
47	NAME OF MANUFACTURER AND MODEL # OF CONTINUOUS NO _x MONITOR	Specify the name of the manufacturer and model number of the continuous NO _x monitor. Also check "Yes" or "No" to indicate whether a device to produce a permanent record is provided for.
BOILER SECTION		
47A	NUMBER OF BOILERS APPLIED FOR	Submit total number of identical boilers applied for. Note that only identical make and model equipment may be included on any one application.
48	UNIT I.D. LETTER: A	Pre-answered question.
49	BOILER NEW / EXISTING	Check "New" if boiler was installed on or after July 1, 1973, and submit draft calculations. Note that a new boiler must have prior DEP Fossil Fuels acceptance. The boiler ratings (gross output and gross output firing rate) must be consistent with the ratings accepted by the DEP Fossil Fuels Section for the boiler in question. Check "Existing" if boiler was legally installed prior to July 1, 1973.
50	BOILER TYPE	Specify the two digit code number that best represents the unit type:
		01 Package boiler.
		02 Built up boiler.
		08 Acceptable steel oil-fired boiler assembly.
		09 Acceptable cast-iron oil fired boiler assembly.
		10 Scotch marine boiler.
		11 Cast iron boiler with water backed combustion chamber and water all around combustion chamber.
		12 Boilers (other than scotch marine) having water cooled furnaces, including those with refractory lining where the burner centerline is above the mudleg of the boiler.
		13 Boilers having refractory lined solid wall settings.
		14 HRT (Horizontal Return Turbular) Boilers.
51	BOILER MANUFACTURER AND MODEL NUMBER	Specify the name of the manufacturer of the boiler and the complete manufacturer's model number.

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ITEM NUMBER	NAME	SPECIFIC INSTRUCTIONS
51A	TYPE OF BOILER STEEL / CAST IRON STEAM / HOT H ₂ O	Check appropriate items.
51B	CHECKERWORK COMBUSTION CHAMBER FLOOR NO	Pre-answered question; refer to Part III, Section 5.4.3. of the Criteria.
51C	HEATING SURFACE (FIRESIDE) (SQ. FT.)	Indicate fireside heating surface of boiler in square feet.
51D	GROSS OUTPUT (BTU/HR)	Submit boiler gross output in BTU/Hr; refer to Part III, Section 2.1 of the Criteria
51E	GROSS OUTPUT FIRING RATE (GPH)	Enter boiler gross output firing rate in gallons per hour; refer to Part III , Section 2.2 of the Criteria
51F	ADDITIONAL COMBUSTION EQUIPMENT ON CHIMNEY OR IN BOILER ROOM YES / NO	Check "Yes" if other combustion equipment is operated in the same room or is attached to the same chimney, as the filed equipment. Show other equipment on plans: Identify other boiler/incinerator/burner/etc. manufacturer's name and model number(s), DEP CA/CB or source emission numbers, draft controls, firing rates, ventilation, and all pertinent details. Check "No" if no other combustion equipment exists in same boiler room or on same chimney.
51G	LEAD LAG SYSTEM YES / NO	Check "Yes" if multiple boilers covering the same load are employed; refer to Part III, Section 6.7 of the Criteria. Check "No" if single boiler covers entire load or each boiler carries a distinct load. Supply manufacturer's name and complete model number for a lead-lag system which has been approved by the department.
51H	TYPE OF LOAD ON BOILER; SPACE HEATING DOM HOT H ₂ O AIR CONDITIONING PROCESS	Check appropriate loads. (Must agree with Item # 29B).
INSTALLER'S STATEMENT		
	COMPANY NAME OF INSTALLER	Firm hired by person named in Item # 7 which employs licensed installer.
	COMPANY ADDRESS	Complete business address of above firm.
	INSTALLER'S NAME	Full name of individual licensed by New York City to perform required work.
	INSTALLER'S SIGNATURE	Signature of licensed individual who attests to the certification appearing above his name.
	N.Y.C. OIL BURNER LICENSE #	Submit license number.
	CLASS	Class of installer's license - Class A required for #6 oil.
BURNER SECTION		
52	UNIT HEAT INPUT (MILLION BTU/HR)	Heating value of fuel times burner oil delivery rate. Heating value for all fuel oil is 140,000 BTU/Gal. Heating value of natural gas is 1000 BTU/Cu Ft. Specify answer in Million BTU/Hr, i.e., express 8,000,000 BTU/Hr as 8.0.

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ITEM NUMBER	NAME	SPECIFIC INSTRUCTIONS																																								
58	BURNER TYPE	Enter the appropriate two-digit code to specify the type of burner used:																																								
		<p>Coal</p> <table border="1"> <tr><td>01</td><td>Pulverized, dry bottom.</td></tr> <tr><td>03</td><td>Pulverized, wet bottom without flyash reinjection.</td></tr> <tr><td>05</td><td>Pulverized, wet bottom with flyash reinjection</td></tr> <tr><td>07</td><td>Cyclone.</td></tr> <tr><td>09</td><td>Pulverized, general.</td></tr> <tr><td>13</td><td>Spreader stoker with flyash reinjection.</td></tr> <tr><td>15</td><td>All other stokers.</td></tr> <tr><td>16</td><td>Spreader stoker without flyash reinjection</td></tr> <tr><td>17</td><td>Hand-fired</td></tr> <tr><td>19</td><td>All not listed</td></tr> </table> <p>Oil-Atomizers</p> <table border="1"> <tr><td>51</td><td>Pressure atomized burner</td></tr> <tr><td>52</td><td>Steam atomized burner</td></tr> <tr><td>53</td><td>Air atomized burner</td></tr> <tr><td>54</td><td>Rotary cup burners</td></tr> <tr><td>55</td><td>Sonic Atomizer</td></tr> <tr><td>59</td><td>Other oil atomization burners</td></tr> </table> <p>Natural Gas</p> <table border="1"> <tr><td>60</td><td>Atmospheric gas burner</td></tr> <tr><td>61</td><td>Natural draft power gas burner</td></tr> <tr><td>62</td><td>Forced draft power gas burner</td></tr> <tr><td>69</td><td>Other natural gas types</td></tr> </table>	01	Pulverized, dry bottom.	03	Pulverized, wet bottom without flyash reinjection.	05	Pulverized, wet bottom with flyash reinjection	07	Cyclone.	09	Pulverized, general.	13	Spreader stoker with flyash reinjection.	15	All other stokers.	16	Spreader stoker without flyash reinjection	17	Hand-fired	19	All not listed	51	Pressure atomized burner	52	Steam atomized burner	53	Air atomized burner	54	Rotary cup burners	55	Sonic Atomizer	59	Other oil atomization burners	60	Atmospheric gas burner	61	Natural draft power gas burner	62	Forced draft power gas burner	69	Other natural gas types
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59	BURNER NEW / EXISTING	<p>Check "New" if burner installed on or after July 1, 1973; refer to Part III, Sections 3.5 and 3.6 of the Criteria. If the burner is "New" it must have prior DEP Fossil Fuels Section acceptance. The burner oil delivery rate indicated must correspond to firing rate accepted for the burner in question.</p> <p>Check "Existing" if burner was legally installed prior to July 1, 1973; refer to Part III, Section 3.7 and 3.8 of the Criteria.</p>																																								
60	NUMBER OF BURNERS	Specify the total number of burners mounted on the boilers being filed for on the same application. All burners on a single application must be identical.																																								
61	BURNER MANUFACTURER'S NAME AND MODEL NUMBER	Specify the name of the manufacturer of the burner and the manufacturer's model number.																																								
62	BURNER OIL DELIVERY RATE (GPH)	The maximum oil delivery rate to the burner nozzle as stipulated in Part III, Section 3 of the Criteria. Also see Engineering Directive number 10 of 1974.																																								
<p>Note: Items #63 to #72 apply to primary fuel. Items #363 to #372 apply to secondary fuel (if any).</p>																																										
<p>In instances where more than two types of fuel are filed for, an additional APC 5-0 is required (in triplicate). This additional APC 5-0 will require the following only: Owner's name (Item #1), Owner's Address (Item #2) and additional burner information (Items #63 to #372).</p>																																										
63, 363	HOURS/DAY	Average number of hours per day burner is or will be operating.																																								
64, 364	DAYS/YEAR	Average number of days per year burner is or will be in operation.																																								

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ITEM NUMBER	NAME	SPECIFIC INSTRUCTIONS
66, 366	FUEL TYPE	Specify the appropriate code number for the type of fuel burned or to be burned: 01 - Anthracite Coal 12 - No. 2 Fuel Oil 14 - No. 4 Fuel Oil 16 - No. 6 Fuel Oil 21 - Natural Gas 22 - Liquid Petroleum Gas 99 - Other
70, 370	AVERAGE QUANTITY/HOUR	Average quantity of fuel burned per hour in lbs. for coal, gallons for oil or cubic feet for gas during normal heating season.
72, 372	QUANTITY/YEAR	Total quantity of fuel burned per year in lbs. for coal, gallons for oil or cubic feet for gas.
COMBUSTION CONTROLLER		
74	ON-OFF	Refer to Part III, Table I of the Criteria, and Engineering Directive Number 10 of 1974.
75	LOW-HIGH-OFF WITH LOW FIRE START	Refer to Part III, Table I of the Criteria, and Engineering Directive Number 10 of 1974.
76	LOW-HIGH-LOW-OFF WITH PROVEN LOW FIRE START	Refer to Part III, Table I of the Criteria, and Engineering Directive Number 10 of 1974.
77	FULL MODULATION WITH PROVEN LOW FIRE START	Refer to Part III, Table I of the Criteria, and Engineering Directive Number 10 of 1974.
78	DIRECT RESPONSE LINKAGE YES	Pre-answered question. Direct response linkage required; refer to Part III, Section 5.4.1 of the Criteria.
79	HI/LOW MODULATING MOTOR	Submit manufacturer's name and complete model number.
80	FIRING RATE CONTROL	Submit manufacturer's name and complete model number.
81	RAPID DISCONNECT LINKAGE YES / N/A	Check "Yes" if applicable to burner type filed. Refer to Part III, Section 5.4.1. of the Criteria. Check "N/A" if burner design is not relevant to Part III, Section 5.4.1 of the Criteria.
82	WINDBOX YES / NO	Check "Yes" if windbox is existing or is required; refer to Part III, section 5.5.1 of the Criteria and Appendix definition of windbox on page. 26 of the Criteria. Check "No" if windbox is not existing or not required.
83	SHROUDED SECONDARY AIR DAMPER YES / N/A	Check "Yes" if secondary air damper is required or existing; refer to Part III, section 5.4.2 of the Criteria. Check "N/A" if secondary air damper is not applicable.
84	PREPURGE AND POSTPURGE YES / NO	Check "Yes" if required, check "No" if not required; refer to Part III, section 6.6 of the Criteria.
85	BURNER ELECTRICALLY INTERLOCKED WITH ANY MOTORIZED LOUVER(S), MOTORIZED DAMPER(S), MECHANICAL VENTILATION FAN(S), INDUCED DRAFT FAN(S), AND FORCED DAFT FAN(S) YES	Pre-answered question in which the filing engineer is obliged to confirm the above statement; refer to Part III, section 6.5 of the Criteria.
OIL HANDLING		
86	NO. OF PRIMARY OIL HEATERS	For No. 6 Fuel Oil, indicate the number of primary heaters, the name of the manufacturer and the complete manufacturer's catalog number; refer to Part III, section 4.2.1 of the Criteria.

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ITEM NUMBER	NAME	SPECIFIC INSTRUCTIONS
86A	STEAM / HOT H ₂ O / ELECTRIC	Check appropriate box to indicate whether the heat source for the primary oil heaters is steam, hot water or electricity. When steam is used, item 96B must be compatible with the steam pressure required to satisfy the heating requirements. When hot water is used, item 96B must be compatible with the water temperature required to satisfy the heating requirements.
86B	CAPACITY, ETC.	Submit the capacity of the primary oil heater in GPH for the specific temperature rise at the steam pressure or water temperature maintained in item 96B. Refer to Part III, section 4.1 of the Criteria and Engineering Directive number 10 of 1974.
87	CIRCULATION \\ FORCED / GRAVITY	Check "Forced" if the primary heater is equipped with a hot water circulator. Check "Gravity" if it does not have a pump.
88	NON-CONTAMINATING YES	Pre-answered question in which the filing engineer certifies that the primary oil heater selected is a non-contaminating type; refer to Part III, section 4. 2. 1 of the Criteria.
89	BLOWDOWN AND THROTTLING VALVES YES	Pre-answered question, in which engineer certifies that primary oil heater meets blowdown and throttling valve requirements of Part III, section 4. 2. 1 of the Criteria.
90	NO. OF AUXILIARY (ELECTRIC) HEATER(S)	Indicate total number of auxiliary electric heaters associated with all identical boilers filed on this application. Do not include electric heaters submitted as "primary oil heaters".
90A	CAPACITY (EA) WATTS	Refer to Part III, section 4. 2. 2. Of the Criteria, and Engineering Directives Number 4X of 1974 and Number 10 of 1974.
91	ELECTRIC HEATER(S) UNDER CONSTANT TEMPERATURE CONTROL YES	Pre-answered question in which filing engineer certifies that electric heater is under thermostatic or oilstat control, refer to Engineering Directive Number 5 of 1974.
92	OILSTATS AS PER PLAN DETAILS YES	Pre-answered question; refer to Part III, section 4.2.4 and 6.3 of the Criteria, and Engineering Directive Number 5 of 1974.
93	COLD OIL INTERLOCK YES	Pre-answered question; refer to Part III, Section 6.3 of the Criteria, and Engineering Directive Number 5 of 1974.
94	TEMPERATURE GUAGES AS PER PLAN DETAILS YES	Pre-answered question; refer to Part III, Section 4.2.6 of the Criteria.
95	ALL OIL PIPE LINES ADEQUATELY INSULATED YES	Pre-answered question; refer to Part III, Section 4.2.5 of the Criteria.
96A	AUTOMATIC PRESSURE DEVICE TO MAINTAIN BOILER STEAM PRESSURE YES / NO	Specify manufacturer's name, and complete catalog number of device. Specify minimum pressure setting in psig. Check "Yes" if filing engineer certifies that one is existing or will be installed before inspection is requested. Refer to Part III, Sections 6.1 and 6.2 of the Criteria. Check "No" if not required.
96B	AUTOMATIC TEMPERATURE DEVICE TO MAINTAIN BOILER WATER TEMPERATURE	Specify manufacturer's name, and complete catalog number of device. Specify temperature setting in degrees Fahrenheit. Check "Yes" if filing engineer certifies that such a device is existing or will be installed before an inspection is requested. Check "No" if not required. Refer to Part III, Sections 6.1 and 6.2 of the Criteria.
GAS HANDLING		
97	MECHANICAL VENTILATION FAN(S) YES / NO	Check "Yes" if required or desired. Check "No" if not required.
98	EXHAUST FAN(S) IN BOILER ROOM NO	Pre-answered question in which filer certifies that statement 98 is true.

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ITEM NUMBER	NAME	SPECIFIC INSTRUCTIONS
99	LOUVERED OPENING YES/NO GROSS AREA (SQ. IN.) EFFICIENCY % NET AREA (SQ. IN.)	Check "Yes" if a fixed open louver will be utilized. If "Yes", specify the gross area and net area in square inches and indicate the percent efficiency. Refer to Part III, Sections 5.3 and 5.3.2 of the Criteria. Check "No" if a fixed open louver will not be utilized.
99A.	LOUVER SIZING	Pre-answered question in which filing engineer certifies that an adequate louver will be installed unless adequate ventilation is accomplished mechanically in accordance with Part III, Section 5.3 of the Criteria.
100	VENTILATION DUCT YES / NO NEW / EXISTING	Check "Yes" if ventilation duct(s) is (are) used. Check "New" if duct(s) is (are) installed on or after July 1, 1973. Check "Existing" if installed prior to July 1, 1973. Show cleanout ports on breeching plan. Refer to Part III, Section 5.3.3 of the Criteria. Check "No" if ventilation duct(s) is (are) not used
101	MOTORIZED LOUVER/DAMPER YES / NO	Check "Yes" if motorized louvers are required or existing. Check "No" if not. Refer to Part III, Section 5.3.4 of the Criteria.
DRAFT CONTROL		
102	BAROMETRIC DAMPER YES/NO NOMINAL SIZE (IN.) NOMINAL AREA (SQ. IN.)	Check "Yes" if barometric damper is acceptable as per Part III, Section 6.8.5 of the Criteria. If "Yes", specify its diameter in inches and its area in square inches. Check "No" if another form of draft control is used.
103	POWER OPERATED DRAFT REGULATOR WITH LOW DRAFT CUTOFF YES/NO MANUFACTURER: CATALOG NO.:	Check "Yes" if power operated draft regulator is required as per Part III, Sections 6.8 and Appendix I of the Criteria. If "Yes", indicate the original manufacturer and complete catalog number of basic unit and of low draft switch. If the low draft switch is manufactured by a different company than the draft regulator, submit the complete manufacturer's name and catalog number of the switch. Check "No" if not required.
103A	FULL SIZE DAMPER YES	Pre-answered question in which filing engineer certifies that barometric damper, if used, is in compliance with Part III, Section 6.8.5 of the Criteria.
103B	AXIS-ROD OF DAMPER IS OF SQUARE X-SECTION OR IF ROUND IS WELDED TO THE CONTROL ARM YES	Pre-answered question in which filing engineer certifies that axis rod of power operated draft regulator, if used, is in compliance with Part III, Section 6.8.3 of the Criteria.
103C	ARROW PROVIDED ON AXIS- ROD TO INDICATE POSITION OF DAMPER YES	Pre-answered question in which filing engineer certifies that axis rod of power operated draft regulator, if used, is in compliance with Part III, Section 6.8.3 of the Criteria.
103D	DRAFT SAMPLING LINES ADEQUATELY SIZED AS PER PLAN DETAILS YES	Pre-answered question in which filing engineer certifies that draft sampling lines are in compliance with Part III, Section 6.8.4 of the Criteria, if a power operated draft regulator is used
104	FULL SIZE CLEANOUT PLUG YES	Pre-answered question in which filing engineer certifies that clean out plug is in compliance with Part III, Section 6.8.4 of the Criteria, if a power operated draft regulator is used.
105	ACCESS PORTS IN BREECHING AND IN ANY VENTILATION DUCT(S) YES	Pre-answered question in which filing engineer certifies that access ports are in compliance with Part III, Section 5.3.3 and 5.6.1 of the Criteria.
106	SMOKE ALARM WITH COMBUSTION SHUTOFF YES / NO MANUFACTURER: CATALOG NO.:	Check "Yes" if smoke alarm is required. If "Yes", indicate manufacturer's name and complete catalog number of The Department approved smoke alarm; refer to Part III, Section 6.9 of the Criteria Check "No" if not required.

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ITEM NUMBER	NAME	SPECIFIC INSTRUCTIONS
107	AUDIO-VISUAL ALARMS INSTALLED AS PER PLAN DETAILS YES	Pre-answered question in which filing engineer certifies that smoke alarm is in compliance with Part III, Section 6.9.3 and of the Criteria.
EMISSION CONTROL		
109	CONTROL EQUIPMENT ID NO.	Pre-answered No. 01.
110	CONTROL EQUIPMENT STATUS NEW / EXISTING	Check the appropriate box to specify whether the device is "New" or "Existing".
111	CONTROL TYPE	Use the appropriate 3 digit code to designate the type of emission control equipment used:
		999 None
		002 Cyclone
		003 Setting Chamber
		004 Electrostatic Precipitator
		005 Venturi Scrubber
		006 Other Type Scrubber
		007 Filters (Baghouse)
		009 Other
112	MANUFACTURER AND MODEL NUMBER	Specify the name of the manufacturer of the emission control equipment and the manufacturer's model number.
113.	% EFFICIENCY	Specify the efficiency (%) for particulate collection equipment.
114.	HOW DETERMINED	Use the appropriate code number to designate how the efficiency was determined.
		1 Stack test on emissions control equipment specific in question 112 when used on this combustion installation.
		2 Stack test on emission control equipment specified in question 112 when used on identical combustion installation.
		3 Stack test on geometrically similar emission control equipment model when used on identical combustion installation.
		9 Other

ENGINEERING DIRECTIVE # 4X-74
AUXILIARY ELECTRIC HEATERS
JUNE 24, 1974

Effective immediately, Part III, Section 4.2.2 of the “Engineering Criteria for Fuel Oil Burning Equipment”, effective July 1, 1973 is revised to read as follows:

“4.2.2 An auxiliary electric heater (or heaters) under constant temperature control capable of heating [twice] the burner oil delivery rate or [twice] the gross output firing rate of the boiler, whichever is greater, from the temperature for easy pumpability to the temperature for proper atomization. The auxiliary electric heater (or heaters) shall be sized to provide the following minimum capacities:

Horizontal Rotary Cup, Steam and Air Atomizing ($\Delta T = 30F$).....	17 watts/gph*
Mechanical Atomizing ($\Delta T = 50F$).....	28 watts/gph*

*Where this factor is multiplied by twice the burner oil delivery rate or twice the gross output firing rate of the boiler, whichever is greater, to obtain the total required capacity of the auxiliary heater(s).”

Note that the words in brackets are deleted from the section.

ENGINEERING DIRECTIVE # 5-74
OIL TEMPERATURE CONTROL DEVICES (OILSTATS)
JUNE 26, 1974

The following regulations are issued pursuant to section 24-125 of the Air Pollution Control Code and shall apply to all fuel burning equipment applications (where applicable) filed at the Bureau of Environmental Compliance on or after August 1, 1974.

Part III, section 6.3 of the "Engineering Criteria for Fuel Oil Burning Equipment", effective July 1, 1973 is revised to read as follows:

6.3 An installation shall be provided with acceptable control device(s) so as to maintain the oil (where low sulfur NO. 6 oil is used) at appropriate temperature(s) as described in Part III, section 4 of the Criteria. [Two oil temperature control devices (oilstats) shall be provided, one located in the oil suction line prior to the separate oil circulating pump set which shall activate the separate pump set and the auxiliary heater(s) when the oil temperature falls below the temperature for easy pumpability. The other shall be located in the oil line near the inlet to the burner and shall activate the auxiliary heater(s) when the following two conditions exist: (a) the burner is required to respond to a load demand and (b) the temperature of the oil falls below the temperature for proper atomization] *The following oil temperature control devices (oilstats) shall be provided: (a) one oilstat, located in the oil suction line prior to the separate oil circulating pump set, shall activate the separate pump set when the oil temperature falls below the temperature for easy pumpability (b) one oilstat per auxiliary electric heater located in the heater (near the oil line outlet) shall activate the heater when the oil temperature falls below the temperature for proper atomization. In no case, however, shall this oilstat be set to maintain an oil temperature less than that required for easy pumpability.* A cold oil interlock shall be provided to prevent the fuel valve from opening unless the oil is at the minimum temperature specified in Part III, section 4 of the Criteria. If the fuel valve has properly opened and the temperature of the oil drops below the minimum required, the cold oil interlock shall close the oil valve.

Note: The material in brackets is deleted, the material in italics is added.

With regard to the above, the following recommendations are provided:

- a) the separate pump set should be installed directly after the fuel oil tank(s). The primary heater and the auxiliary heater should be installed following the separate pump set, respectively. The location of the separate pump set would then be such that when drawing oil from the fuel oil tank it would not be subjected to vaporized oil which could cause the pump to "slip", given the system is operating properly. And, furthermore, the location of the auxiliary heater, relative to the primary heater, would be such that the auxiliary heater would be activated when the primary heater could not provide sufficient heat.
- b) an additional oilstat, per auxiliary heater, should be provided, located near the outlet of the heater. This oilstat should be wired in series to the one required in revised section 6.3 above, and set at some upper limit temperature. The function of this oilstat would be to serve as a safety backup, should the required oilstat fail, and would de-energize the heater so as to prevent a hazardous condition.
- c) all electric heaters should be interlocked with the separate pump set such that the heaters could not be energized unless the pump is energized.

Notwithstanding the effective date of this revision, these requirements will be implemented at an earlier date or will be applied retroactively, at the request of the applicant.

ENGINEERING DIRECTIVE # 10-74
NEW BURNERS
AUGUST 28, 1974

The “Engineering Criteria for Fuel Oil Burning Equipment”, effective July 1, 1973, specifies in Part III, Installation Design, that, in certain instances, design criteria shall be based on the “...burner oil delivery rate or the gross output firing rate of the boiler (gph)...” Specifically, reference is made to Part III, Sections 4.2.1, 4.2.2, 5.3.4, 6.4 (i.e., Table I: Minimum Control Requirements) and 6.9.

Where an application is filed, and a design submitted, for an installation comprised of a new burner, which has been accepted by the Department, the design criteria, as specifically referred to above, shall be based on the burner oil delivery rate, only. Notwithstanding the above, in those cases where an application is filed for an installation which is comprised of an existing burner, where it can be satisfactorily demonstrated that the existing burner fully complies with the conditions of acceptance set forth by the Department for a new burner of the same make and model, the design criteria, as specifically referred to above, shall also be based on the burner oil delivery rate, only. In all other cases, however, the requirements of the criteria shall apply as stated therein.

This Directive shall take effect immediately and will be applied retroactively, at the request of the applicant.