Texas Commission on Environmental Quality
Air Quality Standard Permit for Boilers (AQSPB) Checklist

Site Name:	RN Number:
Unit Name:	EPNs:

The following checklist covers all boilers greater than 40 MMBtu/hr requested to be authorized at any site in the state of Texas under the AQSPB. Note that the boiler still needs to be in compliance with the requirements of 30 TAC Chapter 117, Control of Air Pollution from Nitrogen Compounds, if applicable. Maintenance, startup, and shutdown (MSS) emissions must be authorized under the AQSPB. Fugitive components associated with the boiler can also be authorized under the AQSPB. Any ammonia storage tanks, piping, and other equipment necessary to supply ammonia to a selective catalytic reduction (SCR) unit can be authorized under the AQSPB. Pollution control cannot be authorized under, or in tandem with, the AQSPB. If you have any questions, please contact the TCEQ, Air Permits Division.

Please complete a separate checklist for each boiler. If boilers are identical (all characteristics, uses, and physical features are exactly the same), this checklist can be completed one time for that group of boilers, but list all individual boiler EPNs and names above.

Definitions

Fuel Gas: Any gas which is generated at a petroleum refinery or a petrochemical plant, as defined by Standard Industrial Classification (SIC) Code 28, and any blends of those gases with natural gas. Fuel gas must also comply with the fuel limitations specified in subsection (4)(A).

Temporary Boiler: A boiler, as a replacement for an existing boiler or as an additional source that is installed and operated for no more than 180 days at a site. At least 12 months must pass between authorizations for a temporary boiler that will perform substantially the same purpose at the site. However, if the boiler will be used for a different purpose at the site, the owner or operator must seek authorization within the 12 month period.

Annual Capacity Factor (ACF): The ratio between the actual heat input during a calendar year and the potential heat input had the boiler been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity.

Boiler Identifying Features

Boiler Type: ☐ Fire Tube ☐ Water Tube

Heat Input:_____ MMBtu/hour:_____

Boiler Horsepower: _____ based on evaporation of 34.5 lb/hr of steam from

5 square feet of heating surface at 212^{o} Fahrenheit.

How many identical boilers are being claimed?_____

Do the boilers have the same common header? ☐ YES ☐ NO

Operating temperature of the boiler:_____ °F

Boiler feed water temperature:_____ °F

Peak Efficiency of Boiler_____ % of it rating

Fuel Used:_____

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Section I: Requirements that Apply to All Boilers Under the AQSPB	
Rule	**Applicable Requirement**
(1)(A)	Will heat input for the boiler be greater than 40 MMBtu/hr? ☐ YES ☐ NO *If YES, continue.* *If NO, STOP. The boiler cannot be authorized under the AQSPB.*
(1)(B)	Is this project a new major source or a major modification with respect to Prevention of Significant Deterioration (PSD) or Nonattainment New Source Review (NNSR)? ☐ YES ☐ NO *If YES, STOP. The boiler cannot be authorized under the AQSPB.* *If NO, continue.*
(4)(A)(v)	Is the boiler an air pollution control device? ☐ YES ☐ NO *If YES, STOP. The boiler cannot be authorized under the AQSPB.* *If NO, continue.*
Rule	**Part 1 (This row is used for reference on the checklist only.)**
(3)	Check the appropriate box if the following administrative requirements have been met:
(3)(A)	☐ Registration of boiler in accordance with 30 TAC 116.611:
(3)(A)	☐ Submittal of calculated short- and long-term emissions as specified in (3)(A)
(3)(B)	☐ Registration compliance with fees stipulated under 30 TAC 116.614.
(3)(C)	☐ Obtaining written approval of registration prior to construction or operation.
(3)(D)	☐ Compliance with applicable conditions, including testing and performance standards stipulated under Title 40 Code of Federal Regulations (40 CFR) Part 60. Subparts Da, Db, and Dc
(3)(E)	☐ Compliance with applicable requirements of 30 TAC Chapter 117, Control of Air Pollution from Nitrogen Compounds.
(4)(A)(i)	Are references to emission limits and boiler sizes in this standard permit based on the higher heating value of the fuel? ☐ YES ☐ NO
(4)(A)(ii)	Will fuel fired in the boiler meet the specifications outlined under " Definitions" above and also comply with 40 CFR Part 60, Subpart J, Standards of Performance for Petroleum Refineries, if applicable? ☐ YES ☐ NO
(3)(A) and (3)(B)	Except for 116.110(a)(1), does the boiler meet the general requirements for standard permits? ☐ YES ☐ NO
(3)(A)	Is Form PI-1S included in this registration? ☐ YES ☐ NO
(3)(A)	Are maximum lb/hr emission calculations, maximum tpy emission calculations, and Table 1(a) included in this registration? ☐ YES ☐ NO *Calculation spreadsheets for boiler exhaust emission calculations are available on the TCEQ website.*

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Section I: Requirements that Apply to All Boilers Under the AQSPB		
Part 1 (This row is used for reference on the checklist only.)		
Rule	**Applicable Requirement**	
(4)(D)(i) and (4)(D)(ii)	During MSS, are: • NO_x emissions ≤ 0.10 lb/MMBtu • CO emissions ≤ 500 parts per million by volume dry (ppmvd)?	☐ YES ☐ NO
(4)(D)(iv)	During MSS, is: • warm startup ≤ four hours • cold startup ≤ eight hours • shutdown ≤ one hour?	☐ YES ☐ NO
(4)(D)(iii)	Does opacity exceed limits in 30 TAC Chapter 111 during MSS?	☐ YES ☐ NO
(3)(A)	Is the annual capacity factor calculation included in this registration?	☐ YES ☐ NO
(4)(B)(i)	Is compliance with emission limits based on: • one-hour block averages for NOx • three hour block averages for CO?	☐ YES ☐ NO
(4)(B)(v)	During normal operations, are CO emissions ≤ 50 ppmvd, corrected to 3% oxygen?	☐ YES ☐ NO
(4)(B)(vii)	Is opacity determined by 40 CFR Part 60, Appendix A, Method 9, for: • initial compliance testing • testing at least once per year, thereafter?	☐ YES ☐ NO
(4)(B)(vii)	Is the opacity of emissions ≤ 5%, averaged over a six-minute period?	☐ YES ☐ NO
(4)(A)(i)	Are all emission calculations and the maximum heat input based on the higher heating values of fuels?	☐ YES ☐ NO
(4)(A)(ii)	Is gaseous fuel: • fuel gas and/or natural gas only • sulfur content ≤ 10 grains per 100 dry standard cubic feet (dscf) • total hydrogen sulfide content ≤ 10 grains per 100 standard cubic feet (scf) • < 50% hydrogen by volume • free of alkynes • higher heating value ≥ 900 Btu/scf?	☐ YES ☐ NO
(4)(A)(iii)	Is liquid fuel: • used for ≤ 720 hours per calendar year • total sulfur content ≤ 0.05% by weight • waste solvent free?	☐ YES ☐ NO

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Section I: Requirements that Apply to All Boilers Under the AQSPB			
Part 1 (This row is used for reference on the checklist only.)			
Rule	**Applicable Requirement**		
(4)(E)	Is the minimum boiler stack height calculation in this registration?	☐ YES ☐ NO	
(4)(E)	What is the minimum boiler stack height in feet?_____	feet	
(4)(E)	What is the actual boiler stack height in feet?_____	feet	
If all the questions under Part 1 are answered YES, continue. *If any of the questions under Part 1 are answered NO, STOP. The boiler cannot be authorized under the AQSPB.*			
Rule	**Part 2 (This row is used for reference on the checklist only.)**		
(3)(D)	Does the boiler comply with 40 CFR Part 60, Subpart Da?	☐ YES ☐ NO ☐ NA	
(3)(D)	Does the boiler comply with 40 CFR Part 60, Subpart Db?	☐ YES ☐ NO ☐ NA	
(3)(D)	Does the boiler comply with 40 CFR Part 60, Subpart Dc?	☐ YES ☐ NO ☐ NA	
(3)(E)	Does the boiler comply with 30 TAC Chapter 117?	☐ YES ☐ NO ☐ NA	
(4)(A)(ii)	Does the boiler comply with 40 CFR Part 60, Subpart J?	☐ YES ☐ NO ☐ NA	
If all the questions under Part 2 are answered YES or NA, continue. *If any of the questions under Part 2 are answered NO, STOP. The boiler cannot be authorized under the AQSPB.*			
*The following address the possible choices under the AQSPB. Check the **one** box in the first column that applies, and complete the corresponding Sections indicated in the last column. If you have any questions, please contact the TCEQ.*			
Temporary boiler, <100 MMBtu/hr:			
☐	No SCR, no CEMS .		Section II
☐	No SCR, CEMS with no shared stacks and no common stack		Section II
☐	No SCR, CEMS with shared stacks or a common stack		Section II
☐	SCR (CEMS required), CEMS with no shared stacks and no common stack		Sections II and IV
☐	SCR (CEMS required), CEMS with shared stack or a common stack		Sections II and IV
Temporary boiler, ≥ 100 MMBtu/hr maximum rated input:			
☐	CEMS required/no shared stacks and no common stack, no SCR		Section II
☐	CEMS required/shared stacks or a common stack, no SCR		Section II
☐	CEMS required/no shared stacks and no common stack, SCR		Sections II and IV
☐	CEMS required/shared stacks or a common stack, SCR		Sections II and IV

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Section I: Requirements that Apply to All Boilers Under the AQSPB		
Part 2 (This row is used for reference on the checklist only.)		
Permanent boiler, <100 MMBtu/hr:		
☐	No SCR, no CEMS	Section III
☐	No SCR, CEMS with no shared stacks and no common stack	Section III
☐	No SCR, CEMS with shared stacks or a common stack	Section III
☐	SCR (CEMS required), CEMS with no shared stacks and no common stack	Sections III and IV
☐	SCR, (CEMS required), CEMS with shared stacks or a common stack	Sections III and IV
Permanent boiler, ≥ 100 MMBtu/hr maximum rated input:		
☐	CEMS required/no shared stacks and no common stack, no SCR	Section III
☐	CEMS required/shared stacks or a common stack, no SCR	Section III
☐	CEMS required/no shared stacks and no common stack, SCR	Sections III and IV
☐	CEMS required/shared stacks or a common stack, SCR	Sections III and IV

Rule	**Section II: Requirements that Apply to All Temporary Boilers Under the AQSPB**	
(4)(B)(iii)	During normal operations, are NOx emissions ≤ 0.036 lb/MMBtu? *If YES, continue.* *If NO, STOP. The boiler cannot be authorized under the AQSPB.*	☐ YES ☐ NO
(5)(B)(vii)	Was stack testing performed on this temporary boiler at another site in the state of Texas, and was this stack testing acceptable to the TCEQ Regional Office with jurisdiction over the other site? *If YES, and you are using the stack test emission results for emissions under this registration, attach supporting information.*	☐ YES ☐ NO

Rule	**Section III: Requirements that Apply To All Permanent Boilers Under the AQSPB**
*The next three rows address the possible choices for NOx emission limits during normal operations. Check the **one** box that applies.*	
(4)(B)(ii)	☐ maximum heat input < 100 MMBtu/hr, annual capacity factor ≤ 0.30, ≤ 0.036 lb NO_x/MMBtu
(4)(B)(ii)	☐ > 75% of the fuel heating value due to natural gas, ≤ 0.01 lb NOx/MMBtu
(4)(B)(ii)	☐ ≤ 0.015 lb NOx/MMBtu

Section IV: Requirements that Apply To All Boilers Using an Ammonia or Urea Injection SCR for Boiler Exhaust Emission Controls Under the AQSPB	
Rule	**Part 2 (This row is used for reference on the checklist only.)**
The next three boxes address ammonia storage. Check at least one box.	
(4)(C)(ii)	☐ The site has an acceptable review under 40 CFR 68.
(4)(C)(ii)	☐ Ammonia is being stored on site in quantities less than the threshold values in 40 CFR 68, citation 68.130.
(4)(C)(ii)	☐ Ammonia is being stored on site in ≤ 20% by volume aqueous solution.
Rule	**Part 3 (This row is used for reference on the checklist only.)**
(4)(B)(vi)	During all operations, are ammonia emissions from the boiler ≤ 10 ppmvd, corrected to 3% oxygen? ☐ YES ☐ NO
(4)(C)(ii)	Are audio, olfactory, and visual checks for ammonia leaks performed at least once per day in the operating area? ☐ YES ☐ NO *If all the questions under Part 3 are answered YES, Section IV is complete. If any of the questions under Part 3 are answered NO, STOP. The boiler cannot be authorized under the AQSPB.*

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