

**LIMITATIONS ON FUEL CONSUMPTION IN  
STATIONARY COMBUSTION AIR EMISSION SOURCES**

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(For assistance, please contact EHS at (402) 472-4925, or visit our web site at <http://ehs.unl.edu>)

**INTRODUCTION**

The University of Nebraska-Lincoln (UNL) is required to limit fuel consumption for combustion sources with air quality permits. These include boilers at the City and East Campus Utility Plants and electric emergency power generators on both campuses. This Safe Operating Procedure (SOP) provides a summary of permit limits, recordkeeping, and reporting requirements for stationary combustion sources with respect to fuel use.

**Emergency Generators**

The EHS SOP, *Power Stationary Emergency Generators - Permits and Compliance Requirements*, provides detailed information regarding permitting and restrictions for natural gas & diesel powered generators. Diesel specifications & operation limitations are summarized below:

- Emergency generators do not have fuel consumption limits but are limited to annual hours of operation and can be operated for emergency, maintenance, and readiness testing purposes only.
  - Units manufactured before April 1, 2006 are limited to less than 500 hours of operation per calendar year
  - Units manufactured after April 1, 2006 are limited to less than 100 hours of operation per calendar year
  - 2007 and later model year stationary emergency and non-emergency generators are limited to using diesel fuel that contains 0.0015% or less sulfur (Ultra Low Sulfur Diesel).

**Utility Plants**

Table 1 summarizes maximum fuel use and minimum fuel specifications for the boilers at the City and East Campus Utility Plants as specified in the applicable air permits. Fuel supplier records must be maintained for each delivery to demonstrate compliance with the sulfur limits.

**Table 1-Utility Plant Boiler Permit Limits**

Permit Limits	East Campus Utility Plant			City Campus Utility Plant				
	B#3	B#4	B#5	B#1	B#2	B#6	B#7	
Permitted to burn #2 fuel oil	Boilers are not equipped to burn #2 fuel oil.			Yes	Yes	Boiler not equipped to burn #2 fuel oil	Yes	
Max gal/12 mo. #2 fuel oil				Combined total of 950,000			714,000	
Max sulfur #2 fuel oil				0.5% or less by weight				0.5% or less by weight
Min heating value (BTU/gallon) for #2 fuel oil				No limits specified in permit				No limits specified in permit
Permitted to burn #6 fuel oil	Yes	Yes	Yes	Boilers not equipped or permitted to burn #6 fuel oil		Yes	Boiler not equipped or permitted to burn #6 fuel oil	
Max gal/12 mo. #6 fuel oil	387,000 in boiler #5 and 690,000 in all boilers combined					1,200,000		
Max sulfur #6 fuel oil	Less than 1.7% sulfur by weight					1.7% or less sulfur by weight		
Min heating value (BTU/gallon) for #6 fuel oil	No limits specified in permit		148,000			No limits specified in permit		
Permitted to burn natural gas	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Maximum MMCF (million cubic feet) /12 mo.	182 in boiler #5 and a total of 1,650 in all boilers combined			Combined total of 1000		500	587.2	