Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: New Source Review Permit Reviewers **Date:** March 3rd, 2003

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Air Permits Division

Subject: BACT determinations for Boilers > 40 MMBtu/hr

30 Texas Administrative Code §116.111(a)(2)(C) requires that Best Available Control Technology (BACT) be applied to all facilities that must obtain a permit. BACT determinations are made on a case-by-case basis. Current BACT guidelines for boilers greater than 40 MMBtu/hr are:

NOx - 9 ppmvd corrected to three percent oxygen (equivalent to 0.01 pounds per million BTU)

CO - 50 ppmvd corrected to three percent oxygen (equivalent to 0.035 pounds per million BTU)

No. 2 fuel oil (0.05 wt % sulfur) firing will be allowed as a backup fuel up to 720 hr/yr, not subject to 9 ppmvd NOx

This guidance is meant to be flexible and each determination is made on a case-by-case basis for each project. If the applicant proposes emissions levels of 9 ppmvd NOx and 50 ppmvd CO @ 3% O₂, a detailed BACT analysis is not needed. Alternative BACT proposals need to be explained in detail, and should be structured using the TCEQ three tier approach or the EPA top down approach. Cost estimates for control equipment should be amortized over the life of the equipment and the annualized operating costs should be included. The TCEQ BACT Tier III Cost Analysis guidance document describes in detail how the analysis should be performed and provides the format for presentation of the results. Alternative BACT proposals for NOx emissions also depend upon factors such as the design heat input of the boiler(s), the fuels that the boiler(s) will fire (natural gas, fuel oil, and/or process gases), and the annual hours of operation.

This guidance is primarily intended for new boilers; potentially mitigating factors involved in retrofitting existing boilers allows for greater flexibility in determining BACT for these existing facilities.