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| **Message Map 1**  **Audience interest: Proposed Rule Revisions to Lower Emission Standards for Boilers**  **Stakeholder: Senator Betsy Close**  **Facility: Frank Lumber**  **Last date revised: 01/31/2012** | | |
| **Key Message 1** | **Key Message 2** | **Key Message 3** |
| **DEQ has proposed lower particulate emission limits for old boilers.** | **The proposed limits will “even the playing field” for all boilers.** | **The proposed limits are needed to maintain air quality and help to prevent violations of fine particulate ambient air quality standards.** |
| **Supporting Fact 1-1** | **Supporting Fact 2-1** | **Supporting Fact 3-1** |
| **Old boilers built before 1970 can emit 0.2 gr/dscf while newer boilers built after 1970 must meet a 0.1 gr/dscf limit.** | **Most boilers in the state can meet the proposed 0.10 gr/dscf standard. About 11 old wood-fired boilers may not be able to meet the standard consistently.** | **Several areas of the state are approaching the ambient air quality standard for fine particulate. If the standards are exceeded, it would invoke restrictions on economic development in that area.** |
| **Supporting Fact 1-2** | **Supporting Fact 2-2** | **Supporting Fact 3-2** |
| **EPA requires that limits contain two significant figures, so the proposed new limit will be 0.10 gr/dscf.** | **Some of the old boilers may be able to meet the proposed standard with increased maintenance/tune ups or using high quality fuel. Some old boilers might need to install additional control equipment or replace the existing boiler with a new natural gas boiler.** | **Emissions from old boilers have been shown to be a major contributor to poor air quality in those areas of the state approaching the ambient air quality standard.** |
| **Supporting Fact 1-3** | **Supporting Fact 2-3** | **Supporting Fact 3-3** |
| **The proposed lower limit will reduce emissions from the old boilers. 1970 and newer boilers are already meeting the new standard.** | **After controls are installed on the old boilers, they will meet the standards post 1970 boilers have met for years.** | **DEQ is allowing until 2019 for the old boilers to comply with the new standards due to the costs of compliance and the time for installation of controls/new boilers. An extension may be granted until 2020.** |

Questions and answers:

1. Why are you doing this now? See Key Message 3
2. Is there a problem in the area? Phil’s modeling
3. How much is this going to cost sources?

Wood-fired Boilers: Some businesses may need to optimize their boiler operations to comply with the particulate matter standards. Close monitoring of fuel quality may help some boilers comply while others may need tune-ups. One vendor estimated a typical boiler tune-up that requires no replacement parts would cost between $5,500 and $11,000. A tune-up may include:

* A visual inspection of the system while operating, looking for obvious things that need repair
* Review of past performance checks & expected performance data
* Gathering performance data (O2 & CO2 readings, stack temperature, feed water temperature, fuel moisture, steam flow)
* Making adjustments to furnace air delivery settings

A more comprehensive boiler tune-up costs from $33,000 to $65,000. A boiler tune-up may or may not allow sources to comply with the new standards over time but could provide other benefits such as reduced fuel costs.

If optimizing operations does not achieve compliance with the lower grain loading and opacity standards, businesses may need to install pollution control equipment such as multiclones or electrostatic precipitators. Based on vendor information, multiclones cost approximately $65,000 to $86,000 and would remove some particulate matter but may not be successful in removing enough to comply with the new standard. Information from vendors indicates a new ESP costs approximately $1.8 to $2.2 million. One vendor stated that the cost could vary by plus or minus 40 percent, and another vendor indicated a smaller electrostatic precipitator could be used if the goal were simply to comply with the 0.10 gr/dscf standard. Although not anticipated, boiler replacement to achieve compliance would have the greatest fiscal impact on a business. A business that recently installed a new wood-fired boiler capable of 100,000 pounds of steam per hour paid approximately $8 million.

1. Is EPA requiring this? Not directly but they require compliance with NAAQS.

**Talking Points:**

**DEQ has proposed lower particulate emission limits for old boilers.**

* Old boilers built before 1970 can emit 0.2 gr/dscf while newer boilers built after 1970 must meet a 0.1 gr/dscf limit.
* EPA requires that limits contain two significant figures, so the proposed new limit will be 0.10 gr/dscf.
* The proposed lower limit will reduce emissions from the old boilers. 1970 and newer boilers are already meeting the new standard.

**The proposed limits will “even the playing field” for all boilers.**

* Most boilers in the state can meet the proposed 0.10 gr/dscf standard. About 11 old wood-fired boilers may not be able to meet the standard consistently.
* Some of the old boilers may be able to meet the proposed standard with increased maintenance/tune ups or using high quality fuel. Some old boilers might need to install additional control equipment or replace the existing boiler with a new natural gas boiler.
* After controls are installed on the old boilers, they will meet the standards post 1970 boilers have met for years.

**The proposed limits are needed to maintain air quality and help to prevent violations of fine particulate ambient air quality standards.**

* Several areas of the state are approaching the ambient air quality standard for fine particulate. If the standards are exceeded, it would invoke restrictions on economic development in that area.
* Emissions from old boilers have been shown to be a major contributor to poor air quality in those areas of the state approaching the ambient air quality standard.
* DEQ is allowing until 2019 for the old boilers to comply with the new standards due to the costs of compliance and the time for installation of controls/new boilers. An extension may be granted until 2020.