

Table 2-2 — MRY Unit 1 Existing System Capabilities using Brominated PAC

Parameter	Units	MRY Unit 1 185 lb/hr BPAC
Unit Load during testing	MWg	257.1
PAC Injection Rate	lb/MMacf	2.28
Avg. Sorbent Trap Hg Emissions	lb/TBtu	2.57

At the current injection capabilities of the existing system (i.e. requiring minimal modifications/retrofit of the existing equipment), BPAC cannot be applied to reduce Hg emissions to 1.2 lb/TBtu.

2.3. MRY MERCURY REMOVAL EFFICIENCY

2.3.1. Lignite Coal Mercury Content

To calculate an overall mercury removal efficiency needed to control to 1.2 lb/TBtu, the coal Hg inlet must be defined.

- EPA reported the "Hg Inlet" level based on the maximum Hg content of the range of feedstock coals that the EPA assumes is available to each of the plants in the Integrated Planning Model (IPM).
 - With respect to MRY, EPA reported "Hg inlet":
 - MRY Units 1 and 2: 7.81 lb/TBtu
- According to the proposed rule, EPA estimated the 2021 Hg inlet concentration from actual 2021 fuel usage and 2021 Hg emissions reported to the EPA. However, based on the 2024 Technical Memo, EPA updated the information based on 2022 information.
 - With respect to MRY, EPA "Estimated Hg inlet" content documented in 2023 and 2024 Technical Memo is summarized in the table below:

Table 2-3 — EPA Estimated North Dakota Lignite Coal Hg Inlet

Parameter	Units	2023 Technical Memo (Estimated 2021 Hg Inlet)	2024 Technical Memo (Estimated 2022 Hg Inlet)
MRY Unit 1	lb/TBtu	7.78	9.70
MRY Unit 2	lb/TBtu	7.79	9.70

- However, recent test information and other resources for the North Dakota lignite fired at MRY has indicated that significantly higher inlet Hg is experienced at MRY:
 - Within the BNI Coal, Ltd.'s Center Mine, the Kinneman Creek (KC) and Hagel (HA) beds are targeted for the coal supply for MRY. Based on the 2021 BNI coal data (constructed from Carlson reports), the avg. coal Hg content is approximately 16 lb/TBtu for KC and 15 lb/TBtu for HA.
 - The variability of the projected lignite coal quality received from the Center Mine from 2025 through 2036 is shown in the following table.