

US EPA ARCHIVE DOCUMENT

Mona Johnson

From: Mona Johnson
Sent: Wednesday, May 14, 2014 1:19 PM
To: Magee, Melanie
Subject: Victoria GHG Permit [capital cost CCS]

Melanie:

Please see responses to your email request below. We will separately forward the information related to the proposed out-based limit for Victoria. Let me know if this is sufficient.

-Mona

From: Magee, Melanie [<mailto:Magee.Melanie@epa.gov>]
Sent: Tuesday, May 13, 2014 1:03 PM
To: Mona Johnson
Subject: RE: Victoria GHG Permit

Hi Mona. I hope all is going well. I am continuing to work on your statement of basis and have run across another piece of information that we are going to need. In your permit application and response to comments, the CCS cost estimate is provided in an annualized cost amount. I need to understand how you derived the initial capital cost of your CCS system. Could you provide me with the specifics on the equipment used in the estimate and the initial capital cost?

Our CCS cost estimate was based on information provided in the "Report of the Interagency Task Force on Carbon Capture" (August 2010) data, which provides a methodology to estimate the total annualized costs for CO₂ capture and compression facilities. This methodology aligns well with our goal of developing a cost per ton of reduction. This same report also makes reference to the expected total capital cost to add CCS to a combined cycle natural gas facility. According to this report, DOE analyses indicate that for a new 550 MW net output power plant, the addition of post-combustion CO₂ capture will increase the capital cost of the project by \$340 million (Section III.A.4 CO₂ Capture Cost).

The VIC10 addition will result in approximately half this amount of additional output. Therefore, we are assuming a capital cost of \$170 million for CCS on the new unit (if it were technically feasible). Additionally, the capital costs for CO₂ transportation facilities need to be addressed. Table 6-2 of our GHG application (attached) provides the \$17 million capital cost for a 10 mile pipeline with 24-inch diameter, estimated using DOE/NETL calculation methodology. Therefore, we would be looking at a total capital cost of about \$187 million.

Also, I have included a placeholder for your numeric output based limit for EPN:VIC10, so if you can just send that to me I will add it to my drafts. I have been following the requirements in Subpart Da to use as a guideline for the monitoring strategy.

We will send this information separately.

Thanks, Melanie