

Mr Russell Brooks
Senior Approvals & Stakeholder Manager
level 14, 567 Collins Street
Melbourne Victoria 3000

18/06/2020

Dear Mr Brooks

**Eastern Gas Pipeline-Mod-1 (SSI-9973-Mod-1)
Response to Submissions**

The exhibition of the Modification Report for the above proposal ended on 02 Jun 2020. Submissions received by the Department during the exhibition of the proposal are available on the Department's website at <https://www.planningportal.nsw.gov.au/major-projects/project/26196>

The Department requests that you provide a response to the issues raised in the submissions.

The Department also requests that you provide the following additional information and/or clarification:

- an indicative construction program;
- clarification regarding the initial and future capacity of the duplicated pipeline;
- details of the likely quantities and classification of wastes generated during construction and details on waste storage, handling and disposal as well as consideration of the waste hierarchy, as proposed in the scoping report (GHD, 2019);
- a summary of the proposed benefits and justification for the proposed modification; and
- additional assessment of the risks to surrounding land users from the proposed pipeline as outlined in **Attachment A**.

The Department requests that you provide this information by Friday 17 July 2020.

If you have any questions, please contact Jack Turner on 02 9995 5387.

Yours sincerely



Stephen O'Donoghue
Director
Resource Assessments
as delegate for the Planning Secretary

Enclosed/Attached: Attachment A – Review of Pipeline Safety Management Study

Attachment A

Review of Pipeline Safety Management Study - Eastern Gas Pipeline-Mod-1 (SSI-9973-Mod-1)

The Department has reviewed the modification report and the Pipeline Safety Management Study (SMS) (Appendix D). Although the SMS document appears to be prepared in accordance with *AS 2885 Pipelines – Gas and Liquid Petroleum*, the Department does not agree that it can be used to satisfy the requirement for a Preliminary Hazards Analysis (PHA) (Level 2) under *State and Environmental Planning Policy No 33 – Hazardous and Offensive Development* (SEPP 33). The SMS is a qualitative assessment and a Level 2 PHA involves semi-quantitative analysis. While the SMS identifies risk to the pipeline, a PHA is required assess the risk from the pipeline to the surrounding land uses.

It should also be noted that a Level 2 assessment as specified in Department's guideline - *Multi-level Risk Assessment*, requires that incidents that have potential significant consequences beyond the site boundary must be quantified and demonstrated to be below the appropriate criteria. No individual event should have off-site consequences (such as fatality or injury) at a frequency greater than that appropriate for the exposed land use at any point outside the site.

It is noted in Figure 4.1 of the SMS that the heat radiation of 12.5kW/m² (c 401m) and 4.7 kW/m² (c 618m) were illustrated. These contours are based on a full-bore rupture event. In accordance with the Hazardous Industry Planning Advisory Papers (HIPAPs), the two heat radiation levels can be interpreted as the potential for significant chance of fatality and injury. The extent of these contours reaches industrial area (such as BOC which is classified as a Major Hazard Facility) and extends into a residential area. As such, based on the HIPAPs requirement for level 2 PHA, it should be demonstrated that risk exposure to these land uses would satisfy the relevant risk criteria.

In addition, the SMS notes that the "similar [risk] contours are assumed to apply to NGP2 (the proposed lateral looping pipeline) [as per NGP1 (the existing lateral pipeline)]". However, operating information, such as maximum operating pressure, pipe diameter, process flow etc, are not provided. The operating pressure of NGP1 was assessed at 12MPa. The Department is aware that the Maximum Allowable Operating Pressure (MOAP) of the Eastern Gas Pipeline (EGP) is approximately 16MPa but is unaware of the operating pressure. It is unclear how the operating pressures proposed lateral looping pipeline, existing lateral pipeline and existing EGP are comparable.

As such, there is lack of evidence to support the risk contours of the two would be similar. Further, the looping pipeline is connected to two tie-in facilities. Information regarding the tie-in arrangement, and whether the pipeline would be aboveground at these facilities has not been provided in the Modification report and the SMS. The risk levels at the tie-in facilities should also be assessed.

The Department notes that some of the information provided in the SMS is useful and can be considered in the PHA, however it is expected that a PHA be submitted that is comparable to the PHAs prepared for the Port Kembla Gas Terminal.

As such, it is requested that:

1. The Proponent provides further information regarding:
 - a. Detail regarding the operating pressures and MAOP for the proposed lateral looping pipeline, existing lateral pipeline and existing EGP
 - b. Details of the tie-in facilities, for example, whether there will be additional valves, flanges and/or pressure regulators
 - c. Details of the looping pipeline going above ground, if any
 - d. Separation distance between the looping pipeline and the existing pipeline where they are in proximity in the same corridor.
2. The Proponent submits a quantitative risk that considers all leak sizes from the pipeline and the risk of pipeline propagation if an incident occurs to a pipe. A risk transect is to be provided to demonstrate the risk vs distance from the pipeline, in particular at the location close to BOC, residential, and other potentially sensitive occupants. A risk contour should be developed if the risk at the tie-in facilities will be increased due to the looping pipeline and generate off-site impacts.
3. The individual risk results are to be compared against all the relevant risk criteria as published in HIPAP 4.
4. Based on the findings established in point 2, provide justification of whether the modification would comply with societal risks criteria.