# Jemena Northern Gas Pipeline Pty Ltd

## Northern Gas Pipeline

Supplement to the Draft Environmental Impact Statement

APPENDIX B
NT EPA COMMENTS ON DRAFT EIS

Public

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ntepa Northern Territory Environment Protection Authority

**COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT**

**JEMENA NORTHERN GAS PIPELINE PTY LTD – NORTHERN GAS PIPELINE**

| Section / Subject | Comment |
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| Risk assessment | Staff of the Northern Territory Environment Protection (referred to hereafter as NT EPA) have reviewed risk assessment sections and registers provided in the draft Environmental Impact Statement (EIS). While the NT EPA agrees with many of the residual risks ratings, the risk assessment is deficient in some areas. This is largely because a number of studies have yet to be completed and/or the proposed mitigation measures are assumed to be successful in implementation. The following comments are specific to the consideration of the Plains Death Adder address in risk assessment but may relate to other areas of the risk assessment:<br>• The analyses include an assumed successful mitigation of impacts before the risk analysis has been conducted. An appropriate risk analysis would assess risk without mitigation, in this case rectification of damage to habitat. If the risk was above the stated risk criterion, mitigation would need to be assessed to allow for realistic assessment of likelihoods and consequences of various mitigation strategies. A successful mitigation should never be assumed as part of a risk analysis, it needs to be considered and assessed. Successful rehabilitation cannot be assumed in determination of inherent risk.<br>• Sources of risk are identified without undertaking any analysis of the level of risk to the death adder from all sources of risk. This should include independent assessments of each source of impact (e.g. clearing, dust, fire, weeds, entrapment, traffic), each without and with mitigation as appropriate, and then a cumulative assessment of all risk to the species. This approach needs to be taken for all the risk assessments.<br>• The draft EIS states that 11% of death adders are likely to suffer mortality from entrapment in the trench. If the descriptions for the levels of consequence and likelihood are corrected to be based on population size, then 11% mortality plus other impacts would not seem to represent a low risk. The analyses as presented are potentially false and may need revision. |
| Construction contractor and further information | The draft EIS notes that components of the construction design and logistics of the Northern Gas Pipeline (NGP) are conceptual and that more detailed planning would be undertaken either during the design phase and/or on the ground by the construction contractor during construction. While the NT EPA acknowledges that some specific information cannot be feasibly obtained during the Environmental Impact Assessment (EIA) process for the NGP, it is difficult to fully understand the risks and appropriateness of proposed mitigation measures without this information. Concerted efforts |

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| | should be made to:<br>• identify and address where information gaps exist<br>• clearly explain the roles and responsibilities of those involved in executing the NGP<br>• clearly explain how the construction contractor will take ownership of the Environmental Management Plan (EMP), and related documentation, and responsibility for commitments made by the Proponent during the EIA.<br>The draft EIS noted that there were additional surveys/assessments that were being completed at the time the draft EIS was available for public comment (e.g. Economic and Social Impact Assessment). It was unclear whether the Proponent intended to provide this information as part of the Supplement to the draft EIS.<br>Any new information that is available to address the written comments received on the draft EIS (e.g. Traffic Impact Assessment) or that was identified as a gap in the draft EIS should be provided in the Supplement to the draft EIS. The results from surveys, consultation and assessments should be clearly identified as being new information. A discussion of how the results differ from previous knowledge and how the results and findings obtained from the additional research fill information gaps should be included. This information should be incorporated, where relevant, in the identification and quantification of potential impacts, risk assessment and environmental management plans. |
| Watercourse crossings | The draft EIS included a water crossing survey report as an appendix and discussed the results of the report in the main document. It is acknowledged that the construction of the pipeline and facilities would involve six river crossings (stream order five and above), 12 creek crossings (stream order three to four) and a number of minor drainage line crossings (stream order one to two). All intersected watercourses are anticipated to be ephemeral to intermittent during construction, and crossings would be constructed via open trenching methods. The Proponent has committed to undertaking further works to assess the major watercourse crossings to be intersected by the pipeline alignment, with a particular focus on identifying and locating permanent pools in proximity to the construction footprint and characterising bed and bank profiles for input into progressive Erosion and Sediment Control Plan and construction requirements.<br>Based on the information provided in the draft EIS, the NT EPA has assumed that the major watercourses to be subject to further targeted charaterisation works in the Northern Territory would be within the Ranken, James and Georgina River catchments. Sites identified as NT watercourse 1 (Ranken River), 2 (James River) and 4 (Georgina River) were surveyed in early May 2016 and all displayed evidence of surface water flows or the presence of pools. No information was provided in the draft EIS on the typical period in which these systems would be classed as ‘dry’ and the conditions |

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| | that would be considered suitable for open trenching methods in ephemeral, dryland systems (i.e. criteria for assessing whether open trenching methods are able to be conducted or whether an alternative construction method, or time to undertake construction works, should be considered).<br><br>The NT EPA does not support the use of open trenching methods for any watercourse that is flowing, including base flow, or within close proximity to pools that support ecosystem function. It must be clearly demonstrated in the Supplement to the draft EIS that measures have been take to avoid and mitigate the risks associated with watercourse crossings. Further information is required to address the above-mentioned comment and should include but not be limited to:<br><br>• details on the specific watercourse crossing locations, survey methods and targeted information on watercourse crossing methods, including erosion and sediment control, vegetation, bed and back reinstatements and ongoing monitoring and reporting to be conducted at the watercourse crossing locations<br><br>• contingencies in the event of uncharacteristic rains, prolonged/larger than average wet season or the delayed onset of 'dry' conditions<br><br>• criteria for assessing whether open trenching methods are able to be conducted at watercourse crossing locations or whether an alternative construction method, or time to undertake construction works, should be considered, including alternative construction methods for each location.<br><br>In responding, consideration should be given to the nature of dryland river systems that typically experience cyclic episodes of large floods followed by protracted intervals of low or no flow. During extended dry periods, water may remain as shallow waterholes or pools, which may depend on groundwater or surface water runoff to initiated by the hydroperiod; the duration of a single hydrocycle from initial flooding to drying, which may last for a matter of months, seasons, or longer (semi-permanent). These pool-types may dry with sufficient regularity as to prevent the development of permanent vegetation or biotic habitats. However, they can provide important temporary refugia and/or drinking water sources for remnant aquatic biota and other native and agricultural animals. |
| Hydrostatic Test | The draft EIS identified the uncontrolled release of hydrostatic test water (either from dams or directly at the test section site), or release without pre-treatment, is considered to have a severe consequence as it could result in temporary impacts on water quality and temporary harm to the environment. The likelihood of this occurring was considered "possible", with an inherent risk rating of "significant" and a residual risk rating of "moderate". The quality of pre-fill water |

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| | was unknown at the time the draft EIS was available for public comment because water quality assessment and sourcing studies had not been completed. Significant uncertainty exists regarding the risks to water resources from hydrostatic testing activities. Further information is required to identify and address the risks, including the anticipated quality of pre-fill water, estimates of the types and quantity of additives that may be required, the discharge location and treatment and discharge controls. Further details on disposal methods and legislative requirements should be provided.<br><br>In addition, it is proposed that construction and hydrostatic test water would be stored in temporary 12 ML low consequence dams constructed along the construction ROW. It was estimated that eight dams would be required, but the location, sizing and number of dams had not been confirmed. Further information should be provided on the site requirements and site selection protocols for the dams, indicative locations and materials required for dam construction (e.g. source of clays or liners).<br><br>Please note that a Waste Discharge Licence under the *Water Act* may not be appropriate for the proposed disposal hydrostatic test water. Other legislative or licensing considerations should be presented in the Supplement to the draft EIS. |
| Trenching and fauna management | The draft EIS indicated that the NGP route would avoid areas of high faunal conservation value. However, it is acknowledged that it is likely animals would fall into the trench and therefore appropriate measures would need to be implemented to facilitate their escape or assisted removal. There are some inconsistencies in the information provided in the draft EIS in respect to the exposed trench and proposed fauna management. Further information is required on the following:<br><br>• indicate what types of fauna, with particular reference to listed species, are most vulnerable to falling in the open trench, and species-specific management that may be required for handling and managing targeted species<br><br>• define what is meant by 'open trench', i.e. excavation to full coverage<br><br>• clearly identify the proposed timing and locations of the open trench, including the estimated times and distances the trench would be open under various trenching conditions (e.g. rocky terrain, watercourse crossings, open country, etc.)<br><br>• define how the construction schedule would coordinate the trenching schedule with the trenchless construction |

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| | methods.<br><br>Further detail is required on how trench clearing would take place over larger distances (e.g. greater than 40 km) of open trench in such a way to prevent dehydration and predation of trapped fauna. Further discussion of mitigation measures, including the possible use of trench skirting, use and effectiveness of shelter and egress ramps and a discussion of the proposed management for feral animals found trapped in the trench should be provided. In addition, a description of any mitigation measures to protect fauna for the open trench that may remain open at hydrotesting points until hydrotesting is complete is required.<br><br>Provide details on whether the personnel trained to handle fauna captured in the trench would be able to adequately survey and manage the length of the open trench to ensure the greatest survival of animals. Given the harsh climate, it would be appropriate for further information to be provided on the appropriate times and regimes for trench inspections and other associated measures. |
| Reinstatement acceptance criteria | Reference is made to reinstatement acceptance criteria throughout various sections of the draft EIS. To enable adequate assessment of reinstatement methods, it is requested that the reinstatement acceptance criteria be included in the Supplement to the draft EIS. Information on the typical time between pipe laying activities and when reinstatement activities would commence is also requested. |
| Road crossing | It is anticipated that Warrego Road, Stuart Highway and the Adelaide to Darwin railway line will be crossed using boring or trench-less techniques. It is common for muds and fluids from the drilling to require appropriate handling and storage and for containment pits for drilling fluids and drill cuttings to be located at the drill entry and exit points. Information on the muds, fluids, slurry or other potential wastes generated from boring or trenchless techniques, and management/handling requirements should be provided in the Supplement to the draft EIS. |
| Gas flaring | Section 6.6.2 of the draft EIS identified that '…*during operations, gas flaring and venting will occur at the compressor stations'.* Section 10.4.3 of the draft EIS identified that *'…during the operational phase, noise generated will be from compressor operation, and from gas venting and flaring at the compressor stations and MLV facilities'.*<br><br>Clarification is sought on whether gas flaring would occur at the MLV facilities. If so, the Supplement to the draft EIS should include relevant details on the proposed flaring at these facilitates, implications for noise, nuisance and air quality assessments, and proposed management measures. |

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| Hours of operation | In Section 2.10.1 of the draft EIS it is inferred that the majority of the works would be undertaken between 6 am and 6 pm. However, it is noted that additional crews may be required with different operating hours. Clearly identify the times and instances when work would occur outside of these hours in the Supplement to the draft EIS. Clearly indicate the lighting requirements and potential lighting and noise impacts on sensitive receptors associated with works to be conducted outside of the normal operational hours in a relevant section of the Supplement. |


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