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19. HAZARD AND RISK

19.1. Operations phase risk assessment

One submitter stated that the Project risk assessment did not consider potential risks in the road reserve, including pipeline rupture from structural faults, accidental damage from vehicles and intentional damage/vandalism resulting in rupture.

Table 19-1 provides a further risk assessment from the EIS for the pipeline considering hazards associated with rupture. This is relevant to all areas the pipeline traverses, including road reserves. The construction of the pipeline will involve a combination of buried and above ground pipe. The preference will be for buried pipelines but until detailed surveys and design is undertaken it will not be possible to define which sections are buried and which are above ground. All pipelines constructed in State controlled road reserves will be buried pipelines. As part of the detailed design phase a detailed risk assessment will be undertaken for any above ground portions of the pipeline. The risk assessment will identify risks based on the location of the pipeline in the road reserve, level of security of water supply required and likelihood of collision, and propose mitigation measures appropriate to the level of risk. The mitigation measures may include such things as placement of frangible vegetation, physical barriers and signage.

Table 19-1 Addendum to operation phase risk assessment

Hazards	Proposed controls	Residual risk		
		C	L	R
High pressure - pump operating against closed valve(s), water hammer	Operating procedures, design to consider the safety system (such as key interlock for the valve and pump start system) to ensure valves are open prior to restarting the pump after maintenance.	3	E	Mod
Water contamination - commissioning, maintenance debris or loss of pipeline lining materials	Adequate operating and maintenance procedures. Design to consider screens at inlet to pumps to catch deposits and foreign objects.	4	D	Low
Fire/explosion Transformer - stations and control room fires	Smoke detection in buildings, adequate clearance of vegetation around the switch yards, confirming that all necessary fire fighting equipment is provided to support the use of water from the pump stations.	4	D	Low
Leaks/Rupture - chaffing of pipes from rocks, corrosion from soil type	Site survey undertaken, permits and safety by design risk studies, potential to use cathodic protection for the pipeline, independent welding QA checks as defined in the design	3	E	Mod
Public access during maintenance periods	Security fencing to restrict public entry to dangerous areas during maintenance periods	3	D	Mod
Maintainability issues - lack of visibility of site, lack of access to inside of the pipe, lack of pigging operations access	Maintenance manuals are required, troubleshooting guide to be included in the specification, design considers the requirements for pigging	4	D	Low

19.2. Emergency planning

One submitter requested that SDRC liaise closely with Department of Community Services (DCS) during the development of emergency planning and particularly regarding changes planned. SDRC is committed to liaising with the DCS during the development of emergency plans including the development of fire management plans.

19.3. Emergency Action Plan

One submitter requested that the Emergency Action Plan (EAP) be consistent with local and district emergency management plans. As discussed in section 18.5.3 of the EIS SDRC will develop an EAP for the dam. In developing the EAP, SDRC will undertake the following steps:

- determine and identify those conditions that could forewarn of an emergency and specify the actions to be taken and by whom and under what circumstances
- in consultation with the District Disaster Coordinator (DDC) for the impacted area (or the Disaster District Manager from the DCS), identify all jurisdictions, agencies and individuals who should be involved in the EAP (for example, local governments, the Queensland Police Service and downstream residents); and
- identify response actions to be taken in response to potential emergencies.