Business Case – Capital Expenditure less than $500,000

T33 LV03 Pit

Business Case Number BC220 AA23-27

1 Project Approvals

TABLE 1: BUSINESS CASE – PROJECT APPROVALS

Updated By	Adam Newbury	Asset Lifecycle Specialist, Asset Management
Cost Updated By	Prasoon Premachandran	Victorian Team Lead Project Delivery, Engineering & Planning
Reviewed By	Nicholas King	Senior Mechanical Engineer, Engineering & Planning
Approved By	Daniel Tucci	Victorian Asset Manager, Asset Management

2 Background and Project Need

Project resubmitted – due to reprioritisation

It is standard APA practice to have all bypass valves installed above ground; however both bypass valves for LV03 on T33 pipeline are currently buried and cannot be accessed for maintenance and/or inspection (per T33-22 and T33-08-05).

A small pit currently exists around LV03 for limited access. A new larger pit will be constructed to current standards to allow safe and unrestricted access for LV03 and both bypass valves, which will reduce workplace hazards related to confined space entry and exit.

These bypass valves permit effective isolation of T33 pipeline as well as protecting LV03 from being re-opened from a high pressure differential event. Without the bypass valves being in a functional and accessible state, the capacity to protect LV03 and isolate T33 pipeline is compromised.

3 Risk Assessment

TABLE 2: RISK RATING

Risk Area	Risk Level
Health and Safety	Moderate
Environment	Negligible
Operational	Moderate
Customers	Moderate
Reputation	Moderate
Compliance	Moderate
Financial	Low
Final Untreated Risk Rating	Moderate

4 Options

4.1 Option 1 – Do Nothing

- Leave as is – only LV03 is maintained without any maintenance performed on both bypass valves.
- The risks involved with doing nothing or deferring the project remains moderate.
- If the bypass valves fail due to no maintenance, full isolation may not be achievable.
- The 'Do – Nothing' option is not considered a viable alternative, due to the severity of the untreated risks including inability to efficiently isolate during an emergency.

4.2 Proposed Solution

4.2.1 What is the Proposed Solution?

- Remove existing smaller pit around LV03 and install a single larger pit around all 3 x valves with adequate clearance and meeting current relevant standards.

4.2.2 Consistency with the National Gas Rules

Consistent with the requirements of Rule 79 of the National Gas Rules, APA considers that the capital expenditure is:

- Prudent – The expenditure is necessary in order to maintain and improve the safety of services and maintain the integrity of services to customers and personnel and is of a nature that a prudent service provider would incur because without the expenditure the capacity to protect LV03 and isolate T33 pipeline is compromised.
- Efficient – The field work will be carried out by a suitably qualified external contractor in a safe and cost effective manner. The expenditure will be undertaken consistent with the APA procurement policy. The expenditure can therefore be considered consistent with the expenditure that a prudent service provider acting efficiently would incur.
- Consistent with accepted and good industry practice – Addressing HSE risks associated confined space entry and exit, including maintainability and accessibility of LV03 as good industry practice. In addition the reduction of risk to as low as reasonably practicable in a manner that balances cost and risk is consistent with Australian Standard AS2885.
- To achieve the lowest sustainable cost of delivering pipeline services – The sustainable delivery of services includes reducing risks to as low as reasonably practicable and maintaining reliability of supply.

4.2.3 Forecast Cost Breakdown

TABLE 3: PROJECT COST ESTIMATE

	Total
Internal Labour	**$65,960**
Materials	**$9,670**
Contracted Labour	**$155,230**

Other Costs	**$100,000**
Total	**$330,860**

5 Acronyms

Acronym	Definition/Description
AEMO	Australian Energy Market Operator
AGA	Australian gas association – Type B compliance governing body
API	American Petroleum Institute – publisher of standards
CHAZOP	Control system HAZOP – study of the control system functions to identify logic vulnerabilities
ESD	Emergency shutdown – control system-initiated shutdown designed to prevent incident escalation if operating parameters are breached
ESV	Energy Safe Victoria
HAZOP	Hazard and operability study
HMI	Human machine interface
ILI	Inline inspection – pipeline internal inspection
OEM	Original Equipment Manufacturer
RA	Risk Assessment
RBI	Risk Based Inspection – a process used to prioritise maintenance or inspection activities based on risk of failure.
SIL	Safety Integrity Level – an assessment used to rank control systems by their ability to fail safely
SMS	Safety Management Study
VTS	Victorian Transmission System