Document Cover Sheet

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DOCUMENT REVIEW Jemena

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2 ☐	ISSUED WITH MINOR COMMENTS Work may proceed Revise as noted and resubmit
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Jemena

Port Kembla Pipeline Project

Construction Health & Safety Management Plan

Document No.: GAS-599-PA-HSE-005 | Revision 1

Rev	Description	By	Checked	QA	Nacap Approved	Date
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1 INTRODUCTION

1.1 Project Description

Australian Industrial Energy (AIE) plan to build a new LNG import terminal at the Port Kembla inner harbour with the aim to sell gas to the east coast market. The gas is planned to be processed on a Floating Storage and Regasification Unit (FSRU) and imported into the existing gas networks through a new pipeline that will connect the AIE Port Kembla Gas Terminal (PKGT) with the Jemena owned gas transmission network via the Eastern Gas Pipeline (EGP).

The Principal (Jemena) in partnership with AIE is planning to build, own and operate a new gas transmission pipeline, associated pipeline assemblies and gas metering facility to connect AIE PKGT to the EGP. As shown in Figure 1 Port Kembla Pipeline Project Overview Map, the proposed buried steel gas transmission pipeline is approximately 12.1 kilometres long, 18" (DN450) buried steel gas transmission pipeline and a new End of Line (EOL) facility in the vicinity of the Jemena's existing Kembla Grange facility. The proposed Port Kembla Pipeline Project (PKPP) is comprised of three sections:

- Segment 1.1 – 4.3 km pipeline from PKGT to Springhill Road to be built by Jemena; owned by AIE with some services provided in operation by Jemena.
- Segment 1.2 – 2.2 km pipeline from Spring Hill Road to Five Islands Road; to be built, owned, and operated by Jemena.
- Segment 2 – 5.6 km pipeline from Five Islands Road to Kembla Grange Metering Station (KGMS) which includes the Kembla Grange Tie-in Facility to be built, owned and operated by Jemena.

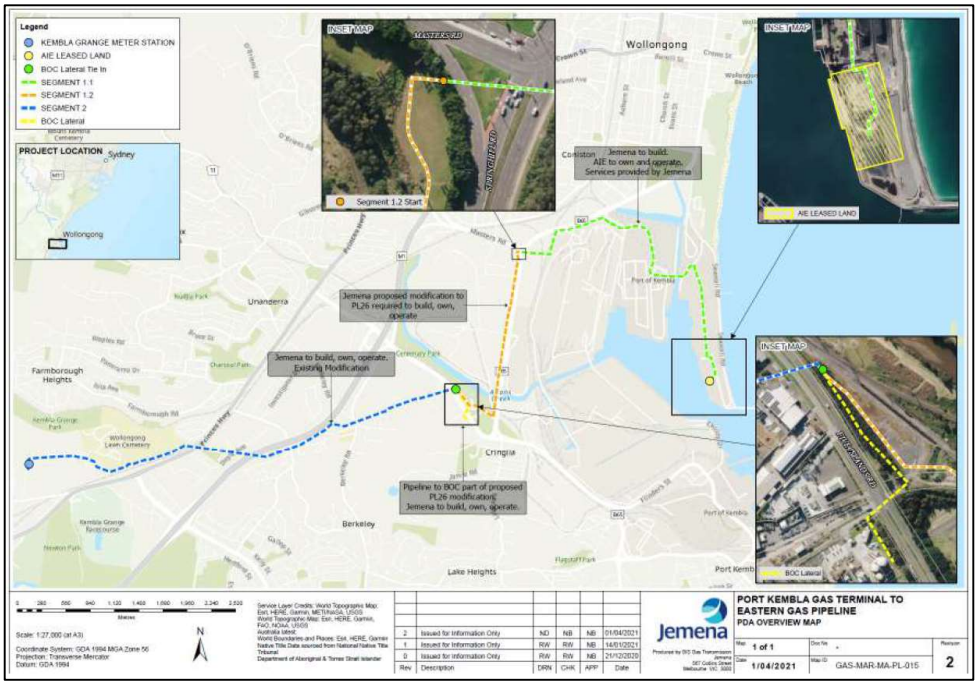

Figure 1 - Port Kembla Pipeline Project Overview Map

1.2 Purpose

This Construction Health & Safety Management Plan (CHSMP) has been developed to outline Nacap's approach to managing work health and safety for the Port Kembla Pipeline Project. Nacap will ensure that:

> This CHSMP will be available to all workers and contractors on this project and ensure they have the opportunity to read, understand, clarify and ask questions

> A copy of the CHSMP is readily available to all personnel and stakeholders for the duration of the project

> This CHSMP is regularly reviewed throughout this project and make any revisions known to those working on the project, including subcontractors.

This Construction Health and Safety Management Plan is designed to meet the requirements of a Construction Safety Plan consistent with the most recent Australian Standard AS 2885.1 Pipelines – Gas and liquid petroleum (Part 1: Design and construction). This plan specifically addresses all safety measures related to the construction of the pipeline. This plan will be updated at a later date to address all safety measures relating to testing and commissioning of the pipeline only if required.

1.3 References

Refer Appendices A, B and C for the applicable Legislation, Codes of Practice and Australian Standards. Nacap procedures applicable to Health and Safety Management on this Project refer to section 8.3.

1.4 Principal Contractor Details

Table 1 - Principal Contract Details

Nacap Details	
Business name:	Nacap Pty Ltd
Address:	Ground Floor, 599 Doncaster Road, Doncaster Victoria 3108
ABN:	33 006 306 994
Main phone number:	03 8848 1888
Contact person:	James Povey
Contact mobile:	0430 452 172
Contact email:	j.povey@nacap.com.au

2 DEFINITIONS AND ACRONYMS

2.1 Definitions

Table 2 - Definitions

Term	Meaning
Audit	A systematic review of the systems being applied on the Project
Company/Principal	Jemena
Competent Person	A person whom by reason of qualifications, training or experience has the skills necessary to perform a task

Term	Meaning
Contractor (also Principal Contractor)	Nacap
Corrective Action	Action to eliminate the cause of a detected nonconformity or other undesirable potential situation
High Risk Work	Has the same meaning as in the work health and safety regulation and is summarised in 3904-OPS-002-3 Verification of Competency Procedure
OSHA	Occupational Safety and Health Act 1984
Principal	Jemena
Project	Jemena Port Kembla Pipeline Project (PKPP)
Regulatory Requirements	Government acts and regulations that are safety specific which prescribe legal obligations encompassing the employer and contractor
Risk	Effect of uncertainty on objectives. Often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated likelihood of occurrence [ISO Guide 73:2009, definition 1.1]
Senior Management	Comprises the Nacap President, Executive Vice President, Vice President Operations, and Operations Director, collectively, for governance of health and safety
Worker	Includes all employees, contractors and apprentices of Nacap, and of any subcontractors engaged by Nacap for the project, that perform work within the project site (including administrative work)
WHS / OHS	Work health and safety / occupational health and safety, both of which have the same meaning

2.2 Acronyms and Abbreviations

Table 3 - Acronyms and Abbreviations

Term	Meaning
AS/NZS	Australian Standard/New Zealand Standard
AIE	Australian Industrial Energy
BrAC	Breath Alcohol Content
BBL	Behaviour Based Leadership
CEMP	Construction Environmental Management Plan
CHSMP	Construction Health & Safety Management Plan
EAP	Employee Assistance Program

Term	Meaning
ECI	Early Contractor Involvement
ECIA	Early Contractor Involvement Agreement
EGP	Eastern Gas Pipeline
ESCP	Erosion and Sediment Control Plan
FEED	Front End Engineering Design
FSRU	Floating Storage and Regasification Unit
HAIL Register	Hazard, Action, Incident, Learning Register (will have the same meaning as Corrective Action Register)
HSE	Health, Safety, Environment and Security
HIRAC	Hazard Identification, Risk Assessment and Control (refer to Section 11)
HRCW	High risk construction work – means work listed in the table in Section 16.1
JHA	Job Hazard Analysis (also known as a SWMS – Safe Work Method Statement)
KGMS	Kembla Grange Meter Station
KP	Kilometre Point
LECH	Land Environment and Cultural Heritage
LNG	Liquefied Natural Gas
MIJ	Monolithic Insulating Joint
NSW	New South Wales
PE	Project Engineer
PKGT	Port Kembla Gas Terminal
PKP	Port Kembla Pipeline
PMT	Project Management Team
PPE	Personal Protective Equipment
RCD	Residual Current Device
RFT	Request for Tender

Term	Meaning
SDRL	Supplier Document Requirements List
SMS	Safety Management Study
SWMS	Safe Work Method Statement
VOC	Verification of Competency
TDR	Technical Document Register

3 ROLES & RESPONSIBILITIES

Refer to the following Nacap Project Organisational chart in the Project Management Plan.

Table 4 - Roles & Responsibilities

Role	Responsibility
Operations Director	> Senior Management representative with respect to the project WHS management system > Review of WHS reports against Nacap's objectives and targets
Project Manager	> Provide sufficient resources for effective implementation of this CHSMP > Provide leadership and direction for implementation of this CHSMP > Accountable for the overall Project WHS performance and compliance with this plan > Coordination of any rehabilitation and / or return to work process required for injured workers > Ensure HSE risks are managed > Ensure construction work is carried out by qualified and competent persons > Ensure adequate supervision for personnel carrying out work, provision for information, training and instruction and competency of personnel undertaking work related tasks > Consult personnel on HSE matters that will or may affect them. Ensure opportunity for raising issues or providing ideas and feedback > Facilitate and/or participate in internal monitoring and audits to ensure safe systems of work reflect a commitment to safe work practices, and > Demonstrate commitment to HSE objectives and targets
Construction Manager	> Ensure all necessary WHS related systems are developed, implemented and maintained > Ensure that all reported incidents (including near misses) are investigated, corrective actions implemented, and the lessons learned are shared > Actively encourage safe behaviour via worker engagement > Maintain positive interaction with Project WHS support personnel > Ensuring health and safety audits are conducted in accordance with the project audit program

Role	Responsibility
	> Oversee workforce toolboxes > Ensure pre-starts are led by work supervisors prior to each shift commencement > Ensure that all work crews have sufficient coverage of competency for required task
WHS Manager	> Maintain this CHSMP and make all subsequent revisions available to all workers including subcontractors > Ensure Nacap signage is posted and visible at all entrances to the work site > Lead Project HIRAC Workshop (refer to Section 11) and ensure all reasonably foreseeable project hazards and risks are identified, assessed and controlled in accordance with the hierarchy of control including implementation of controls required by legislation and consideration of controls recommended by codes of practice and Australian Standards > Ensure all workers and visitors are inducted > Ensure VOC process is established and implemented (refer to GAS-599-PR-HSE-005, 3904-OPS-002-3) > Ensure workers, visitors and members of the public are consulted about health and safety matters that may affect them and that these are considered in the risk management process and the affected parties are informed about decisions that affect their health and safety > Ensure JHA / SWMS for HRCW are prepared and confirmed as conforming to Nacap WHS Management System requirements prior to commencement of the relevant HRCW (including for subcontractors) - refer to 3904-OPS-012-F Subcontractor JHA / SWMS Review > Coordinate safe interaction between Nacap and all subcontractors > Ensure there are adequately trained first aiders for each work group as determined from a first aid risk assessment – refer to 3905-HSE-014-F First Aid and Emergency Equipment Risk Assessment, or alternative form that meets this requirement as a minimum > Ensuring a site emergency preparedness and response plan is prepared, implemented, and maintained > Lead health and safety audits and inspections > Lead investigation of incidents and high potential near miss events > Prepare project WHS reports against established Nacap WHS Management System criteria, and > Understand, apply, and maintain knowledge of current governing regulations, codes and practices and Australian Standards and legislative HSE requirements > Ensure all government, landowner and client COVID requirements are implemented on project
WHS Advisers	> Support the WHS Manager in fulfilling their health and safety responsibilities as directed
Superintendent(s) and Supervisor(s)	> Conduct pre-starts prior to commencement of each shift involving all work crew members > Consult with workers for JHA / SWMS reviews

Role	Responsibility
	> Inform Construction Manager and WHS Manager of incidents that are reported to them and assist with investigation processes > Ensure work is performed in a safe manner and in compliance with JHA, CHSMP and HSE Management System > Ensure all members of their work group are competent to perform their required duties and notify the Construction Manager of additional human resource needs or training to ensure task can be performed by workers with appropriate level of competency > Provide instruction in safe systems of work > Implement change management process > Conduct workplace inspections and loss prevention inspections to ensure safe systems of work > Assess risks and implement risk controls in consultation with the workforce > Involve personnel undertaking work activities to ensure that hazards are identified, risk assessed, and controls implemented > Ensure all personnel read and understand risk assessments with opportunity to ask questions > Implement field risk management processes > Implement first response for incidents within area of control > Ensure incident scenes are preserved, and > Manage SIMOPS
Health and Safety Representatives (TBC)	If elected, responsibilities of Health and Safety Representatives are: > Represent workers in their designated work group on matters of health and safety > Facilitate communication and consultation and provide a crucial link between workers and their employer > Enforce compliance with WHS Act and Regulations as well as other applicable legislation > Resolution of WHS related issues between workers and their employer > Participate in workplace inspections and incident investigations in consultation with the WHS Manager
Workers	> Adhering to Nacap Policies and Jemena Safety Rules > Working in accordance with their JHA / SWMS > Stopping work to review hazards and risks when there is a change to people, plant, process or work environment > Updating their JHA with new tasks, changes to process, and newly identified hazards and risks > Taking reasonable care of their own health and safety and the health and safety of others > Only carrying out hazardous work for which they have been deemed competent (including only carrying out work that requires a licence if they have the applicable licence)

Role	Responsibility
	> Ensuring they have the correct tools and equipment, and these are in a serviceable condition for the task > Reporting all hazards, incidents and near miss events to their supervisor and ensure preservation of incident scenes > Wear and maintain PPE where required > Operate and maintain machinery in a safe and practical manner > Follow work instructions and procedures > Comply with company policies and procedures > Commit to a positive safety culture and challenge "at risk behaviour" > Perform duties in a safe, ethical, and lawful manner, treat teammates with respect and ensure conduct does not adversely affect work performance, safety and health > Present fit for work, and > Attend and participate in pre-start meetings, safety presentations and weekly toolbox meetings
Nominated First Aider(s)	> Maintaining first aid facilities and supplies > Administering first aid as required > Maintaining first aid records > Advising the Project WHS Manager or a Project WHS advisor if 3 years have passed since they completed first aid training or if 1 year has passed since they completed CPR refresher training, so that training can be arranged, or another person can be appointed as a first aider in their place

4 GENERAL HEALTH AND SAFETY

4.1 Nacap as Principal Contractor

As Principal Contractor for this project, Nacap is responsible for:

Preparing, updating and implementing this CHSMP, including all associated procedures Identifying and observing all legal WHS requirements including ensuring that:

- All workers have completed general construction industry training (e.g. "white card")
- Site-specific inductions are conducted for all workers and visitors
- Ensuring that all works are conducted in a manner without health and safety risk to workers and other persons who may be affected
- Processes are in place for inspection, risk mitigation and safe operation with respect to plant
- Licenced work is only carried out by licenced workers
- SMWS are prepared for all HRCW in accordance with Nacap WHS Management System requirements
- Workers are competent to carry out work safely

- Ensure subcontractor WHS performance is considered as part of subcontractor selection, with reference to Nacap Vendor Assessment Procedure prior to engaging them
- Identifying required WHS training and ensuring workers undertake the required training
- Ensure senior managers, site managers and supervisors are trained in their WHS legal and due diligence duties and Nacap's WHS management system requirements, relevant to the role
- Ensure that senior managers visit project sites at regular intervals and review the relevant WHS hazards / issues with site management and workers
- Communicating and consulting with workers
- Communicate to its employees that they have the right and ability to stop work or refuse to work in situations where they believe that the work would expose them, other people, or the environment to a risk of harm
- Planning to do all work safely
- Investigating hazard reports and incidents and ensuring that corrective actions are undertaken
- Assisting rehabilitation and return to work following any work-related injury or ill health
- Dispute resolution in relation to health and safety matters

4.2 Subcontractors

Subcontractors are responsible for:

- Fulfilling the health and safety duties in respect of their own operations
- Identifying all HRCW associated with their activities and ensuring JHA are developed, approved by Nacap prior to commencement, and implemented. These JHA to be supplied to Jemena for review/feedback.
- Adherence to this CHSMP and any health and safety related direction given to them by Nacap
- Ensuring their workers and visitors undertake site-specific induction before starting work and signing off that they have completed this induction

4.3 Environmental Management

All aspects of environmental management associated with the Project will comply with Nacap's Contractor's Environmental Management Plan (CEMP) (**GAS-599-PA-EV-001**).

5 ORGANISATION AND RESOURCING

Nacap will conduct a project / crew based risk assessment to determine and ensure adequate ratios of HSE team and Supervisors are provided for each crew / location. The outputs of this assessment will be reviewed and approved by Jemena and Nacap Governance and Project Teams.

Ongoing review of HSE and Supervisor organisation and resourcing will be undertaken in accordance with Project 'management of change' processes.

6 LEGISLATION, STANDARDS AND CODES OF PRACTICE

Legislation, codes of practice and Australian standards applicable to this project are listed in Appendices A, B and C respectively.

Access to legislation and codes of practice are publicly available. Nacap will help workers access these as required, including providing resources (e.g. IT resources or hard copies) if required and instructing workers where to find the information.

Standards are available via paid subscription only. Access to the subscription service will be made available to all workers who need access to standards.

For further information on ensuring all health and safety legislation, codes of practice and Australian standards are identified relevant to NACAP operations and the project / site activities, review, updates and maintaining compliance, refer to Health and Safety Legal Compliance (**3905-HSE-003-2**).

7 LEADERSHIP AND COMMITMENT

7.1 Commitment to zero harm

Nacap is committed to the safety, health and welfare of all workers and members of the public who can be affected by its activities.

- The values supporting this commitment are:
- All injuries are preventable
- All levels of management will encourage involvement and ownership by leading through example
- Adopting safe work practices is a condition of employment
- Worker involvement and consultation is essential
- All levels of management are accountable for managing health and safety
- All hazards can be identified, assessed, and controlled
- Training workers to work safely is essential
- Safety must not be compromised to meet schedules or budget

7.2 Planning

The Project management Team will work in conjunction with Jemena and other stakeholders to ensure all Project activities are planned, managed and reviewed with all relevant stakeholders (e.g. regulatory authorities and landowners).

In developing systems to effectively manage Health and Safety, planning activities including but not limited to the following will occur as appropriate:

- Pre-construction HIRAC workshops (refer to Section 11)
- Development of safe work methods and systems
- Public safety management
- Training and qualification of Project personnel, and
- Assessment of medical treatment and emergency response capabilities

7.3 Programs

Behavioural Based Leadership (BBL)

Nacap's Behavioural Based Leadership Program – One Team, focuses on a four-pillar approach to the successful delivery of projects; the four pillars consist of and focus on a balance of Quality, Production, LECH and OHS.

The BBL program aims at:

Building leadership capability

A risk assessed approach to targeted leadership training

Up skilling and facilitating coaching and audit capabilities, and

Visible leadership – genuine and consistent conversations and communication

The BBL program is based on a foundation of:

Nacap expectations; the behaviour we expect from our workers

Nacap commitments; made from the highest level of the organisation to enable personnel to deliver on the expectations

Safety Non-Negotiables (**3902-POL-10-1**) with respect to each of the Four Pillars

Based on the understanding that "behaviour influences attitude and attitude influences behaviour" the goal is to achieve small gains consistently to achieve an incident free workplace and continuous safety culture growth.

Senior Management are also required to attend and participate at various forums as part of visible leadership, refer Section 9.2 Consultation, communication and cooperation plan (table 7) and Section 21.4 Continuous Improvement and Management Review.

Capacity Model

The Capacity Model for Frontline Safety Managers – world class safety system, providing framework, standards, and tools for frontline leaders, providing capacity to eliminate incident.

The Capacity Model is built on the foundation of the seven human performance principles, the model presents the way we do safety. This program introduces the following elements:

STKY (Stuff / S**t That Kills You)

Energy Wheel

Absolute Controls, and

Operational Learning.

The Capacity Model will provide the structure required for safety conversations between frontline leaders, supervisors and crews on how we look at hazards.

Capacity Model Training will be required as follows:

TCM 101 Understanding the Capacity Model – mandatory online training for all project personnel

TCM 102 Energy in the Workplace: STKY and the Energy Wheel – mandatory Supervisor and Project Management Team Training

Safe Run Home

In recognition of human behaviour that can lead to complacency which can increase likelihood of people coming into contact with hazards, Nacap's Safe Run Home Program will be rolled out during the final stages of construction. The Safe Run Home Program is a key component of the BBL Program that provides NACAP with an opportunity to have a safety refocus and raise awareness with all personnel on some key safety issues, controls and safe behaviours.

The Safe Run Home Program shall work to engage all personnel on the Project with particular focus on the following groups:

Senior Project Management

Superintendents

Supervisors

Engineers

Field Services

OHS Team, and

Truck and light vehicle drivers

The Safe Run Home Program will provide additional focus and reinforcement of several key risk areas including:

Working Safely

Safe Run Home Conversations

Housekeeping (including site preparation for holiday period)

Healthy Bodies (including fitness for work, fatigue, hydration, mental health, EAP, Mates in Construction), and

Driving

The Project Manager and Project WHS Manager with the support of the Senior Management will address these groups over the relevant work cycles discussing key safety issues, required controls and safe behaviours.

Reward and Recognition

Recognition of innovative and proactive safety behaviours forms part of the BBL Program, recognition can be via different methods, such as:

- Onsite barbecue for crews, or
- Individual recognition awards – these awards are typically presented by a member of the PMT or Senior Management

Reward and recognition can be measured through hazard awareness and implementation of actions. Workers are recognised for observation that have a positive impact on change to the way we do business to reduce risks. Recording and tracking of these actions on the NACAP Portal is regularly reviewed by the PMT and feedback provided to the workforce to encourage behavioural change and involvement.

7.4 Health, Safety and Environment Information

During the Project, safety and working environment information will be made readily accessible to all personnel enabling the identification, assessment and control of hazards associated with the Project.

HSE information to be provided will include, upon request, a wide range of documents including access to this Plan, Legislation, Codes of Practice, Australian Standards, Drawings, Specifications, Procedures, Risk Assessments, Safety Data Sheets (SDSs) and Safe Work Method Statements (SWMS).

Nacap will provide staff with access to health and safety information through a variety of forums, including but not limited to:

Health and safety meetings, including toolbox meetings and pre-starts

Health and safety noticeboards

Dedicated HSE notice boards displaying minutes of related meetings,

Safety Alerts

Up-to-date lists of names (and photos - where practicable) of local Health and Safety Representatives, First Aiders, Fire Wardens

Map of local area layout including emergency information such as emergency equipment, firefighting equipment, emergency exits, muster points

Project Hazard Register

Incident reports

Other general awareness information such as simultaneous operations in the work area, such as operations and maintenance works within the existing facility, potential local development works and the like

Health and safety committees

Formal and informal business communication processes

Supervisors, and

Computer access (via Hot Desk)

Nacap will provide open access to health and safety information either in hard copy or in electronic form. The information provided must be accurate, up to date and easily accessible to all personnel.

7.5 Safety Management Records

All WHS management documentation generated on the Project, whether hard copy or electronic, will be controlled in accordance with Nacap document control protocols, and managed in the same way as other Project information, refer to the Nacap Management System Manual 3902-CORP-001-1 for further details.

The table below outlines other WHS related documentation and registers that will be maintained by and kept up to date on site may include (but not limited to):

Table 5 - WHS Documents and Registers

Document	Maintained By
Safety Incident Register	HS Manager
Journey Management Register	HS Manager
Continuous Improvement Register	Project Manager
Competency Register	HR and HS Manager
Electrical Tagging Register	Plant and Equipment Manager
Project Induction Register (including third party's)	HR and HS Manager
Lifting Equipment Register	Plant and Equipment Manager
Plant Hazard Analysis Register (HSE Risk)	Plant and Equipment Manager
Project Hazard Register	HS Manager
SDS Register	HS Manager
SWMS Register	HS Manager

8 POLICIES AND PROCEDURES RELEVANT TO THE WHS MANAGEMENT SYSTEM

8.1 Health and Safety Policy

Nacap's Health and Safety Policy (**3902-POL-01-1**) is attached at Appendix D.

The Health and Safety Policy will be displayed in offices and crib rooms.

All workers are encouraged to make suggestions for improving the Health and Safety Policy.

8.2 Fitness for Work Policy, Return to Work Policy and Non-Negotiables

NACAP's Fitness for Work Policy (**3902-POL-04-1**), Return to Work Policy (**3902-POL-05-1**) and Non-Negotiables (**3902-POL-10-1**) are attached at Appendix D and will be displayed in offices and crib rooms alongside Nacap's Health and Safety Policy.

Nacap has a Policy to ensure that personnel on worksites under its control are fit for work. This involves ensuring amongst other things, that people in the workplace are not adversely affected by drugs, alcohol, heat or fatigue. The Nacap Fitness for Work Policy and Fitness for Work Procedure (**GAS-599-PA-HSE-009**) provide further details.

Consumption or possession of alcohol or unlawful drugs, or the wilful abuse of non-prescription ("over the counter") or prescription medications, are all unacceptable practices within the workplace. Nacap adopts a zero-tolerance approach to impairment in the workplace due to abuse of any such substances and has adopted a Fitness for Work Procedure that deals with such instances.

Nacap will ensure their personnel undergo medical assessments to a standard that is consistent with Jemena's minimum requirements and approval as per the Recruitment to Onboarding Procedure (**3903-HR-001-3**). All workers will be required to sign an individual employment contract, which will signify their agreement to comply with all Project policies and procedures (including Nacap corporate policies and procedures) and their agreement to be subjected to random and for cause drug (by saliva) and alcohol testing.

The PMT will monitor the workforce for instances of suspected wilful substance abuse that is illegal and / or detrimental to the safe conduct of work. Random and for cause testing for drug and / or alcohol abuse is standard practice on all Nacap Projects.

Specifically, the Nacap drug and alcohol testing program will include:

- Pre-employment testing of all personnel
- Daily alcohol testing administered by breathalyser (BrAC)
- Testing of personnel involved in an incident where consumption of drugs or alcohol is thought to be a possible contributing factor. The operator/driver of any vehicle / plant / machine / equipment that is involved in an incident will be drug and alcohol tested. All persons involved in incidents where the actual injury consequence is MTI or above or where there is a near miss incident of significant potential consequence will also be drug and alcohol tested
- Testing personnel on reasonable suspicion
- Unannounced random testing for drugs (saliva) and alcohol (minimum 10% random drug test per month), and
- Self-assessment (voluntary) testing facilities available to personnel

Nacap will align with Jemena Alcohol and Other Drugs Policy Statements in the management of alcohol and drugs on the Project.

Fatigue Management

Fatigue related impairment is considered an identifiable workplace hazard and as such the controls employed to manage the risks that fatigue poses are based on sound principles.

Fatigue will be managed proactively on the Project as outlined within the Nacap Fitness for Work Procedure (**3905-HSE-001-3**) and project specific Fatigue Management Plan (**GAS-599-PA-HSE-009**) that is aligned with Jemena Fatigue Management Procedure and associated risk assessment for the Project.

Fatigue related consequences may impact on such things as critical decision-making, critical responses, personal interactions, task concentration, dexterity and the ability to complete complex tasks. Areas to be considered are:

Mental and physical demands of work – reduce time workers spend performing physical and demanding tasks

Work Scheduling and Planning – Plan work so as to ensure breaks are included

Work Time- ensure breaks are taken during the day and heat and hydration are monitored

Extended work hours/overtime – all extra work should be risk assessed to ensure adequate rest period after shift conclusion

Breaks during working time – ensure breaks are taken to allow Rest and Hydration

Rostering - Design rosters to ensure adequate rest periods

Shift work – ensure adequate breaks between rotating shifts, day to night or nights to days

Night Work (if required) - ensure adequate breaks between rotating shifts, day to night or nights to days

On-call and call back work - to ensure adequate rest periods after shift completion

Any shift or swing extension needs to be supported by a risk assessment reviewed and approved by Jemena PM

Mental Health

Mental Health of workers is a key focus of NACAP's Fitness for Work Procedure. NACAP will include Employee Assistance Program (EAP) information and contact details to all employees via induction, HSE Noticeboard and Prestart / Toolbox meetings. Converge International provide Nacap with EAP & support services.

In addition to the EAP NACAP will conduct Mates In Construction (MIC) awareness and connector sessions. MIC provides suicide prevention through community development programs on sites, and by supporting workers in need through case management and a 24/7 help line.

8.3 Nacap standard procedures

The following Nacap procedures are applicable to health and safety management on this project, form part of this CHSMP, and will be made available on-site to all personnel and to Jemena.

NOTE: ***All Nacap corporate documents listed in this Plan without an accompanying Jemena document number (GAS-XXX-XX-XXX-XXX) are not considered deliverables as part of this Project, and hence will not be formally transmitted to Jemena. These documents can however be provided to Jemena upon request for information only. Where both Jemena and Nacap document numbers are denoted, these documents are considered deliverables to be produced for the Project and will be formally transmitted to Jemena for review.***

Table 6 - Nacap Standard Procedures

Document Number	Title
3902-CORP-002-3	Internal Audit Procedure
3905-HSE-001-3	Fitness for Work Procedure
3905-HSE-002-3 GAS-599-PR-HSE-006	Incident Reporting and Investigation Procedure

Document Number	Title
3905-HSE-007-3	Procedure for Health Risk Assessment and Monitoring
3905-HSE-008-3	Coronavirus Management Plan
3904-OPS-001-3 GAS-599-PR-HSE-008	Safe Driving and Light Vehicle Management Procedure
3904-OPS-002-3 GAS-599-PR-HSE-005	Verification of Competency Procedure
3904-OPS-003-3	Heavy Vehicle Operations
3904-OPS-004-3 GAS-599-PR-HSE-003	Hazardous Chemicals – Storage, Handling and Use
3904-OPS-005-3 GAS-599-PR-HSE-004	Mobile Crane Operations
3904-OPS-006-3	Dangerous Goods Transport
3904-OPS-007-3	Subcontract Management Procedure
3904-OPS-009-3	Vendor Assessment Procedure
3904-OPS-010-3	Management of Design
3904-OPS-012-3 GAS-599-PR-HSE-002	Safe Working with Electricity Procedure
3904-OPS-013-3 GAS-599-PR-EL-002	Foreign Services Procedure (Working Around Live Lines Procedure)
3904-OPS-014-3	Working at Heights Procedure
3904-OPS-016-3 GAS-599-PR-CV-001	Safe Excavation Procedure
3905-HSE-010-3	Chain of Responsibility Procedure
3904-OPS-019-3	Confined Space Procedure
GAS-599-PR-HSE-007 3904-OPS-018-3	Permit to Work Procedure
3904-OPS-017-3	Traffic Management (Construction in Public Thoroughfares)
3907-PLA-002-3	Management of Plant on Projects
Safety Essential 1	Senior Management Commitment
Safety Essential 2	Excavation
Safety Essential 3	Mobile Plant
Safety Essential 4	Safe Driving & LV Management
Safety Essential 5	Mobile Crane
Safety Essential 6	Lifting Equipment

Document Number	Title
Safety Essential 7	Safe Working with Electricity
Safety Essential 8	Isolation of Plant-Equipment-Services
Safety Essential 9	Foreign Services
Safety Essential 10	Worksite Traffic
Safety Essential 11	Traffic (Construction in Public Thoroughfares)
Safety Essential 12	Hazardous Chemicals - Storage, Handling & Use
Safety Essential 13	Dangerous Goods Transport
Safety Essential 14	Emergency Preparedness and Response
Safety Essential 15	Heat Stress
Safety Essential 16	Hazard Identification Risk Assessment and Control (HIRAC)
Safety Essential 17	Safe Working at Heights
Safety Essential 18	Chain of Responsibility
Safety Essential 19	Training Management
Safety Essential 20	Project Performance Management

9 REPRESENTATION, CONSULTATION, COMMUNICATION AND COOPERATION

9.1 Worker representation

If requested to do so by a worker or group of workers, Nacap will establish a process for determining work groups for health and safety representation and subsequent election of health and safety representatives of those work groups, in accordance with requirements of the Occupational Safety and Health Act 1984 (OSHA).

Similarly, as required by the WHS Act, a WHS committee will be formed if one is requested by an elected health and safety representative or by any 5 (or more) workers.

Any WHS committee that the workforce wishes to be formed will be formed progressively as the Project continues to mobilise new work crews.

Any elected representatives' names will be displayed on HSE noticeboards. Copies of minutes and action items arising from any WHS committee meetings will also be displayed on HSE Noticeboards.

Paid formal training will be provided to elected health and safety representatives as required by the WHS Act.

9.2 Consultation, communication and cooperation plan

Nacap recognises that consultation is not just token advice on what is about to happen, but is a process of providing individuals with genuine opportunities to communicate and therefore influence decisions that relate to WHS, allowing leaders to make informed decisions about WHS.

Nacap's consultation, communication and cooperation plan is designed to give all workers, supervisors and managers (including senior company management) the opportunity to collaboratively discuss and resolve hazards, hazard controls and issues. The process will also apply to subcontractors and affected external parties. The arrangements on this project will be as follows:

Table 7 - Consultation, Communication and Cooperation

Method	Typical frequency	Led by
Senior Management visits*	Monthly (in the field / onsite)	Operations Director / Project Manager
WHS committee meetings (where a committee is formed)	Monthly or as called	Committee chair
STKY Conversations	1 per Week (in the field / onsite)	Line Managers (Project Management Team)
JHA / SWMS workshops	Prior to start of activity	HSE Manager / Supervisor
Toolbox meetings	Weekly	Construction Manager or WHS Manager
Prestart meetings	Daily (in the field / onsite)	Supervisors
Safety meetings with affected external parties	As identified	Construction Manager or WHS Manager
Construction Supervisors' Meeting	Weekly	Construction Manager or Superintendent
Project Site Specific Induction	Commencement of Project for each individual	Self-paced
JHA / SWMS reviews	Weekly (in the field / onsite)	Supervisors & HSE

**Senior Management visit means a visit by at least one member of Senior Management.*

Senior Management shall record interactions via any of the tabled methods of consultation and communication shown via the Nacap Portal https://portal.nacap.com.au/. Any corrective actions identified or positive interactions / observations during interactions are to be recorded on the Visible leadership module of the Nacap Portal.

9.3 Project Management Meetings

Project Management Meetings will be held weekly or as scheduled and chaired by the Nacap Project Manager for general Project issues.

WHS related information presented during these meetings will be inclusive of:

- Injury and workplace related illness treatments
- Hazards, incidents and near miss event reports raised
- Incident notifications forwarded to any statutory authorities
- Active Project related Worker's Compensation Claims
- Workplace inspection findings, proposed and completed Corrective Actions
- Issues of WHS non-conformance
- Summary of inductions, worker competency status, toolbox meetings and training occurrences
- All incidents, near miss events, their causes and the proposed or achieved Corrective Actions
- Audit and inspection findings (both observations and non-conformances)
- BBL programs status and achievements, and

- Emergency response activity including any drills

9.4 Resolution of OHS Issues

Figure 2 below reflects guidelines related to OHS issue resolution process and should be followed by Project personnel in reaching a satisfactory resolution to safety and health issues should they arise in the workplace.

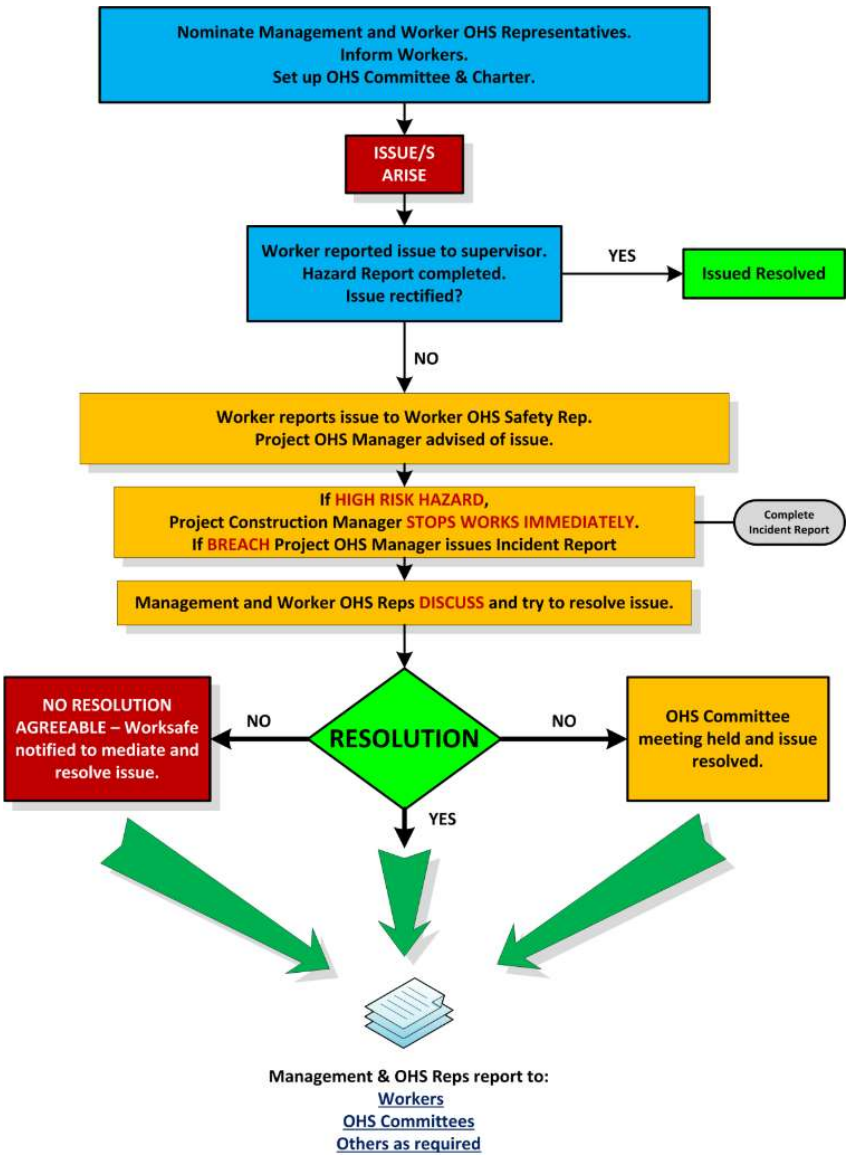

Figure 2 - WHS Issue Resolution Flowchart

This WHS issue resolution process will be communicated to all workers on site. Jemena to be consulted before any notification to WorkSafe is made in relation to issues on the project.

9.5 Minimum recording requirements

Minimum record keeping requirements in relation to representation, consultation, cooperation and communication are:

Records that are relevant to determination of work groups for representation and election of health and safety representatives

Minutes will be taken for all WHS committee meetings and the minutes of the meetings will be available to all workers

Minutes will be taken of Project Management Meetings

Maintenance of records of all meetings relating to WHS issues raised by workers, and their resolution

Safety meetings with external parties must be recorded – they may be meeting minutes or less formal means, e.g. diary notes, depending on the external party and the issues discussed

Toolbox and prestart meetings will be recorded by documenting list of attendees and summary of topics and issues discussed and any decisions made with respect to WHS, and must be sighted by the superintendent

JHA / SWMS will form the record of JHA / SWMS workshops and JHA / SWMS reviews

9.6 Access to Health and Safety Information

Nacap will provide staff with access to health and safety information through a variety of forums, including but not limited to:

- Health and safety meetings, including toolbox meetings and pre-starts
- Health and safety noticeboards
- Health and safety committees
- Formal and informal business communication processes
- Supervisors, and
- Computer access (via Hot Desk)

NACAP will provide open access to health and safety information either in hard copy or in electronic form. The information provided must be accurate, up to date and easily accessible to all personnel.

10 GENERAL RISK MANAGEMENT

10.1 Hierarchy of control

All risks will be managed in accordance with the hierarchy of control:

1. Hazards will be eliminated as far as reasonably practicable
2. If it is not reasonably practicable to eliminate a hazard, the risk associated with the hazard will be controlled by application of control measures as follows:
    a. Substituting the hazardous situation, material, process or thing for a situation, material, process or thing that is less hazardous, e.g.:
        i. substitute a hazardous chemical for a non-hazardous chemical, or chemical with lower risks, that meets similar performance requirements
    b. Isolate the hazard from any persons exposed to it, e.g.:
        i. erect a permanent / semi-permanent physical barrier
        ii. design the work so there is plant or a structure between workers and the hazard
        iii. isolate workers from harmful energy sources

c. Implement engineering controls e.g.:

i. install machine guards, interlocks or dead man switches

ii. install range limiters on plant

Substitution, isolation and engineering are considered **equal** in the hierarchy of control

Each identified substitution, isolation and engineering control that is reasonably practicable will be implemented

3. If risk remains after application of substitution, isolation and engineering controls, or if no reasonably practicable substitution, isolation and engineering controls are available, the risk will be controlled by administrative controls, such as JHA / SWMS, work procedures, permit to work systems, etc.
4. If risk remains after application of all reasonably practicable controls under steps (2) and (3), the risk will be further controlled by provision of PPE to people exposed to the hazard.

10.2 Pre-determined PPE requirements

As a minimum, the following PPE will always be worn on site:

- Safety footwear certified as meeting requirements of AS/NZS 2210 or equivalent
- Natural fibre long sleeve shirt and long trousers
- High visibility clothing will be incorporated into a shirt (alternatively a high visibility vest will be worn)
- Safety glasses:
  - General (non-prescription) type must be certified as meeting requirements of AS 1337.1 or equivalent
  - Prescription type must be certified as meeting requirements of AS 1337.6 or equivalent
- Hard hats certified as meeting the requirements of AS/NZS 1801 or equivalent
- Task-appropriate gloves for all manual tasks

All other PPE will be certified as meeting the requirements of a published standard if one exists, e.g. AS/NZS 1270 for hearing protectors.

Persons wearing respiratory protection must ensure a good fit is obtained using the designated fitting test process associated with that respirator, noting that and identifying certain physical appearances and structures could impede the effectiveness of the respirator (e.g. facial hair).

Task-specific PPE requirements must be outlined in each JHA / SWMS.

All PPE will be made freely available and replaced when worn, damaged or misplaced.

Nacap will align with the Jemena's Personal Protective Equipment requirements.

11 HAZARD IDENTIFICATION, RISK ASSESSMENT AND CONTROL (HIRAC)

11.1 Planning

Nacap will facilitate and participate in a Hazard Identification Workshop (HAZID). HAZID is a facilitated risk evaluation workshop that defines and evaluates fatality and serious injury risks associated with the

agreed scope(s) of work being performed. The HAZID will include key/critical controls that Nacap will implement to ensure a safe system of work.

The purpose of the HAZID is to identify task-based exposures which could result in a consequence score of B or A (refer HSE Risk Matrix) with the intent to determine control strategies based upon both the hierarchy of control and positive human behaviours to eliminate the potential for these risks to occur.

			Consequence				
			A	B	C	D	E
		SAFETY	Fatality or permanent disability	Long term injury or illness	Lost time injury	Restricted or alternative duties	Medical treatment or first aid
		ENVIRONMENT	impact with potential for severe long-term harm or impact on an area of significance	events causing harm that cannot be immediately recovered	offsite impact with localised harm	Onsite events with the potential to cause local harm	single onsite event causing negligible harm
Likelihood	1	Probable	Intolerable	Intolerable	High	High	Medium
	2	Highly credible	Intolerable	Intolerable	High	Medium	Medium
	3	Credible but infrequent	High	High	Medium	Medium	Low
	4	Unlikely	High	Medium	Medium	Low	Low
	5	Remote	Medium	Medium	Low	Low	Low

Figure 3 - HSE Risk Matrix

Hazid assumptions, methodology and/or Terms of Reference (ToR) will be stated by NACAP prior to the development of the HAZID in order to determine the work methodology for NACAP's Scope of Work.

It will, as a minimum, identify those activities that have the potential to cause a fatality or serious injury to personnel undertaking the task.

These work method statements will form part of Nacap's overall health and safety management system and be utilised for the completion of the HAZID.

HIRAC Workshop

NACAP will also conduct a project wide HIRAC workshop to be conducted during the project pre-mobilisation phase to identify, assess and specify controls for all reasonably foreseeable construction hazards and risks.

This HIRAC will be conducted in a workshop environment with representation from Senior Management, Project Manager, Construction Manager, Project WHS Manager and specially selected individuals with construction experience that is applicable to the planned construction methods and hence a good understanding of the expected construction hazards and risks relevant to the project scope. Jemena HSE and project management will be invited to participate. NACAP will ensure all relevant Sub Contractors are invited to process.

11.2 Training

Prior to the HIRAC workshop, all its participants will be trained in NACAP's standard methodology and tools for developing a Project HIRAC Register, including information about:

- how to identify hazards and assess risks associated with hazards
- reasonably practicable control measures and application of the hierarchy of control

- how to identify risk controls that are required by legislation in relation to a particular class or type of hazard or risk
- the standing of codes of practice and what this means when selecting reasonably practicable controls
- requirement to consider risk controls recommended or specified by Australian standards to the extent they are reasonably practicable
- Nacap's risk rating system and approval protocol
- The outputs that are expected from the HIRAC workshop (Project HIRAC Register and HIRAC Close Out Reports (or similar))

11.3 Overview of process

Figure 4 below provides an overview of the HIRAC process to be followed in the workshop in relation to each reasonably foreseeable hazard and risk and the requirements for approval of risk level after application of controls ("delegation of authority").

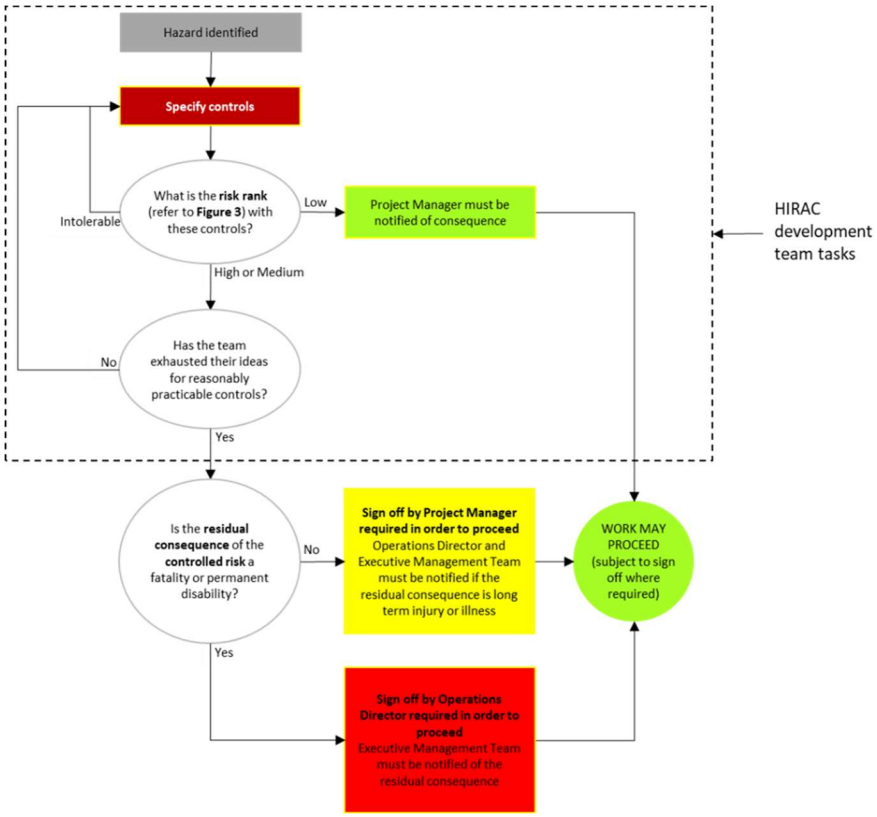

Figure 4 - HIRAC process including delegation of authority

The HIRAC process will include the identification of any hazards that may impact third parties (client/public/other entities/stakeholders).

Hazards that are identified as having potential to affect 3rd parties will be noted on the Project HIRAC register, then where noted and where necessary, consultation will be held with the 3rd party stakeholders to alert them of potential impacts. Liaison and interaction with impacted third parties will be documented (e.g. agenda/meeting minutes/diarised/register, etc).

Actions from the HIRAC, including any third-party actions, will be tracked and managed to close-out by designated person(s) thru HIRAC Close Out Reports (or similar).

11.4 SWMS/JHA

SWMS will be developed for all site field activities. All DRAFT SWMS will be provided to Jemena for review and feedback. The final working version of the SWMS to be developed in a SWMS workshop onsite with the relevant operational team(s). The client will be invited to SWMS workshops to provide input as to the final contents of the SWMS.

SWMS must be prepared for:

- all activities involving HRCW (refer section 15.1)
- all activities involving high risk plant (i.e. plant that requires a licence to operate), and
- for further avoidance of doubt, any activities involving:
  - mobile plant operation
  - work in the vicinity of foreign services. Refer to Working Around Live Lines Procedure (**GAS-599-PR-EL-002**) / Foreign Services Procedure (**3904-OPS-013-3**)
  - excavations (any)
  - welding and allied processes
  - abrasive blasting
  - hazardous chemical handling / use
  - lifting
  - work that can produce harmful airborne contaminants (e.g. concrete / masonry cutting)
  - driving
  - use of pneumatic tools or regulated pressure equipment
  - use of powered cutting tools (e.g. chainsaw)
  - any other hazardous work identified by the Project HIRAC Register

Nacap SWMS template will be used for the works.

All Nacap employees and subcontractors will be:

- provided training on how to develop a SWMS (or JSA) and how to identify hazards and risks and apply appropriate risk control measures, and
- consulted on development of the SWMS (or JSA) that relate to their work

SWMS (or JSA) will be prepared in a consultative environment (workshop) facilitated by a WHS Manager or WHS Advisor, who will have the Project HIRAC Register on hand to ensure all risks relevant to a SWMS as identified by the Project HIRAC process are transposed onto SWMS (or JHA).

The remaining content of SWMS (hazards, risks, controls) will be derived from consultation with members of the relevant work crew.

Figure 5 provides an overview of how the Project HAZID / HIRAC Register will be used when preparing SWMS (or JHA).

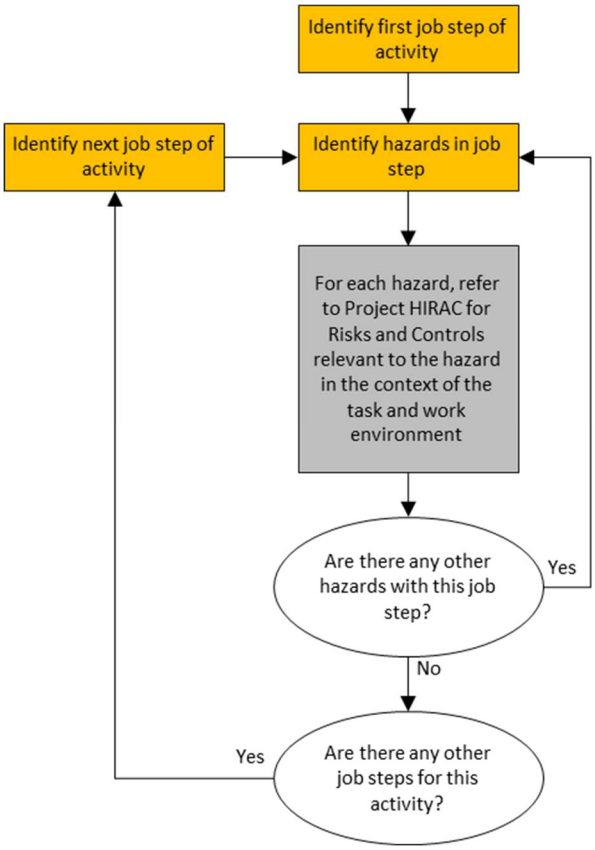

Figure 5 - JHA development using Project HIRAC Register

Subcontractors are responsible for training their personnel to develop their own SWMS/JHA and for consultation with their workforce when developing their SWMS/JHA.

Subcontractor SWMS/JHA will be assessed for meeting Nacap requirements using Subcontractor SWMS/JHA Review (**3904-OPS-012-F**). Nacap approval of the subcontractor's SWMS/JHA, as evidenced by this form, must be obtained prior to the subcontractor commencing the relevant work.

SWMS/JHA must be reviewed and signed by the work crew prior to commencing the activity.

SWMS/JHA must be kept up-to-date and any new circumstances, construction activities, locations, equipment, personnel, climatic conditions etc. must be taken into consideration. When work methods or conditions change, or if a new task is to be performed that is not documented on the SWMS/JHA, the SWMS/JHA must be updated.

11.5 Plant safe system of work

Safe system of work for plant is outlined in the corporate procedure **3907-PLA-002-3** Management of Plant on Projects.

Hazards, risks and controls identified on a plant hazard assessment are critical to ensuring the plant can and will be operated safely.

Any identified risks of plant operation that are not documented in the plant operation and maintenance manual must be documented in the relevant SWMS/JHA, and the SWMS/JHA and operation manual together will form the documented safe system of work.

11.6 Take 5 Card

Prior to undertaking any work tasks where there may have been changes in respect of People, Plant, Process or Environment, all personnel are expected to undertake a Take 5 to ensure hazards associated with the task they are about to undertake have been controlled to mitigate risks to ALARP.

Where previously unidentified or new hazards are found, the Supervisor will be contacted and the SWMS/JHA is to be updated to cover the hazard and the control strategies to be implemented to eliminate or control the hazard.

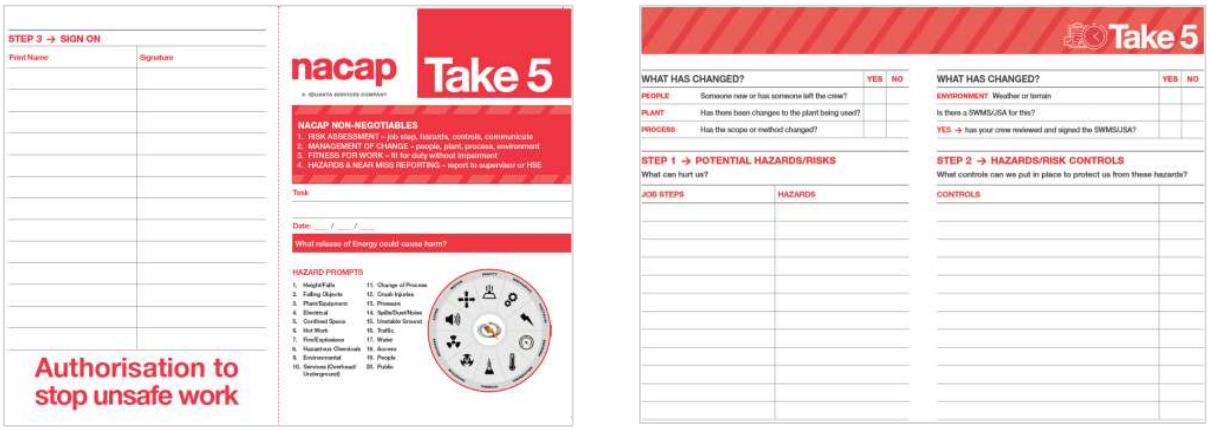

Figure 6 - Take 5 Card

11.7 Safety in Design

The risk associated with any residual WHS constructability issues that cannot be designed out will be transferred to the HIRAC (HAZID) process.

This process will also be applied to design changes. Also refer Management of Design (**3904-OPS-010-3**).

12 WORKER SCREENING, ON-BOARDING, INDUCTION, MOBILISATION AND COMPETENCY

Nacap has an integrated process for ensuring that personnel assigned to the Project are competent, qualified and physically fit.

New / inexperienced workers will be mentored and coached by line managers / supervisors ensuring that identification of hazards, understanding of task JHA / SWMS and development of skills are key focus areas, further development opportunities will be considered as part of ongoing development of new / inexperienced workers.

Nacap will ensure their personnel undergo medical assessments to a standard that is consistent with Jemena Pre-Employment Medical requirements.

Prospective workers (of Nacap and subcontractors) are required to undergo a drug screen prior to engagement in addition at a minimum 10% of the workforce will be randomly tested on a monthly basis. Refer to Fitness for Work Procedure (**3905-HSE-001-3**). Positive indication on drug screen precludes a worker from engagement on the project.

Workers will also be screened for being fully vaccinated for COVID 19.

Once engaged, all workers are governed by Fitness for Work Procedure (**3905-HSE-001-3**).

Once a worker has an offer of employment having undergone the recruitment and onboarding processes, including vendors and subcontractors, will complete the following induction processes:

- Provide Nacap with all evidence of training and competency relevant to general construction (e.g. white card) and their specific role (e.g. licences, certificates, qualification records, statements of attainment)
- Complete Nacap online project inductions on the Nacap Portal (portal.nacap.com.au), and
- Complete any other inductions required for their role by the client or third parties as per Jemena Prerequisite and Induction Requirements
- The Nacap Online Project Induction will address but not limited to the following:
- Emergency procedures and muster points
- Medical facilities and locations
- Risk management techniques for use on site
- Reference to the mandatory Jemena procedures
- Stop Work Authority
- Safety representative information (e.g. local H&S Committees)
- Critical operations and permit to work processes
- Incident and hazard reporting procedures
- Site specific safety procedures
- Site layout
- Fitness for work – site specific content
- Fatigue management, and
- Workers compensation and injury management general awareness

Once mobilised, workers will be subjected to verification of competency as per Verification of Competency Procedure (**3904-OPS-002-3**) (GAS-599-PR-HSE-005) for tasks relevant to their role (HSE training records will be maintained and available to Supervisors).

Additionally, a project Training Needs Analysis (TNA) will be used to ensure competency profiles are documented for all positions and periodically reviewed.

Personnel who are absent from the Project site for a period exceeding 3 months may be required to complete the Induction process again.

Project induction records will be maintained on the Nacap Portal, and worker licences and competency records will be maintained in NACAP's Human Resources Information System.

12.1 Short Term Workers

A Short-Term Workers induction has been developed, the Short Term Works Project Induction is specifically designed for individuals who are required to work on the Project for no more than 4 days in total. All work conducted by individuals under this induction process must be directly supervised at all times by a member of the construction supervision staff.

12.2 Visitors

As a minimum requirement:

- Visitors must be escorted at all times whilst on site and have a host assigned to them who has completed the site induction
- Visitors must comply with all local procedures and policies and if breached, are subject to removal from site without notice, at the projects discretion
- Hosts are responsible for the conduct and safety of their visitor / guest at all times and may, without notice, withdraw their permission to remain on site
- In an emergency situation visitors or essential service staff may be admitted to site without an induction at the request of Jemena and NACAP WHS Manager. The Jemena representative will then assume responsibility for their conduct and movement on site
- Visitors are not permitted to operate machinery or vehicles at any time whilst on site (including light vehicles)
- A register of visitors must be kept at each site and entry and exit times recorded for emergency purposes
- All visitors must be fully vaccinated against COVID 19

13 SUBCONTRACTOR SELECTION, MANAGEMENT AND EVALUATION

The following procedures govern Nacap's requirements for selection, management and evaluation of subcontractors, which includes matters related to vetting potential subcontractors' historical WHS performance prior to engagement and ensuring adherence to Nacap's WHS management system on the project:

- Subcontract Management Procedure (**3904-OPS-007-3**)
- Project Procurement Procedure (**3904-OPS-008-3**) (**GAS-599-PR-PM-002**)
- Vendor Assessment Procedure (**3904-OPS-009-3**)

Subcontractors must be fully vaccinated against COVID 19.

14 PERMIT TO WORK SYSTEM

The Nacap PTW procedure and system applies to excavation, hot works, confined space entry, working at height, hazardous area work, abrasive blasting and driving plant over pre-commissioned/operating pipelines and is applied in the following context:

This procedure does not override any permit to work requirements that may be required when working in areas, or near operating assets, that are under control of other parties including our clients. Permit to work systems and requirements of other parties shall be adhered to when they are applied to Nacap's work.

Where a client or third-party permit system is required to be implemented and meets or exceeds the minimum requirements of the Nacap permit system, the client or third-party system will take precedence and a Nacap permit to work is not required. At the commencement of each project the assessment of both Nacap and client permits systems will form part of the Project OHS Management System Gap Analysis to determine the adequacy of permitting arrangements and determine how the Permit System on the project will be implemented. Clients may have different permit requirements for Brownfield and Greenfield Sites which may require specific training and designation of personnel into specific roles which differ from the Nacap permit system.

Permits are required for the following types of work:

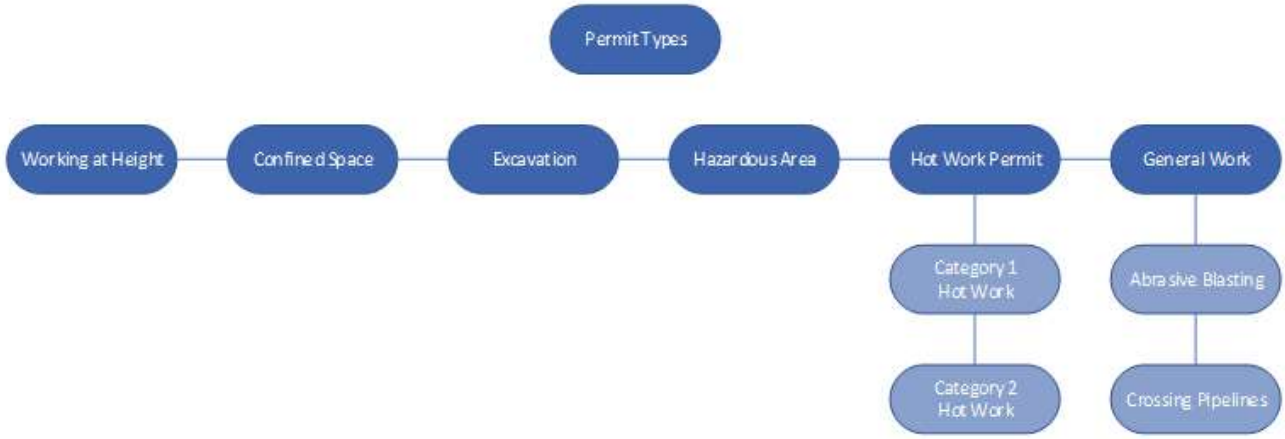

Figure 7 - Permit Types

- Work in the authorised person zone of an overhead powerline. Refer to Safe Working with Electricity Procedure (**3904-OPS-012-3**) (**GAS-599-PR-HSE-002**)
- The relevant jurisdiction's Fire and Emergency Services Authority has prescribed in the Regulations for certain activities carried out in the course of trade or commerce to be permitted in a Total Fire Ban (except when the fire danger is Catastrophic), including:

  hot work (Nacap will work to the requirements of the Nacap PTW Procedure for open air hot works for Greenfields construction and will comply with Jemena hot work procedures where applicable for Brownfield construction.)

  road work (grading and bituminising);

  off-road activity
- Work on external party (including client) assets that require isolation / disconnection of energy sources (including electrical, hydraulic or pneumatic) require a permit from the owner or operator of the asset

Nacap's PTW Procedure (**3904-OPS-019-3**) will be reviewed for alignment with the Jemena Permit to Work Procedure (**GAS-999-PR-HSE-006**).

14.1 Isolation and Tagging

Refer Nacap Safety Essential 8_Isolation of Plant-Equipment-Services together with project and client-specific requirements.

15 HRCW

15.1 Summary

Below (✓) are the categories of HRCW that are currently identified for the Jemena's Port Kembla Pipeline Project:

Table 8 - HRCW Categories

Construction work involving…	(✓)
Risks of persons falling more than 2m	✓
Work carried out on telecommunication towers	☐
Demolishing structural element(s) that are load-bearing or related to structural integrity	☐
Structural alterations or repairs requiring temporary support to prevent collapse	☐
Known or likely to involve disturbance of asbestos	✓
Working in or near confined spaces	✓
Working in or near excavations (shafts or trenches deeper than 1.5m)	✓
Working in or near tunnels	☐
Work involving use of explosives	☐
Working on or near pressurised gas distribution mains or piping	✓
Working near High Voltage Transmission Powerlines	✓
Working on or near chemical, fuel or refrigerant lines	✓
Working in areas that may have contaminated or flammable atmosphere	✓
Work involving tilt-up or precast concrete	☐
On, in or adjacent to roads, railways, shipping lanes or other traffic corridors	✓
Work near movement of powered mobile plant	✓
Artificial extremes of temperature	✓
Working in or near water or other liquid that involves risk of drowning	☐
Diving work	☐

This plan will be updated and recommunicated when any category of HRCW that is not identified in the existing version of the plan is newly identified as a (confirmed or likely) project risk.

15.2 Procedures for managing identified major hazards and HRCW

Nacap will comply with the requirements and align associated High-Risk Work Procedures with the relevant mandatory requirements of Jemena procedures.

Risks of persons falling more than 2m

Refer to Nacap Working at Heights Procedure (**3904-OPS-014-3**).

The risks associated with the potential for falling objects is also identified in Nacap's Working at Heights Procedure where it is required to be assessed and controlled in accordance with the Hierarchy of Control.

In relation to managing elevated work platform (EWP) safety, Nacap will align with Jemena's procedures to manage the risks associated with the operation of this type of equipment.

All scaffolding will be designed and constructed in accordance with AS 1576, as evidenced by product certification and will be managed by the ScaffTag management system or an equivalent.

Scaffolds will be erected by persons with appropriate level of scaffolding licence and verification of competency.

Confined spaces

If confined spaces are an identified risk, a procedure will be developed by Nacap that addresses the requirements as per the WHS regulations and in consideration of requirements in the relevant code of practice and AS 2865. Also refer Nacap Confined Space Procedure (**3904-OPS-019-3**).

Excavations

Nacap will review the Nacap Safe Excavation Procedure (**3904-OPS-016-3**)(**GAS-599-PR-CV-001**) for alignment with the Jemena's Excavation Procedure (**GAS-999-PR-HSE-008**).

Nacap will seek permission prior to undertaking any ground disturbance works, including penetrations deeper than 150mm.

Work on or near pressurised gas distribution mains or piping

Where works are undertaken on pressurised gas lines, will develop project specific procedures for safe systems of work taking into account:

- HIRAC in accordance with hierarchy of control, legislation, codes of practice and Australian Standards locating the lines where they are buried. Refer to Working Around Live Lines Procedure (GAS-599-PR-EL-002) / Foreign Services Procedure (**3904-OPS-013-3**)
- properties, storage, handling and use of the gas
- potential atmospheric conditions and contaminants
- methods to prevent uncontrolled gas release, ignition, or adverse reaction
- qualifications / licences / permits required to undertake the work

In addition to the usual activity risk assessments and planning the following may also be required when working on, in or around pressurised gas lines:

- Permit to work/Asset owner approvals
- Service location plans/drawings
- Isolation/service protection process

Nacap will develop site-specific emergency procedures to manage the potential unplanned release, ignition or reaction of the pressurised gas relevant to the scope of works being undertaken.

Also refer Safety Essential 8_Isolation of Plant-Equipment-Services.

Working Near High Voltage Transmission Powerlines

Where applicable, High Voltage Work shall be subcontracted to an appropriately qualified and experienced licenced electrical contractor.

This procedure applies to work practices on all overhead lines and associated apparatus including overhead lines within a substation.

Work practices will be such that they protect employees from the hazardous occurrences or effects that can develop on or around overhead lines and their support structures, including:

- Lightning
- Induced Voltages and Currents
- Transfer Voltages
- Voltage Gradients

- Line Energising
- Neutral and Earthing System Currents

It is the responsibility of all employees engaged in work on high voltage overhead lines to follow all the safe work practices applicable to the work.

Safe work practices apply to all overhead line working situations and are to be used (as applicable) for all overhead line work.

It is essential when developing safe working procedures to carefully risk assess the possibility of hazardous voltage rises occurring at the work site and ensure safe working practices and safeguards are in place in relation to the following:

Identification of High Voltage Feeders

Persons to Keep Clear of Equipment

Earthing Plans

Engineer's Assessment

Persons Working at Ground Level

Persons Working Aloft

Making or Breaking Connections on High Voltage Overhead Lines

Large Work Sites where the particular work process is to be carried out over multiple spans of a HV overhead line

Stringing an Overhead Line Parallel to an In-Service Line

Stringing Conductor on Landing Span to HV Substations

Testing of HV Overhead Lines - Safeguards for Use of Test Instruments

Also refer Safe Working with Electricity Procedure (**3904-OPS-012-3**)(**GAS-599-PR-HSE-002**)

Work on or near chemical, fuel or refrigerant lines

Where works will be undertaken on chemical, fuel or refrigerant lines, Nacap will develop procedures for safe systems of work taking into account:

HIRAC in accordance with hierarchy of control, legislation, codes of practice and Australian Standards

Properties and handling of the chemical / fuel / refrigerant

Methods to prevent uncontrolled release, ignition, or adverse reaction of chemical/fuel/refrigerants

Qualifications / licences / permits required to undertake the work

Isolation/permit to work processes

Locations of all services are identified and documented with the relevant services disconnected, isolated or otherwise controlled prior to working on or near chemical / fuel / refrigerant lines

Development of site-specific emergency procedures to manage the potential unplanned release, ignition or reaction of the chemical, fuel or refrigerant relevant to the scope of works being undertaken

Also refer Safety Essential 8_Isolation of Plant-Equipment-Services.

Working in areas that may have contaminated or flammable atmosphere

Refer Safety Essential 8_Isolation of Plant-Equipment-Services.

Work on or near roadways or rail corridors (traffic management)

Where work in road or rail traffic corridors is identified as a project risk, procedures will be developed and HIRAC carried out to manage the risk in accordance with the hierarchy of control.

The risk assessment and controls must comply with the relevant road or rail authority requirements for road or rail work site risk assessment.

Where road traffic will need to be controlled to manage risk and / or enable works, a traffic guidance scheme must be developed and implemented by persons that are accredited by the road authority for this purpose.

Where work in traffic corridors is unavoidable, hierarchy of control options to be considered by the project may include:

- Substitution, isolation or engineering, e.g.:
  - Substitute the timing of works in traffic corridors to the least busy times so far as reasonably practicable
  - Isolate workers from traffic with rated barriers such as those complying with AS/NZS 3845.2
- Apply administrative controls by implementing a traffic management plan which includes:
  - works risk assessment by a qualified person (as determined by the road manager)
  - traffic guidance scheme in accordance with AS 1742
  - traffic control ("stop / go bat") personnel

Workers performing risk assessments for works in traffic corridors and installing or using traffic control devices must be trained in accordance with the jurisdictional requirements.

Note that traffic guidance schemes and the actual performance of works on roads may require separate approvals from the relevant road authority.

Where traffic control devices and / or barriers will remain on site when no work is occurring (e.g. night time / "aftercare"), a plan must also be established for inspecting traffic controls devices for their ongoing effectiveness including replacement where damaged (including by vandalism) or stolen.

Works in rail corridors are subject to the rail safety national law and require specialist competency from the rail line operator.

Traffic Management

A Traffic Management Plan (TMP) (**GAS-599-PA-CN-002**) will be developed, implemented and approved by the relevant authority for each site to manage the traffic hazards across the site. The site TMP will be reviewed annually and when traffic logistics change from those nominated in the original TMP, all changes will be managed via change management process.

Traffic Rules outlining the requirements for pedestrians and drivers will be implemented across all operations and at a minimum will include:

- Designated speed limits
- All persons in a moving vehicle will wear a seatbelt at all times
- No vehicle approaches within 50 metres of surface mobile equipment without first making positive verbal radio contact with the operator of that equipment
- If site rules permit overtaking then you must first obtain positive radio communication
- No vehicle tows equipment unless it and the item being towed are engineered to do so
- There will be no use of personal mobile phones or electronic devices whilst operating surface mobile equipment at any time. In light vehicles the use is also prohibited unless a fully operational hands free kit is fitted and approved by the client. Each site should maintain rules for use of mobile phones and electronic devices

A process will be in place to communicate changes or hazards (adverse conditions) which affect traffic management safety. This will include site notices and management of the hazard via road signage (e.g. road maintenance, flood indicators, road condition changes).

All light, heavy vehicles and mobile plant shall be either fitted with UHF / VHF radios or have available handeld units as required to enable positive radio / verbal communication at all times where required.

Also refer Safety Essential 10_Worksite Traffic.

Work near movement of powered mobile plant

Risk of work involving or near powered mobile plant will be managed in accordance with Management of Plant on Projects (**3907-PLA-002-3**) and via the HIRAC / JHA process that will consider the hazards that arise as a result of interaction of mobile plant with workers, structures and other mobile plant including physical separation and barricading.

Also refer Safety Essential 3_Mobile Plant.

16 OTHER SIGNIFICANT SAFETY HAZARDS AND RISK CONTROLS

16.1 Vehicles and Land Transport

General

Vehicle operations present one of the largest areas of risk and greatest area for impact on local communities for a Project.

Light vehicle operations are subject to Safe Driving and Light Vehicle Management Procedure (**3904-OPS-001-3**) (GAS-599-PR-HSE-008).

Heavy vehicle operations are subject to Heavy Vehicle Operations Procedure (**3904-OPS-003-3**).

Both the Nacap Light vehicle and heavy vehicle operations procedures will be reviewed for alignment to address required inspections and specifications outlined within the Jemena's Minimum Requirements.

All loads carried on vehicles will be loaded and restrained as per the requirements of the latest version of the National Transport Commission Load Restraint Guide and by using the approved and appropriately rated chains, straps and lashings.

Note: The use of cheater bars and "over centre" load binders are not permitted for use with transport chain. Turnbuckle type load binders must be used for tightening transport chain.

Approved transport subcontractors will make their drivers available to complete the Project induction. If this is not possible, drivers will not operate plant or equipment on the Project, will comply with Project PPE requirements and will remain in the immediate vicinity of their vehicle or the assigned waiting area

during loading / unloading. Non-inducted drivers will not be allowed to access the ROW or any other Project site that is a part of an operating lease owned by others.

Where journey management is required, i.e. journeys of two hours or more, the driver will log the journey with the identified journey manager.

Also refer Chain of Responsibility Procedure (**3905-HSE-010-3**).

Loading and Unloading Exclusion Zones (LUEZ)

To avoid injury during loading and unloading activities, separation of people and equipment is paramount.

Determine who is best positioned to have control and determine who should be in control. Establish Line of Site - know how many people may be in the area of loading / unloading.

Best practice is an isolation control system referred to as LUEZ, which requires application of risk controls based on the following principles and elements:

- Designated pedestrian exclusion zones for the sole use of the forklift, or other loading equipment
- Designated driver safety zones located so that the driver is kept away from the line of fire and can be kept under surveillance by the forklift operator at all times
- Clear and effective systems of communication between the operator and the driver
- Effective methods of providing "loading in progress" warnings to other operators, drivers, and pedestrians
- All personnel who may be exposed to loading / unloading operations / activities must be trained and deemed competent prior to being exposed to the activity
- All activities associated with loading / unloading should be contained within a designated "Exclusion Zone" at all times. The most effective method to establish an Exclusion Zone is to use physical barriers. These may include: fences; cages; barriers; truck gates; barricades; bollards; tape; chains; etc.
- The control / authority of the Exclusion Zone rests with the loading / unloading operator at all times
- Pedestrians must not approach operating machinery without making eye contact with the operator and receiving positive acknowledgement that it is safe to approach

A spotter may be required in the Exclusion Zone during loading / unloading. Where a spotter is required to operate within the Exclusion Zone, the following actions must be taken:

i. A site-specific risk assessment must be conducted prior to any spotting activities, taking into consideration site and freight requirements

ii. Ensure that spotters and the loading / unloading operator agree on hand signals prior to start of the task

iii. Instruct spotters to always maintain visual contact with loading / unloading operator

iv. Instruct the loading / unloading operator to stop immediately if they lose sight of the spotter

v. Do not give spotters additional duties while they are acting as spotters

vi. Provide spotters with high-visibility clothing that differentiates from normal PPE, especially during night operations

16.2 Physical Separation – Barricading

Nacap shall review for alignment the requirements within Jemena's Procedures. The review will include, but is not limited to the following:

- Guarding on rotating or moving equipment
- Overhead protection guarding
- Barricading and exclusion zones of work areas (incl. signage & cones)
- Whip checks / hose restraint device
- Emergency stops and pull wires

Nacap shall conduct risk assessments and include identified hazards and controls within JHA / SMWS and PHA's.

16.3 Transportable and Temporary Buildings

Temporary and transportable buildings used on the Project will:

Comply with the Building Code of Australia

Be suitably rated for the expected wind conditions and local regulatory requirements of the region where they are to be located

Be correctly installed according to the requirements for temporary anchoring to prevent movement in high wind conditions

16.4 Lifting

Lifting operations are a large part of pipeline and facility construction work, and as such present a significant area of risk.

Use of mobile cranes will be carried out in accordance with Mobile Crane Operations **3904-OPS-005-3** (**GAS-599-PR-HSE-004)** reviewed for alignment with the requirements of Jemena's Cranes and Lifting Equipment Procedure. All other mechanical lifting operations will be subject to preparation of a JHA for the lift.

All operators of mechanical lifting plant must satisfy the relevant VOC requirements. Refer to **3904-OPS-002-3** (**GAS-599-PR-HSE-005**).

16.5 Trenchless Crossings

Nacap will engage a specialist subcontractor for all trenchless crossing works on the Project (Horizontal Directional Drilling (HDD) and Micro Tunneling. HAZID / HIRAC Workshops and risk assessment requirements outlined within Section 11 HIRAC of this plan will be undertaken in consultation with Jemena and the subcontractor.

16.6 Electrical

Installations and AS / NZS 3012 – Electrical Installations, construction and demolition sites.

Inspection, frequency and testing of all installed, fixed, re-locatable or portable electrical equipment will be in accordance with AS / NZS 3012. All RCDs must be inspected and tagged 3 monthly.

Low Frequency Induction (LFI)

Where the proposed pipe sections pass under or beside HV power lines the following additional precautions maybe required:

- The Maximum Safe Length (MSL) of continuous pipe that can be strung will be assessed in areas adjacent or parallel to overhead power lines, and appropriate hazard controls implemented
- Installation of mitigation earthing electrodes to protect against Low Frequency Induction (LFI) currents
- Temporary connections of the earthing electrodes to the steel line pipe and pipe strings will be made using welding clamps on cleaned pipe metal surfaces
- Connection cables from welding clamp to earthing electrode will be assessed and a minimum size copper cable specified prior to any works
- Welding mats may be required where tie-in activities for continuous pipe strings take place in LFI exposure areas. A specific risk assessment will specify the requirement
- In addition, any requirements of the power authority (e.g. restriction on refueling locations) will be agreed with the relevant power authority and will be complied with by all personnel

Further detail is outlined in the Nacap Working Safely with Electricity Procedure (**3904-OPS-012-3**) (**GAS-599-PR-HSE-002**) which will be reviewed for alignment with the Jemena procedures.

Overhead Power Lines

All overhead power lines encountered on the Project will be identified and catenaries erected as described in the Nacap Working Safely with Electricity Procedure (**3904-OPS-012-3**) (**GAS-599-PR-HSE-002**).

This Procedure describes how personnel, plant and equipment will safely work in proximity to live power lines.

16.7 Hazardous Chemicals

Any Hazardous Chemicals (including dangerous goods) used on the Project will be stored, handled and used in accordance with Hazardous Chemicals – Storage, Handling and Use (**3904-OPS-004-3**) (**GAS-599-PR-HSE-003**) which will be reviewed for alignment with the Jemena's Hazardous Materials Management Procedure. A SDS Register will be updated and maintained.

Nacap will ensure hazardous and/or dangerous goods being mobilised to site will be submitted to Jemena, with the relevant manufactures SDS, for approval.

Transport of any dangerous goods by road will conform to Nacap's Dangerous Goods Transport Procedure (**3904-OPS-006-3**).

16.8 Fibrous Material Management

Nacap will implement a procedure which meets or exceeds Jemena's Fibrous Materials Management Procedure.

Asbestos

Potentially operators may encounter Unexpected Finds which could be asbestos related. This is where the operator should stop excavating, ground his attachments and report the find.

Unexpected find protocol

If suspected toxic or hazardous materials are discovered / exposed during construction/demolition activities in an area of the site believed to be free of clean of hazardous materials, the following protocol must be followed:

1. Cease work and evacuate the area of work immediately

2. Contact a Nacap representative (HSE Manager, Superintendent, Construction Manager)
3. Erect barricades to isolate the immediate areas, with 10m between the suspect material and the erected barrier if possible
4. The appropriate regulatory authorities should be notified as soon as possible if applicable
5. No person shall enter the barricaded area unless expressly permitted by the qualified environmental specialist. A clearance certificate or approval should be given in writing prior to entry
6. Sampling of the suspect material is to be carried out by an appropriately qualified environmental specialist (usually a consultant) as advised by the Nacap construction manager
7. The nominated Environmental Specialist (in liaison with Nacap senior site personnel and/or relevant authorities) will determine if further remedial actions are necessary based on the sample test results and will nominate appropriate treatment / handling or disposal options and procedures
8. All permits to carry out remedial work are to be obtained prior to the commencement of any new works and the nominated Environmental Specialist must provide written clearance approval
9. The barricade may then be removed and work activities may resume under the direction of the Nacap Construction Manager

16.9 Welding

A task specific JHA / SWMS will be developed for welding. Nacap will ensure when welding a safe system of work will be implemented and included. As a minimum:

Work area perimeter/barricading is established to segregate and prevent uncontrolled entry (i.e.: pedestrians, mobile equipment or other work groups)

Welding will only be undertaken by qualified and experienced personnel

Welding gloves will be sound, dry and used on both hands while welding and changing electrodes. Welders should wear appropriate dry fireproof clothing that covers the legs and arms and footwear should be rubber soled and not have bare steel toecaps

The arrangement, where necessary, of local exhaust or general ventilation systems for toxic fumes, gases, or dust to remain below the maximum allowable concentration, as specified in applicable Australian Standards

Any transformer or inverter type welding machine will be fitted with a voltage reduction device (VRD)

Oxygen will never be used for ventilation

Filler and fusible granular materials will have welding fumes/hazardous gas notification warnings

Welding filler metals containing cadmium will carry warnings to notify persons of poisonous fumes and the need for adequate ventilation or air supplied respirators, and

Brazing and gas welding fluxes containing fluorine compounds will have cautionary wording to indicate the presence of fluorine compounds

16.10 Portable Tools, Hand Tools and Other Equipment

In all cases, tools will only be used in a manner compliant with manufacturer's recommendations, or their intended purpose. There will be no use of makeshift or homemade tools.

Workers are required to complete specific training requirements for some equipment e.g. power activated tools, chainsaws, etc – refer to Verification of Competency Procedure (**3904-OPS-002-3**) (**GAS-599-PR-HSE-005**).

Nacap will also ensure that no prohibited or restricted items are brought to site in accordance with Jemena's requirements.

16.11 "No knives" policy

Nacap has a "No knives policy" whereby a knife may only be used when there is no other suitable tool available to complete the task and the use of the knife is approved by the Project WHS Manager.

16.12 Compressed Air Equipment / Pressure Vessels

All pressure vessels, such as air compressor tanks, in use on the Project will be inspected and maintained as per AS / NZS 3788 – Pressure Equipment and will only be used within the scope of their rated pressure and for intended purpose.

Compressed air supplies are checked to ensure correct pressure and air quality for the tools being used.

Permanent supply systems shall be labelled and fitted with suitable fittings to minimise the risk of inadvertent connection of Compressed Air Tools to incompatible services.

16.13 Housekeeping

All workplaces on the Project will be maintained in a fit and tidy state to reduce the risks associated with trip hazards, dropped objects and other hazards associated with poor housekeeping.

Supervisors of work areas will conduct regular daily inspections to assure compliance and OHS personnel will conduct regular documented weekly inspections (workplace HSE Checklists, JHA Review Checklists) as a part of their regular duties.

16.14 Firefighting

Firefighting equipment is required as follows:

- Fire extinguishers in all vehicles and mobile plant
- Firefighting equipment with at least 9 litre capacity for outdoor hot work generally
- Firefighting trailer (trailer-mounted 1000 litre (or similar) capacity tank and firefighting pump) for outdoor hot work on days which the rural fire authority has rated the fire risk "high" or greater
- Fire hose reels, and / or sufficient number and type of fire extinguishers for the floor area and fire risk, in all temporary buildings as per the Building Code of Australia

All fire extinguishers and fixed hose reels deployed on the Projects will be tested every 6 months (at a minimum) and tagged to indicate serviceability.

Used fire extinguishers and otherwise unserviceable equipment will be immediately removed from service, tagged as out of service, and quarantined by the equipment owner for repair or disposal.

All vehicles, Plant and equipment on the Projects will be fitted with a fire extinguisher risk assessed as being appropriate and fit for purpose.

Fire extinguishers will be securely mounted, with signage where appropriate or where risk assessed as part of a Plant Hazard Assessment.

Offices and Ancillary Buildings

The supplier of Nacap offices for the project will ensure that all statutory requirements (both New South Wales State and local government) are met in regard to the supply and installation of firefighting equipment. This will include (but is not limited to) the installation of adequate numbers of appropriate fire extinguishers throughout the building areas. The administration buildings supplier will also ensure that a pressurised water supply system is installed along with adequate numbers of fire hose reels. All firefighting equipment will be installed with compliant signage as per AS 1319 – Safety signs for the occupational environment.

16.15 Lasers

All laser generating devices used on the Project will be used in accordance with AS 2397 – Safe use of lasers in the building and construction industry.

Lasers used on the Project will be Class 2 or below. Class 3B and class 4 lasers are prohibited on construction sites by legislation.

Lasers and surveying equipment must only be used by competent workers.

Warning signage must be in place to ensure all persons on site are aware of lasers.

16.16 Radiography

A Radiation Safety Plan will be prepared and submitted by Nacap's nominated Radiography subcontractor prior to any radiography occurring, for review and approval. This Plan will be in accordance with the applicable radiation safety legislation, codes of practice and any applicable standards (refer to Appendices A, B and C).

All radiation apparatus brought on to the Project by the licensed user will comply with all relevant legislation standards and codes of practice.

Residual risk to workers who are not involved in radiography but are at risk of ionising radiation exposure from being near radiography activities will be managed with isolation (bunting / flagging) if reasonably practicable or administrative (signage) controls to warn them of radiography activity.

16.17 Hydrostatic Testing

As high pressure hydrostatic testing is a specialised work process with specific risks and controls, Project Hydro Test Procedures (**GAS-599-PR-TI-002**) and Hydro Test Plan (**GAS-599-PA-TI-001**) will be developed for each system to be tested. This Procedure will identify relevant hazards, risks and controls specific to this process, prior to this activity taking place a JHA / SWMS will be developed and reviewed by crew with the controls put into place to ensure the task is completed safely.

16.18 Fauna and Flora

Construction risk assessments will take into account the identification of hazards arising from dangerous fauna and flora likely to be encountered on the Project, and the management of those identified hazards by trained Fauna Handlers.

Communication with the Project workforce (includes but not limited to Inductions, notice boards, Toolbox / Prestart meetings, and education sessions from fauna handling / environmental personnel) will ensure that all members of the workforce are aware of the relevant hazards associated with venomous fauna and the correct course of action to take if encountered.

The Project WHS Manager will ensure that adequate numbers of the Project workforce have received internal training in the first response treatment for snake bite.

16.19 Manual Handling

Nacap will provide training to employees on manual handling at project induction and Toolbox Meetings. Nacap will also incorporate manual handling activities (>10 kg) within their JHA / SWMS to identify controls to minimise risks in accordance with the Hierarchy of Controls.

16.20 Use of Electronic Devices

Nacap will implement the Jemena's Mobile Phones and Electronic Devices Procedure outline requirements in relation to the use of electronic devices.

Unless otherwise stipulated in that procedure, Nacap will ensure electronic devices are:

- Not used while operating mobile equipment and/or plant
- Not used while involved in high risk activities
- Not used in a manner that reduces or prevents communication abilities between personnel
- Mobile telephones for individuals on site will be subject to client formal approval (if required)
- Not used in a manner that hinders the ability to hear, understand or follow directions on a communication radio
- Not used with any over-ear or in-ear listening apparatus, and
- Used in a manner that will not cause a distraction to other people regarding noise and content

17 MANAGEMENT OF SITUATIONAL CHANGE

Situational changes that have the potential to create a hazard will be investigated. In every case, care will be taken to ensure any safety implications are identified and assessed, and any hazards are either controlled or eliminated. Proposed changes will be assessed for potential impact.

The PMT also recognises the need to address the potential for unintended consequences that could result from uncontrolled / unrecognised change during construction and installation and which may subsequently introduce potential hazards and risk that have not otherwise been assessed.

The PMT will maintain the following strategies to address this potential:

- Actively communicate to all workers the importance of compliance with design, the need to seek authorisation before initiating a change or modification and the importance of reporting where such an event may or could have occurred, and
- Assess, evaluate and fully document changes to design or modification irrespective of scale or detail

At a crew / activity level there are essentially four situational change management factors to be considered.

The environment

People

Plant and equipment, and

The work processes

Change management discussions surrounding these 4 factors encourage management, supervisors, workers, and engineers etc. to think each morning about "what's changed" today from yesterday.

Changes that have been identified will be recorded on the task JHA's/JHA or Take 5 Card and signed by all personnel involved in the task.

Focusing on and communicating these 4 Change Factors can improve planning, crew awareness of new / introduced hazards and importantly any additional controls that need to be communicated and implemented.

17.1 Handovers

An important factor in the management of change at an operational level is to ensure that an effective handover occurs between incumbent personnel and their replacement. All personnel will be required to carry out a suitable handover to ensure their succeeding incumbent is fully conversant with their Project responsibility and work status.

Handover will be carried out when any member of the workforce is preparing for a planned work absence, when personnel return from a work absence, and / or when personnel commence work in a new position.

The Project Manager will ensure that under normal circumstances, relief personnel arrive on site 24 hours (minimum) before commencing work and are provided with a direct handover from the departing incumbent.

18 HEALTH SYSTEM

Nacap will actively participate in the implementation Occupational Health and Hygiene by:

Reviewing the Project Health Risk Assessment with their Jemena Representative to ensure all health risks and controls are appropriately captured applicable to their Scope of the Work

Ensure personnel are made readily available to wear assigned monitoring equipment, as required

18.1 Health Monitoring for Exposure to Hazardous Substances

The need for health monitoring will be considered for credible exposures to hazardous substances.

The following table summarises Nacap's assessment of credible exposure routes for hazardous substances:

Table 9 - Credible Exposure Routes for Hazardous Substances

Route of exposure	Credibility	Examples of how workers may be exposed
Ingestion / aspiration	Not credible	N/A
Inhalation	Credible	Chemicals (e.g. fumes, vapours and particulate matter from welding processes, gases, paints, oils, fuels, lubricants, aerosols, solvents, epoxies, chasing masonry products, blasting media, etc.)
Adsorption	Credible	Chemicals (e.g. paints, oils, fuels, lubricants, aerosols, solvents, epoxies, etc.)
Injection	Not Credible	N/A

Health monitoring will be performed for workers whose health is deemed to be at medium risk due to potential exposure to substances listed in Schedule 14 of the model work health and safety

regulation. The level of risk used as the basis for health monitoring will be the residual risk determined during the HIRAC or any subsequent risk assessment, which will take into account:

- characteristics of the hazardous substance
- volumes and concentrations in which the substance is used
- the manner in which the hazardous substance is used
- the work environment the hazardous substance is used in
- potential duration of exposure
- credible route(s) of exposure, and
- control measures adopted to reduce exposure

The safety data sheet of the relevant substance will be consulted as part of the risk assessment.

The type and method of health monitoring will be as per Schedule 14 of the model work health and safety regulations. Administrative tasks associated with health monitoring such as obtaining work histories, organising questionnaires and compiling exposure information will be overseen by a safety manager or advisor with Certificate IV in Occupational Health and Safety. Any actual health monitoring such as physical examinations or tests will be performed by qualified medical or scientific practitioners in a field relevant to the type of monitoring to be performed. Health monitoring will be undertaken monthly or as required.

Individuals' results of any health monitoring will be communicated directly to individual personnel. In addition, characteristic results of health monitoring may be communicated to work groups who are exposed to the same substances. Where this is done, personally identifiable information will be redacted from the communicated data to protect the privacy of individuals.

Also refer to Procedure for Health Risk Assessment and Monitoring (**3905-HSE-007-3**).

18.2 Management of Noise Exposure and Associated Health Monitoring

Workers are exposed to noise from operating plant and tools. Where there is a suspected risk of unsafe exposure, noise levels generated by such equipment will be measured by a competent person using a calibrated noise meter. The noise levels will be recorded in a register on site.

Nacap directs workers whose daily noise dose are likely to be exceeded due to working with such equipment to wear hearing protection such that no worker's daily noise dose is at risk of being exceeded.

Audiological examinations and audiometric testing will be performed and reported to individual workers where required by work health and safety regulations. The tests will be performed by qualified practitioners.

Also refer Procedure for Health Risk Assessment and Monitoring (**3905-HSE-007-3**) and Noise Management Sub-Plan (GAS-599-PA-EV-004) which will be reviewed for alignment with Jemena.

18.3 Coronavirus (Covid-19)

Nacap have developed a Coronavirus Management Plan (**3905-HSE-008-3**) in accordance with Federal and relevant State restrictions and requirements, this plan will be reviewed, amended and aligned in accordance with ongoing relevant jurisdiction restrictions and requirements communicated by Federal and State Governments and will also be reviewed for alignment with Jemena's Covid-19 Management Plan (GAS-599-PA-HSE-003).

18.4 Injury and Illness Management

In the event of any person sustaining an injury or illness, they will be required to report it as soon as possible to their immediate supervisor, and promptly be assessed and receive treatment as required.

An Incident Report will be completed in all cases. All incidents will be investigated to understand the root cause and contributing factors associated and implement the necessary actions to prevent recurrence.

18.5 First Aid Facilities and Services

A First Aid Risk Assessment will be conducted to identify first aid facilities, resources and service requirements and emergency response resource / equipment requirements relevant to the potential injuries and emergencies that may occur during the project.

This assessment will be conducted by a person with a minimum Certificate IV in Workplace Health and Safety and will be reviewed at least annually.

A first aid kit will be provided in each vehicle used on site and in site offices. All first aid kits will:

- Be dustproof, of solid construction, portable and clearly identifiable
- Have sufficient content having regard to the identified hazards in the workplace
- Have at least one worker appointed to be in charge of each first aid box that has an understanding of the products and their uses, and
- Contain sufficient supplies i.e. compression bandages to treat a snake bite patient

For further details refer to the Project Emergency Response Plan and First Aid and Emergency Equipment Risk Assessment (**3905-HSE-014-F**).

18.6 Medical and Health Assistance

In the event of injury or ill health, arrangements will be made for the person to receive adequate medical treatment. A first aid treatment room at the project offices will be available and controlled by the Project Nurse / Medic / First Aider. The Project will have access to emergency support provided by local resources.

In cases of minor illness or injury, the Project Nurse / Medic / First Aider will coordinate directly with medical service providers by mobile phone, radio or satellite phone.

Personnel will not be permitted to return to work unless a Medical Certificate is provided stating that the worker is considered fit to return to work. A copy of all Medical Certificates or Certificates of Capacity related to any injury or illness as a consequence of Project activity will be forwarded to the Project OHS Manager. Nacap's Injury Management Procedure will be reviewed for alignment with Jemena's Injury Management and Workers Compensation Procedure.

18.7 Worker's Compensation and Rehabilitation

A Worker's Compensation Claim shall be initiated by the worker's employer where any time off work or any medical costs have been incurred because of work related injury or illness.

The worker's employer shall liaise with the applicable Worker's Compensation insurance provider, rehabilitation personnel and medical practitioners as appropriate regarding the status of active claims and advise the Project Manager on the progress of active Project related claims on a weekly basis. This shall include details regarding any work restrictions to be observed upon resumption of duties.

Injured personnel shall be consulted in the development of a Return to Work Plan as part of the injury rehabilitation process. This process shall commence as soon as practicable after the injury using sound

medical and other relevant professional advice and shall be managed by the nominated Nacap's nominated Return to Work Coordinator.

Personnel shall not be permitted to return to work unless a Medical Certificate is provided stating that the worker is considered fit to return to work. A copy of all Medical Certificates or Certificates of Capacity related to any injury or illness as a consequence of Project activity shall be forwarded to the Project WHS Manager.

The injured worker should, whenever possible, present a copy of Nacap's injury management form to the treating medical officer. This form includes information about policy regarding treatment and prompt return to work for workers and is contained in the Nacap "injury pack" which should be sought from the return-to-work coordinator.

Injury Packs are available on the Management System Resource Library to assist with this process. A dedicated Return to Work Coordinator will be appointed and communicated.

19 EMERGENCY PLANNING

19.1 Assessment of potential emergencies

An emergency response plan will be prepared for the project to outline how to prepare for emergencies and actions to be taken in the event of various identified potential emergencies.

The emergency response plan including equipment and first aid requirements, resources and responsibilities, specific to the project's needs, will be reviewed and updated as necessary and when changes to emergency response are identified from:

- New potential emergency scenarios being identified
- Emergency response exercise evaluation
- Incidents
- Substantial changes to the organisation, location or layout of the work site
- Changes to emergency response personnel, equipment or process

Emergency response plans, including necessary equipment and training, for specific hazardous work tasks that require specialist input (e.g. confined space work, working at heights) will be documented in work procedures and approved prior to the relevant work commencing.

All personnel shall have an abridged version of the ERP for their area of work and any demarcation from other ERP sites shall be adequately explained at toolbox and prestart meetings.

All personnel shall be trained in correct emergency response procedure by means of the Project induction and other training as required.

Designated emergency personnel for the project will be inducted in the site-specific emergency procedures/plans and have obtained any qualification or formal training defined by the company as required to fulfil the role.

The ERP shall be displayed in office notice boards and a copy of relevant content maintained in all Project vehicles. Emergency response exercises shall be conducted in accordance with the ERP. Following such an exercise, the PMT shall discuss the exercise with all involved persons and shall make any required changes to the ERP or emergency response training.

Project personnel shall be advised of any emergency response exercises prior to its execution and any landholder requirements/notifications will be identified and taken into account.

Details of Doctor, Paramedics, First Aid Officers and the location of First Aid facilities shall be included in the induction program. This information shall also be available in the emergency information carried in all Project vehicles. If there is an emergency response vehicle on the project it shall be clearly identified, fit for purpose and maintained.

The Nacap Emergency Management Response Plan (**GAS-599-PA-HSE-008**) will be reviewed for alignment with the Jemena's Emergency Management Plan.

19.2 First aid and emergency equipment assessment

First aid and emergency equipment assessment will be assessed by a person with at least a Certificate IV in Occupational Health and Safety. The assessment process and results will be recorded using the form **3905-HSE-014-F** First Aid and Emergency Equipment Risk Assessment or an assessment that meets these requirements.

As part of the assessment checks will be made that emergency response equipment is compliant with statutory and risk based requirements, fit for purpose, available in sufficient quantities, inspected, tested, maintained in a serviceable condition and calibrated where necessary. The assessment to be reviewed by Jemena HSE.

19.3 Communication

VHF and or UHF radios will be provided for communication, as required on site. In addition to the provision of radios, mobile cellular / satellite phones will be available on site for communication with outside emergency service providers (where required).

For all early and late works, adequate and reliable methods of communication will be developed prior to works commencing in the field.

Methods of communications for non-routine / early and late works will be in place and tested to ensure that reliable communications are in place in the event of an emergency.

19.4 Fire Protection

The Project Manager will ensure that:

- Adequate fire protection precautions are in place
- An adequate number of different types of firefighting equipment are provided to meet requirements
- Personnel are made aware of the hazard of ignition sources, and
- Appropriate personnel are trained and competent in the use of firefighting equipment

The Project Manager will ensure that all personnel are aware of the location of all firefighting equipment and will maintain documented evidence of personnel training in the use of firefighting equipment.

All mobile plant and all vehicles will have a fully charged, tested and tagged fire extinguisher ready for use at all times. At the completion of all hot work, the area will be checked thoroughly to ensure no fire has started or may start.

Every item of powered constructional plant (working within designated live gas areas) that is operated by an internal combustion engine will be fitted with an effective exhaust system and spark arrester.

Additional fire response equipment including water tanks fitted with a pump will be available on site where there is a risk of fire. In areas where a higher fuel loading is present i.e. National Park or timber plantations additional risk assessment will be undertaken to determine fire prevention and control resources and procedures.

19.5 Fire Ban Days

An application for a pre-approved permit from the relevant jurisdiction Authority for Fire and Emergency Services will be sought for hot work to be performed on days where a fire ban applies. This application should include mitigation measures to be adopted.

A copy of this permit will be obtained and provided to the Nacap Project Manager. Nacap will carry out the work in accordance with any conditions imposed by the permit.

19.6 Security

Project personnel and all visitors will be required to comply with the requirements of the ERP and instructions from the Project Manager with regard to entering and leaving the Project area.

The names of all visiting personnel will be recorded in the Visitors Register to account for all personnel in an emergency situation prior to entering the Project works areas.

To ensure all operating plant and equipment is secured from trespassers / vandals, the doors and windows will be padlocked when left over night in areas deemed not secure. Warning lights will be used if operation will continue at night, providing adequate warning for the public within the area.

Nacap in conjunction with Jemena will conduct a review to determine any security risk. Where a security risk is identified a security risk assessment in determining security resources and protocols will be developed.

All work sites will be left in a safe and secure condition, with particular attention given to mitigation of risks to others from injury caused by accidental or deliberate access to trenches / excavations, hazardous areas or any other areas.

19.7 Nacap Corporate Crisis Management Support

The Emergency Response Coordinator (ERC) is required to notify the Nacap Senior Management Team of all incidents including those that may require an emergency response. The Nacap Crisis Management Plan (**3902-CORP-001-3**) may be enacted where Nacap Corporate is required to provide support to the Project to manage an emergency event.

Some examples of what may constitute a crisis situation are as follows:

- major safety incident resulting in serious injury or fatality
- major environmental incident resulting in serious environmental damage
- prosecution or conviction in relation to safety, environmental or other breaches
- natural disaster
- major office fire

19.8 Relationship of Emergency (Incident) Management to Crisis Management

Emergency response is the actions taken by Nacap personnel in response to an incident arising from Nacap's activities where damage to property or the environment and/or injury has occurred or may occur. These actions include rendering the scene safe, coordinating with emergency services as required, rescuing trapped or injured personnel, rectifying damage, notification of next of kin and of authorities as required, and the investigation of the incident. Emergency response is dealt with in Emergency Response Plans and Incident Investigation Procedures. An emergency may be a Crisis, but in most cases will not be.

Crisis Management is the actions taken by Nacap personnel to protect the integrity and reputation of Nacap and/or Nacap's ability to continue operating efficiently following a critical event. Crisis Management may relate to a safety or environmental incident that has involved an emergency response

or it may relate to an incident where no emergency response was required such as the sudden death of a key executive.

Crisis Management in response to an emergency operates in support of the emergency response team and plan whenever an emergency meets the definition of a Crisis.

Close co-operation and coordination are required between the CMT and the emergency response coordinator to ensure that there:

- Are no confusions as to roles and responsibilities
- No responsibility or tasking gaps exist between the teams

The CMT must advise the emergency response coordinator of any aspects of the emergency response that the CMT is assuming responsibility.

20 INCIDENT INVESTIGATION AND REPORTING

20.1 Incident Management

NACAP's Management of Incidents Procedure (GAS-599-PR-HSE-006) will be reviewed for alignment with Jemena's Procedure Incident Event Management.

Any incident leading to serious injury or death will be verbally reported immediately or as soon as practicable to the Project Manager, Jemena and, where required, WorkSafe with a detailed report to be provided within 24 hours.

All work will be discontinued following any significant incident as soon as it is safe to do so. Work will not resume until all temporary actions have been implemented and approval provided by the Principal.

Incident Investigation will be undertaken or reviewed by a trained person(s) i.e. person should be trained in incident investigation e.g. ICAM training, incident reports will identify the factor(s) that led to the incident, incorporate a process for the identification and management of corrective actions, involve and/or are reviewed by site/senior management. Jemena will be invited to participate in significant incident level investigations.

Should the Principal decide to conduct investigations for any incident Nacap commits to assist in this regard as required and in a timely fashion.

In addition to the above, further notification will be via the Nacap "Heads Up" email system, whereby a short email with pertinent details is sent by the Nacap Project Manager (or delegate) to a distribution list to be determined (but generally including the client Site Representative, WHS personnel and other persons as nominated). This will be done as soon as practicable but no later than two (2) hours after the incident.

The Project Manager (or delegate) is required to report incidents as follows:

WHS related:

- Fatality - incident resulting in death
- LTI - injury resulting in one or more days loss of shift
- MTI - significant, mod - injury requiring off site treatment and resulting in return to work next shift on full duties
- RWC – any injury resulting in return to work next shift on alternate duties
- First Aid - any injury requiring onsite treatment with immediate return to work
- Near Miss - any incident that could have resulted in injury but in this case did not, and

- Vehicle incident

Environmental Related:

Refer to the Contractor's Construction Environmental Management Plan (GAS-599-PA-EV-001)

Operational:

- NC - any non-conformance arising from audit
- System issue - failure in the application of any system (e.g. procedural failure, Legislative breach), and / or
- Technical issue - any operating malfunction (e.g. trip, emergency shutdown, asset damage)

Safety incidents may require reporting to the following organisations:

- Regulator – client responsible for notification to regulator
- Nacap's Workers Compensation Insurer, and / or
- Nacap's vehicle, Plant and equipment insurer in cases of damage

Environmental incidents may require reporting to the relevant regulatory authorities.

Corrective Actions to prevent the recurrence of the incident will be identified, implemented and tracked within the Corrective Actions register. Details of the incident will be stored in the Incident Register with monthly updates on action closeout.

Upon completion of an investigation, the findings and recommendations will be distributed to the relevant work crews for discussion at prestart meetings. All incidents and the results of the subsequent investigation will be tabled and reviewed at the Project WHS Meeting.

Consequence management actions identified as part of findings and actions related to an incident will be managed in accordance with the Nacap Performance Improvement Procedure 3903-HR-005-3.

20.2 Incident Reporting to a Regulatory Authority

With respect to incident reporting in accordance with WHS Legislation, where a notifiable incident occurs involving any person or registered Plant, the Nacap Project Manager will ensure the full details of the incident is reported as soon as practical and to the relevant Authority after consultation with Jemena. The incident scene will be preserved to ensure persons conducting the investigation have access to the scene untouched.

When a Regulatory Authority comes to site when an incident has occurred or for any other purpose, the client representative and Nacap Project WHS Manager (or delegate) will accompany the Inspector and record details of all discussions and events and a report should be forwarded to the Nacap Project Manager and client representative.

20.3 Hazard Reporting

All personnel will have access to the Nacap Hazard Observation Card or via the Nacap Portal. These should be used by workers to record essential information regarding an identified hazard and to enable the determination and implementation of appropriate actions to manage or eliminate that hazard. Details of the hazard will be recorded in the Project Corrective Actions Register.

21 PERFORMANCE ASSESSMENT, REVIEW, ENGAGEMENT AND IMPROVEMENT

21.1 Site WHS Inspections and Audits

The WHS Team in conjunction with supervisors will conduct a documented inspection of the site office, yard and other work sites on a weekly basis. Members of the PMT and WHS / HSR's Committee will be invited to participate in the inspections. The Jemena Representative will also be invited to attend. Findings of the inspections and audits will be recorded in the Corrective Action Register and tracked for close out as per due date.

The objectives of WHS audits will be:

- To determine the extent to which requirements of client representative, regulatory authorities and industry standards are being met
- To determine the effectiveness of Nacap's management system, Plans and Procedures, and
- To continually attempt to identify ways to improve WHS performance

Audits will be conducted in accordance with accepted industry standards. They will incorporate document review, interviews with key personnel, field inspection, collection of evidence, entry and exit interviews and preparation of a report outlining the audit findings and recommendations.

Documents reviewed should include:

- Previous audit documentation
- Non-Conformance Reports
- Corrective Action Plans
- Close out of previous audits, actions, Non-Conformance Reports
- Incident Notification and Investigation Reports
- Field Inspection Checklists
- Job Hazard Analysis / JHA
- Minutes of Toolbox and other meetings
- Records of inductions
- Notices, and
- Project documentation and mapping including alignment drawings

Audit reports should include:

- Completed Audit Checklists
- Collected evidence of instances of both good and bad practice (e.g. photographs)
- A summary of key findings, and
- Recommendations for improvement, where necessary

Further detail is outlined in the Nacap Internal Audit Procedure (**3902-CORP-002-3**).

Audit findings will be actioned through established corrective action systems, see also Non-Conformance Management (**3902-CORP-003-3**). Audit corrective actions will be identified, implemented and tracked within the Corrective Actions register.

Other formal audits may include joint Nacap / client audits or regulatory authority.

Formal WHS Audits and Inspections will be conducted as follows; client representatives are encouraged to participate.

Table 10 - Audit / Inspection Timings

Type	Timing	Responsibility
Safe Driving and Vehicle Management Audit	Within 2 weeks of commencement of project.	Head of HSEQ
Workplace – Establishment Inspection	Within 2 weeks of commencement of project.	Project WHS Manager
WHS Compliance Inspection	Monthly	Project WHS Manager
JHA / SWMS Compliance Inspection	Self-performed tasks: at least 1 per roster cycle Subcontractor-performed tasks: at least 1 per roster cycle	Project WHS Manager
Safety Walks / Inspection	Weekly after commencement of construction.	Project WHS Manager

Note: under the terms of NSW Ports, Agreement for Lease with AIE, this CHSM Plan will be subject to a desktop audit by AIE's independent auditor (Steve Williams & Associates) prior to work commencing. In addition to the initial desktop audit, while work is being conducted on NSW Ports land, the independent auditor will conduct a field audit every 3 months. AIE will conduct field audits on a monthly basis.

WHS Inspections conducted can be recorded via the Nacap Portal Inspection module. Senior Management participation of inspections / audits can also be recorded on the Nacap Portal Visible leadership module.

Nacap will also participate in Jemena-led HSE Audits.

Subcontractors

Subcontractors will be required to participate in workplace safety inspections with Nacap WHS representatives.

21.2 Injury / Loss Statistical Analysis and WHS Reporting

The Project Manager will monitor the WHS performance of the Project. The Project Manager will endeavour to ensure a high level of compliance is achieved and will promptly rectify any identified deficiencies. Table 10 below summarises the Project WHS objectives, targets and KPI's.

WHS reports are produced that:

- Monitor performance against the WHS objectives and targets defined by the organisation
- Are regularly reviewed by senior management
- Are communicated to site management

All near miss events, first aid cases, medical treatment cases, and loss time case incidents will be monitored, recorded and evaluated. The WHS statistics will be reported monthly to Nacap's head office. The information will be consistent with statistical data including:

- Number of Near Misses: A near miss is any unplanned incident that occurred at the workplace which, although not resulting in an injury, had the potential to do so
- Number of First Aid Injuries (FAC): A first aid injury is a work injury requiring first aid treatment by a first aid trained person

- Number of Medical Treatment Injuries (MTC): A medical injury is a work injury requiring consultation and / or treatment by a Medical Practitioner beyond the scope of normal first aid
- Number of Restricted Work Case Injuries (RWC): An injury is a work injury requiring consultation and / or treatment by a Medical Practitioner beyond the scope of normal first aid
- Total Number of Lost Time Incidents (LTI): A lost time incident is a work injury which results in death or an inability to work for at least one full day or shift any time after the day on which the injury or illness occurred due to a workplace related health matter or injury, and
- Total Recordable Incident Frequency Rate (TRIFR): A calculation of the total number of medical treatment and lost time injuries and illnesses relative to the number of man-hours worked on the Project

The following lead indicators will be measured and reported:

- Number of hazards and near miss events reported
- Number of inspections and audits completed against schedule
- Emergency response exercises undertaken
- Number of safety observations/STKY Discussions conducted
- Number of JHA/SWMS and Take 5s conducted
- Number of drug and alcohol tests conducted
-

Table 11 - Construction Site Safety and Health Objectives, Targets and KPIs

Frequency Rate/KPI	Project Target	
Lost Time Injury Frequency rate (LTIFR)	0	
Total Recordable Injury Frequency Rate (TRIFR)	0	
Near Miss / Hazard Reporting Frequency Reporting target of 1000 per 1 million manhours	>1000	
NCR's External only	Major NCR	0
	Minor NCR	<3
Environmental Incidents Reportable only	0	
EMERGENCY RESPONSE DRILL % (conducted as per Drill Schedule)	100%	
CORRECTIVE ACTIONS (closed by due date)	100%	
STKY Actual	0	
STKY Potential	0	

Frequency Rate/KPI	Project Target
Visible Leadership (Senior Managers = completion of STKY Discussion Card)	4 per month

NB: frequency rates are based in 1 million man-hours (12 month rolling average)

Note: Further specific KPI's and targets may be developed in liaison with Jemena.

21.3 Project Reporting Requirements

Nacap will prepare a monthly OHS performance report as a part of the Contractor's Monthly Status Report. Nacap will measure and report against HSE KPIs on a monthly basis. Reporting will include supporting information as necessary regarding:

- All incidents and near miss events with details
- Incidents reportable to regulatory authorities
- Hours worked (for further information refer to Appendix E: Definition of Site)
- WHS observations (positive and negative)
- Visible leadership activities (Project Management team interaction and proactive involvement)
- Numbers of personnel who have completed inductions
- IVMS Exceptions reporting (where applicable)
- Drug and Alcohol tests conducted with pass / fail rates
- Audits, inspections, non-conformances, and Corrective Action details
- JHAs/SWMS and Take 5s conducted
- Inductions, drills, other WHS related training
- WHS action close out rates
- Project management attendance at toolboxes, inductions, field observations
- Motor vehicle incidents and frequency rates
- Kilometres travelled (estimated)
- Any notices, fines or prosecutions initiated by an Authority or notified to NACAP

21.4 Continuous Improvement and Management Review

Nacap will continually improve the effectiveness of the management system. Improvement of the system is driven by learnings that arise from a variety of sources including:

- Incidents
- Non-conformances
- Analysis of key data including in particular, WHS trend analysis
- Audit, inspection and review
- External learnings from group companies and industry bodies
- Management oversight through site visits, supervisory board meetings
- Ongoing meetings and discussions
- Project Lessons Learnt sessions
- Client feedback, including AIE audit findings

- Senior management will seek to improve performance by periodically reviewing trends in nonconformances and effectiveness of corrective actions
- Annual management reviews of the HSE management system – via performance reviews (KPI's), audit findings, project HSE Reports. Corrective actions and opportunities for improvement shall be recorded on a Corrective Action Register which shall be reviewed for close out

Key learnings / outcomes from any of the above may be shared via HSE Alerts, Toolbox / Prestart Meetings and Intranet / SharePoint.

APPENDIX A – WHS LEGISLATION APPLICABLE TO THE PROJECT

The following Acts and Regulations are relevant to safety management on the Project:

Principal Act	Regulations or Rules under Principal Act
Work Health and Safety Act 2011 (NSW)	Work Health and Safety Regulation 2017
Heavy Vehicle (Adoption of National Law) Act 2013 (NSW)	• Schedule to the Heavy Vehicle National Law Act 2012 • Heavy Vehicle (Fatigue Management) National Regulation • Heavy Vehicle (Mass, Dimension and Loading) National Regulation • Heavy Vehicle (Vehicle Standards) National Regulation • Heavy Vehicle (General) National Regulation • Heavy Vehicle National Law Regulation
Pipelines Act 1967 (NSW)	• Pipelines Regulation 2013
Dangerous Goods (Road and Rail Transport) Act 2008 (NSW)	• Dangerous Goods (Road and Rail Transport) Regulation 2014
Explosives Act 2003 (NSW)	• Explosives Regulation 2013
Radiation Control Act 1990 (NSW)	• Radiation Control Regulation 2013
Workers Compensation Act 1987 (NSW)	• Workers Compensation Regulation 2016 • Workers Compensation (Indexation of Amounts) Order 2013 • Workers Compensation (Indexation) Order 2019

APPENDIX B – CODES OF PRACTICE APPLICABLE TO THE PROJECT

NSW Codes of Practice (https://www.safework.nsw.gov.au/resource-library/list-of-all-codes-of-practice):

Abrasive Blasting Code of Practice
Confined Spaces Code of Practice
Construction Work Code of Practice
Demolition Work Code of Practice
Excavation Work Code of Practice
First Aid in The Workplace Code of Practice
Hazardous Manual Tasks Code of Practice
Managing Electrical Risks in The Workplace Code of Practice
Managing Noise and Preventing Hearing Loss at Work Code of Practice
Managing the Risk of Falls at Workplaces Code of Practice
Managing Risks of Hazardous Chemicals in The Workplace Code of Practice
Managing the Risks of Plant in The Workplace Code of Practice
Welding Processes Code of Practice
Work Near Overhead Power Lines Code of Practice
Moving Plant on Construction Sites Code of Practice

Safe Work Australia Model Codes of Practice and Guides (https://www.safeworkaustralia.gov.au/resources-publications/model-codes-of-practice):

Construction Work Code of Practice
Work Near Underground Assets - Guide Safe Work Australia 2007

National Transport Commission (https://www.ntc.gov.au/codes-and-guidelines/load-restraint-guide):

Load Restraint Guide 2018
Load Restraint Guide for Light Vehicles 2018

APPENDIX C – AUSTRALIAN SANDARDS APPLICABLE TO THE PROJECT

This appendix summarises the standards that are relevant to the project based on the scope of work.

Publisher	Designation	Title
AS	1319	Signs for the occupation environment
AS	1353.2	Flat synthetic webbing slings – Care and use
AS	1418.1	Cranes, hoists and winches – General requirements
AS	1418.5	Cranes, hoists and winches – Mobile cranes
AS	1418.8	Cranes, hoists and winches – Special purpose appliances
AS	1418.10	Cranes, hoists and winches – Mobile elevating work platforms
AS	1418.11	Cranes, hoists and winches – Vehicle loading cranes
AS	1742.3	Manual of uniform traffic control devices
AS	1885.1	Measurement of occupational health and safety performance
AS	1892.5	Portable ladders – Selection, safe use and care
AS	1940	The storage and handling of flammable and combustible liquids
AS	2294.1	Earthmoving machinery – Protective structures – General
AS	2397	Safe use of lasers in the building and construction industry
AS	2550.1	Cranes, hoists and winches – Safe use – General requirements
AS	2550.5	Cranes, hoists and winches – Safe use – Mobile cranes
AS	2550.10	Cranes, hoists and winches – Safe use – Mobile elevating work platforms
AS	2550.11	Cranes, hoists and winches – Safe use – Vehicle loading cranes
AS	2550.15	Cranes, hoists and winches – Safe use – Concrete placing equipment
AS	2550.19	Cranes, hoists and winches – Safe use – Telescopic handlers
AS	2759	Steel wire rope – Use, operation and maintenance
AS	2865	Confined spaces
AS	3775.2	Chain slings for lifting purposes – Grade T(80) and Grade V(100) – Care and use
AS	4326	The storage and handling of oxidising agents
AS	4497	Roundslings – Synthetic fibre
AS	4603	Flashback arrestors – Safety devices for use with fuel gases and oxygen or compressed air
AS	4772	Earthmoving machinery – quick hitches for excavators and backhoe loaders
AS	4839	The safe use of portable and mobile oxy-fuel gas systems for welding, cutting, heating and allied processes
AS	4991	Lifting devices
AS/NZS	1269.0	Occupational noise management – overview and general requirements
AS/NZS	1269.1	Occupational noise management – measurement and assessment of noise emission and exposure
AS/NZS	1269.2	Occupational noise management noise control management
AS/NZS	1269.3	Occupational noise management – hearing protector program
AS/NZS	1270	Acoustics – Hearing protectors
AS/NZS	1336	Eye and face protection - Guidelines
AS/NZS	1337.1	Personal eye protection – Eye and face protectors for occupational applications
AS/NZS	1337.6	Personal eye protection – Prescription eye protectors against low and medium impact
AS/NZS	1715	Selection, use and maintenance of respiratory protective equipment
AS/NZS	1768	Lightning protection
AS/NZS	1800	Occupational protective helmets – Selection, care and use
AS/NZS	1801	Occupational protective helmets
AS/NZS	2210.1	Safety, protective and occupational footwear – Guide to selection, care and use
AS/NZS	2210.4	Occupational protective footwear – Specification for protective footwear

Publisher	Designation	Title
AS/NZS	3000	Electrical installations (Australian / New Zealand Wiring Rules)
AS/NZS	3010	Electrical installations – Generating sets
AS/NZS	3012	Electrical installations - Construction and demolition sites
AS/NZS	3017	Electrical installations – Verification guidelines
AS/NZS	3760	In-service safety inspection and testing of electrical equipment
AS/NZS	3845.1	Road safety barrier systems and devices – Road safety barrier systems
AS/NZS	3845.2	Road safety barrier systems and devices – Road safety devices
AS/NZS	4853	Safe working on or near low-voltage electrical installations and equipment

Notes:

1. *Standards must be applied in the context in which they are written, i.e., recommendations must not be mistaken for mandatory requirements or applied automatically without consideration of what is reasonably practicable in the circumstances.*

2. *Not all standards listed here will have specific application to a work process or risk assessment. For example:*

   Relevance of AS/NZS 1337, AS/NZS 1270, AS/NZS 1801 and AS/NZS 2210.4 are limited to ensuring PPE issued to workers are independently certified as meeting the requirements of the relevant standard.

   Relevance of AS/NZS 3845 is limited to ensuring hired or purchased road safety systems and devices are independently certified as meeting the requirements of the relevant standard.

   AS 1418 series standards primarily relate to design and construction of lifting devices but may have relevance due to recommendations for inspection and maintenance.

APPENDIX D – WHS MANAGEMENT SYSTEM POLICIES

HEALTH & SAFETY POLICY

nacap
A QUANTA SERVICES COMPANY

Safety of our operations and prevention of ill health from our operations is our highest priority and will not be compromised.

We will strive to do no harm to workers, members of the public or any personnel at our workplaces.

TO ACHIEVE THIS, WE WILL:

MAINTAIN	a Health & Safety Management system that meets the requirements of ISO 45001.
COMPLY	with all applicable workplace health and safety laws, client requirements and relevant codes of practice.
COMMIT	to safe work practices and safe working environments for the prevention of work related injury and ill health.
COMMUNICATE	our health and safety policy and procedures to all workers, contractors and interested parties.
EDUCATE	and train our workers and contractors to improve awareness, skills and performance.
CONSULT	with our workers on workplace health and safety including involvement in the decision making process.
SEEK	commitment of all workers, contractors and suppliers to healthy and safe workplace practices.
PROVIDE	leadership, information and a supportive environment that reduces the stigma of mental illness and promotes the mental health and wellbeing of our workers.
ESTABLISH	measurable health and safety targets including both lead and lag indicators.
PROVIDE	relevant health and safety risk management systems and procedures including the use of the hierarchy of controls to manage health and safety risks.
MONITOR	operational health and safety performance and promote reporting of health and safety observations, behaviours and incidents.
CONTINUALLY	review health and safety performance to identify and implement improvements to the health and safety management system.

MATTHEW O'CONNELL
PRESIDENT
NACAP
19/04/2021

3902-POL-01-1 Rev 13

FITNESS FOR WORK POLICY

Nacap is committed to providing and maintaining a working environment in which our workers, contractors and others are not exposed to hazards arising from worker fatigue or the use or misuse of alcohol and drugs.

This commitment extends to the management of transport and heavy vehicle driver fatigue in accordance with laws, regulations and other statutory requirements.

TO ACHIEVE THIS, WE WILL:

IMPLEMENT	practices to minimise the adverse effects of fatigue, work conditions and excessive hours at work.
ENCOURAGE	workers and contractors to take part in activities that promote a healthy lifestyle including things such as exercise, healthy diet and quit smoking programs.
PROVIDE	workers and contractors with access to services to assist with issues that may impact on the worker's or contractor's fitness to work.
PROMOTE	a work environment free of alcohol and illicit drugs through education and a non discriminatory testing regime.
MAINTAIN	a drug and alcohol free work environment on our project sites, defined as 0.00% Breath Alcohol Content for alcohol and any drug level less than the cut off levels stipulated by AS/NZ 4308.
COMMUNICATE	this Policy throughout the organisation and to contractors to ensure there is a uniform understanding and approach to fitness for work requirements.

MATTHEW O'CONNELL
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3902-POL-04-1 Rev 13

RETURN TO WORK POLICY

Nacap recognises that there are mutual benefits to both workers and the organisation by implementing a structured return to work process that provides a worker who has sustained a workplace injury or illness with an early and safe return to work.

TO ACHIEVE THIS, WE WILL:

ENSURE	early implementation of the return to work process.
IDENTIFY	and provide, where practicable, suitable duties consistent with medical advice to achieve an early and safe return to work.
ENFORCE	the timely reporting of all workplace injuries and illnesses by workers through education and awareness in order to ensure prompt initiation of the return to work process.
COMPLY	with all relevent return to work and rehabilitation laws.
EDUCATE	workers to ensure an understanding of the return to work process and the shared responsibility for achieving an early and safe return to work of any injured or ill worker through mutual respect and cooperation.
MAINTAIN	confidentiality of sensitive information regarding a worker's rehabilitation and return to work program.
APPOINT	an accredited return to work coordinator to facilitate return to work programs.

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NACAP NON-NEGOTIABLES

1.	RISK ASSESSMENT	▶ Never start work without identifying and documenting hazards for each job step in your task and having controls in place so you can work safely. ▶ Ensure that hazards and controls are communicated with the crew and SWMS / JSA has been signed by all involved in task. ▶ If you believe a task is unsafe, always stop work and discuss with your supervisor. ▶ Always follow the steps and controls identified in your SWMS's / JSA.
2.	MANAGEMENT OF CHANGE	▶ Always review / assess tasks prior to commencing and identify any changes to: • **People** - someone new or has someone left the crew • **Plant** – new plant introduced, or plant removed • **Process** – scope or method • **Environment** – weather or terrain. ▶ Ensure that changes are communicated to the crew, hazards and controls are recorded on your SWMS's / JSA or SWMS's review card and signed by all involved in the task.
3.	FITNESS FOR WORK	▶ Everyone must report for work fit for duty and without impairment – fatigue or drugs / alcohol. ▶ Undertake / participate in random or for cause alcohol or drug tests. ▶ Undertake / participate in fatigue assessment when required and manage fatigue accordingly.
4.	HAZARDS & NEAR MISS REPORTING	▶ All hazards are to be reported to supervisor and hazard card completed and submitted to your supervisor or OHS / LECH team. ▶ All near misses are to be reported to your supervisor, OHS or LECH team immediately.

MATTHEW O'CONNELL
PRESIDENT
NACAP PTY LTD
19/04/2021

3902-POL-10-1 Rev 2