SUBMITTER NO.	416	Issue Reference:	9010
Submitter Type	Government	TOR CATEGORY	Health & Safety
Nаме	Queensland Police Service	RELEVANT EIS SECTION	Vol 1, 7.7.3

Contractor and sub-contractor operational policies and procedure compliance with project policies and procedures. (e.g. Fatigue Management, Health and Safety).

While the contractor(s) and sub-contractors(s) are responsible for ensuring compliance measures are formulated, these measures must conform and seamlessly integrate with the proponents' policies and procedures that have been detailed as part of the EIS process and approved by the Coordinator-General.

PROPONENT RESPONSE

Waratah Coal will require all employees and all contractors/sub-contractors to undertake induction training before commencing work on the project. As discussed in the *SIMP*, Section 6.5 (contained in *Appendices – Volume 2* of this SEIS), the induction training will cover occupational health and safety, including emergency response procedures, and relevant fatigue management policies.

SUBMITTER NO.	416	ISSUE REFERENCE:	9011
Submitter Type	Government	TOR CATEGORY	Health & Safety
Name	Queensland Police Service	RELEVANT EIS SECTION	Vol 2, 15.5.15

DETAILS OF THE ISSUE

The proponent discusses the impact this and the other Galilee based projects will have on Emergency Services. QPS also notes that the proponent has indicated a willingness to provide financial contributions to help resource the mitigation measures these services may require to implement.

QPS suggests that a joint contribution fund be established with all Galilee Basin Projects, similar to that which LNG proponents have established in Gladstone, to be administered in a fair and proportionate way by the proponents in consultation with emergency services providers.

PROPONENT RESPONSE

As discussed in the *SIMP*, Section 6.1 (contained in *Appendices – Volume 2* of this SEIS), the Coordinator-General, in the evaluation of the Alpha Coal Project EIS, has tasked the proponent to provide an agreed financial contribution towards the provision of a police station in Alpha, police staffing and accommodation requirements, police vehicles for highway patrol and escort vehicles and communications support and education and training programs (negotiating cost recovery arrangements with other proponents through the Galilee Basin CSIA Roundtable). Waratah Coal welcomes a coordinated approach to the provision of emergency services, and supports financial contributions by all Galilee Basin proponents.

Waratah Coal has developed an *Initial Emergency Response Framework* which is included in *Appendices – Volume 2* of this SEIS.

SUBMITTER NO.	416	ISSUE REFERENCE:	9012
SUBMITTER TYPE	Government	TOR CATEGORY	Health & Safety
Nаме	Queensland Police Service	RELEVANT EIS SECTION	Vol 2, 16.7

The proponent has indicated that a Code of Conduct will be developed for Employees and Contractors.

The QPS wishes to engage with the Proponent as to how this Code of Conduct may impact the Alpha community and integrate measures with the QPS to enhance the social assimilation of employees, contractors and the public including the transient mobile tourist community.

PROPONENT RESPONSE

As discussed in the *SIMP*, Section 6.5 (contained in *Appendices – Volume 2* of this SEIS), Waratah Coal will require all employees, contractors and sub-contractors to adhere to a Code of Conduct. The Code aims to enhance relationships between employees and contractors and the local community and minimise adverse social impacts. Waratah Coal would welcome the opportunity to consult with the QFS in regard to the Code and its subsequent implementation.

SUBMITTER NO.	416	Issue Reference:	9013
SUBMITTER TYPE	Government	TOR CATEGORY	Health & Safety
Name	Queensland Police Service	RELEVANT EIS SECTION	Vol 2, 18.6.2

DETAILS OF THE ISSUE

There is a need to include the QPS as a stakeholder in the preparation and exercising of the Emergency Response Plan. QPS contact details are:

District Officer – Longreach Police District Queensland Police Service Galah Street Longreach QLD 4730 Phone: (07) 4658 2200

PROPONENT RESPONSE

Waratah Coal welcomes the opportunity of consulting with the QFRS during the preparation of emergency response procedures.

Waratah Coal has developed an *Initial Emergency Response Framework* which is included in *Appendices – Volume 2* of this SEIS.

SUBMITTER NO.	420	Issue Reference:	9014
Submitter Type	Government	TOR CATEGORY	Health & Safety
Nаме	Queensland Health	RELEVANT EIS SECTION	Sections 2.1 and 4.1.2

Impacts on health services from transient/fly-in-fly-out populations. QH identifies that the greatest demands for health services from mining communities relate to injuries, Alcohol, Tobacco and other Drugs Services, Mental Health and sexual health services, some emergency and GP services. The impacts relating to provision of these services will occur at Emerald Hospital. Major trauma or injuries will be transferred out to Townsville and Brisbane Hospitals. Once the Abbott Point terminal and rail line has been established, increased demands for health services are likely to occur at Bowen Hospital due to the projected population growth associated with current and future mining operations.

Due to the potential impacts on local health services, QH recommends the proponent consults with the relevant health service districts and develop any required management strategies.

PROPONENT RESPONSE

In the evaluation of the Alpha Coal Project EIS, the Coordinator-General has tasked the proponent to collaborate with Queensland Health to develop health service related mitigation strategies to address any impacts on the demands on current regional health services provided by Queensland Health. Other conditions were outlined by the Coordinator-General specific to health services in the Alpha area.

Waratah Coal agrees with the coordinated approach to assessing and addressing health impacts, as proposed by the Coordinator-General. As discussed in the *SIMP*, Sections 5.1 and 6.1 (contained in *Appendices – Volume 2* of this SEIS), Waratah Coal has also proposed that the Galilee Basin and Abbot Point proponents contribute financially to Infrastructure and Community Development Funds, which could be used to support health-related initiatives, not only in response to project-related impacts, but in terms of health needs for impacted communities.

SUBMITTER NO.	420	ISSUE REFERENCE:	9015
SUBMITTER TYPE	Government	TOR CATEGORY	Health & Safety
Name	Queensland Health	RELEVANT EIS SECTION	

DETAILS OF THE ISSUE

There are few references to employee health in the EIS documents and only one statement on the health status of FIFO/DIDO workers in the SIA. While noting the "lack of exercise by mine workers, particularly those on extended shifts" and the effectiveness of physical activity programs conducted in Moranbah since 2005, there are no proposals in either the SIA or *SIMP* for similar initiatives with Waratah Coal employees.

The proponent is encouraged to include programs that address employee lifestyles, diet and exercise as well as the healthy design of accommodation facilities within its *SIMP* and OH&S practice. Advice is available from Queensland Health on how best to approach this.

Waratah Coal aims to have a productive and healthy workforce. As discussed in the *SIMP*, Section 6.5 (contained in *Appendices – Volume 2* of this SEIS), Waratah Coal will promote healthy lifestyle choices:

- Providing a smoke-free work environment
- Providing healthy food choices in work camps
- Enforcing zero tolerance for drug and alcohol use during work hours
- Providing clear guidance on the responsible consumption of alcohol in work camps (after hours)
- Providing a gymnasium and potentially other exercise options in work camps, and
- Considering health promotion strategies such as that trialled in Moranbah.

SUBMITTER NO.	420	ISSUE REFERENCE:	9016
SUBMITTER TYPE	Government	TOR CATEGORY	Health & Safety / Hazard & Risk
Name	Queensland Health	RELEVANT EIS SECTION	Vol 3, 16.4.5

DETAILS OF THE ISSUE

QPS notes the proponents comment relating to the increases in DIDO traffic and the expectation that Emergency Services will increase the demand for those Emergency Services.

QPS requests engagement with the proponent in respect to the level of resources required and available to meet the demand for special service escort activities for over dimensional and excess mass loads. The location of camps along the rail route will result in blackspot areas where police communications will be deficient.

The QPS requests engagement with the proponent on the availability of adequate police mobile communications to improve response and officer safety for incidents in the project areas.

PROPONENT RESPONSE

Waratah Coal welcomes the opportunity to discuss escort requirements, and communication issues in relatively remote areas, with the QPS. Additional details on the loads, routes and timeframes are required before these discussions can meaningfully occur.

SUBMITTER NO.	326	ISSUE REFERENCE:	12019
Submitter Type	NGO	TOR CATEGORY	Air Quality / Health & Safety
Name	Public Health Association of Australia	Relevant EIS Section	

DETAILS OF THE ISSUE

There will be an increase in disease through coal combustion emissions and processing through contamination of air, water and soil.

In order to manage adverse health effects and based on the air quality modelling results, it the following sensitive receptors will be acquired by the Galilee Coal Project in order to avoid significant air quality impacts:

- Kia Ora
- Monklands
- Spring Creek, and
- Glen Innes Homestead (Bimblebox Nature Reserve).

The revised air quality modelling shows that predicted concentrations at surrounding receptors are within the Queensland Air EPP guidelines which are designed to protect against adverse health impacts due to air pollution sources.

Waratah Coal is committed to ensuring that air quality at surrounding sensitive receptors is maintained throughout the life of the mine. Particulate matter from the coal mine will be continuously monitored. A reactive dust management plan will be prepared once the mine is operational that details actions that must be taken when high dust levels are monitored near the mine boundary and at the closest sensitive receptors (residences).

SUBMITTER NO.	420	ISSUE REFERENCE:	12020 / 19002 / 17010
Submitter Type	Government	TOR CATEGORY	Air Quality / Health & Safety
Name	Queensland Health	Relevant EIS Section	Air Quality, Vol 2 Chapter 10, (Mine) / Health / EMP

DETAILS OF THE ISSUE

Queensland Health is concerned that modelled PM_{10} air emissions exceed the goal specified by the Environmental Protection (Air) Policy 2009 of PM_{10} – 50 µg/m³.

The highest exceedences of the goal were modelled at 199%, as specified within S10.2.4.5.1, Table 4 (contained in *Appendices – Volume 2* of this SEIS). It is noted by Queensland Health that the modelling encapsulated the proposed mitigation measures as described by the NPI manual, however it was noted that not all proposed mitigation measures were able to be modelled.

Queensland Health is concerned that the proponent has not assessed the increase in risk to human health at the surrounding sensitive receivers of respiratory illnesses and symptoms due to exceedences in the air quality goal. Further details must be provided to quantify the risks and the implementation of the mitigation strategies to reduce these health risks.

The proponent should provide further assessment and clarification in relation to the air quality modelling and the proposed mitigation strategies to ensure the average concentrations for 24-hour PM_{10} air quality goals are achieved at all sensitive receptors

In order to manage adverse health effects and based on the air quality modelling results, the following sensitive receptors will be acquired by Galilee Coal Project in order to avoid significant air quality impacts:

- Kia Ora
- Monklands
- Spring Creek, and
- Glen Innes Homestead (Bimblebox Nature Reserve).

The cumulative impact air quality model which includes maximum emissions from the Galilee Coal Project, Year 20 emissions from Alpha coal mine and Year 25 emissions from Kevin's Corner coal mine shows that exceedances are not expected at any other sensitive receptor surrounding the mine.

However, air quality will be managed on an on-going basis by using a reactive air quality management plan that incorporates a continuous air quality monitor adjacent to nearby sensitive receptors. Additional emission controls such as increased road watering and modifying operations is recommended when high particulate matter concentrations are recorded at sensitive receptors. More detail on the preliminary air quality monitoring plan is provided in the response to Issue Reference 12026 in Part C – 06 - Air Quality.

Waratah Coal is committed to ensuring that air quality at surrounding sensitive receptors is maintained throughout the life of the mine. Particulate matter from the coal mine will be continuously monitored. A reactive dust management plan will be prepared once the mine is operational that details actions that must be taken when high dust levels are monitored near the mine boundary and at the closest sensitive receptors (residences).

SUBMITTER NO.	420	ISSUE REFERENCE:	4088
SUBMITTER TYPE	Government	TOR CATEGORY	Hazard & Risk / Health & Safety
Nаме	Queensland Health	RELEVANT EIS SECTION	Vol 3, 18.6.2

DETAILS OF THE ISSUE

The proponent details the Emergency Response Plan will constitute appropriately trained persons within Emergency Management and Response teams.

QPS requests the proponent to engage the QPS as a key stakeholder in the preparation of the Emergency Response Plan. QPS Contacts will be dependent upon the relevant Police District in which the rail construction is situated.

PROPONENT RESPONSE

The development of an Emergency Response Plan will be done so in association and utilising communication with relevant stakeholders, including the QPS. Waratah Coal will be mindful to engage the QPS groups relevant to the region in which the project is applicable.

Waratah Coal has developed an *Initial Emergency Response Framework* which is included in *Appendices – Volume 2* of this SEIS.

SUBMITTER NO.	749	Issue Reference:	4089
SUBMITTER TYPE	NGO	TOR CATEGORY	Health & Safety
Name	Doctors for the Environment	RELEVANT EIS SECTION	

- EIS does not address the impact of the loss of biodiveristy on human health matters,
- Air quality (pollution) considerations are presented in disparate sections of the EIS negating a comprehensive understanding of the issues. e.g. rail and mine site air quality impacts are presented in different sections of the EIS, as are cumulative impacts and greenhouse gas considerations,
- EIS does not deal with cumulative pollution over wide areas resulting from the other proposed mines
- Health impacts of global climate change not assessed, and
- Potential health impacts of contamination of water supplies from exposed coal seams.

PROPONENT RESPONSE

Biodiversity and Human Health

There is no requirement in the Terms of Reference for this EIS to address the impact of the loss of biodiversity on human health matters.

Air Quality considerations presented in disparate sections of the EIS

The chapters were based upon the layout in the Terms of Reference which is the usual, and preferred format for an EIS. The presentation of mine and rail impacts in isolation from one another was undertaken to aid reader comprehension given the differing types of activities from rail and mining activities.

Cumulative pollution

The air quality model has been revised to incorporate the inclusion of emission estimates for the Alpha and Kevins Corner coal mines in a cumulative impact assessment model. See Issue Reference 12018 in Part C – 06 – Air Quality.

Health impacts of global climate change

There is no requirement in the Terms of Reference for the EIS to address the health impacts of global climate change.

Potential health impacts of contamination of water from exposed coal seams

See the Groundwater Assessment Report contained in Appendices – Volume 2 of this SEIS.

SUBMITTER NO.	509	ISSUE REFERENCE:	4090
Submitter Type	NGO	TOR CATEGORY	Health & Safety
Name	Lock the Gate Alliance Inc.	RELEVANT EIS SECTION	

DETAILS OF THE ISSUE

Submitter wants cost benefit analysis of the impacts of coal mining, washing, loading and unloading, and transport on human health.

A cost benefit analysis is not a requirement of the Terms of Reference for this EIS and has not been undertaken for this project. The purpose of the economic impact assessment is to identify and assess potential impacts of the project (both beneficial and adverse), not to identify whether the project provides a net benefit to the state (project appraisal). Potential impacts on human health are examined in the Health and Safety section of the EIS.

SUBMITTER NO.	364	ISSUE REFERENCE:	4091
SUBMITTER TYPE	Government	TOR CATEGORY	Health & Safety
Nаме	DEEDI (Mining & Petroleum Operations)	RELEVANT EIS SECTION	Vol 2 Chap 18, 18.1

DETAILS OF THE ISSUE

Safety Management Plan for the information of the proponent: mine safety standards are anticipated to include a requirement for contractors to abide by mine safety and health standards at the time the mine is constructed and operated.

It is suggested that the EIS reflect contemporary safety and health management practices and future requirements to include contractors within a single mine safety and health system.

PROPONENT RESPONSE

A Health and Safety Management Plan will be prepared for the mine (refer to Issue Reference 4078 in Part C - 16 - Hazard & Risk). These comments will be incorporated.

SUBMITTER NO.	420	ISSUE REFERENCE:	6060 / 19119 / 4127
Submitter Type	Government	TOR CATEGORY	Water Resources (Surface Water) / Health & Safety
Name	Queensland Health	Relevant EIS Section	Surface Water, Waste and Social Vol 2 Chapter 9, 12, 16

DETAILS OF THE ISSUE

- Queensland Health notes that the mine site waste water (including effluent from the sewerage treatment plant) is treated and stored on-site and that the treated waste water (to Class C quality) is intended to be recycled for on-site use. While it is understood the treatment processes may reduce the concentration of some contaminants, information on the direct and indirect human health risk of exposure to waste water has not been provided.
- 2. Queensland Health has concerns regarding the potential for offsite human exposure should waste water be released or escape. Examples include the potential for contaminants to reach downstream drinking water sources or other reservoirs where people may be exposed through dermal contact or farming activities. In particular Vol 2 Chapter 16, S16.5.3 (p395) identifies that the proponent will pipe water from the mine to be used for both stock and domestic purposes. The source and quality of this "mine water" has not been specified by the proponent.
- 3. Queensland Health has also noted that the proponent proposes to extract ground water for industrial and potable use and that the site has an on-site water treatment plant. This plant must provide water that complies with the Australian Drinking and Water Guidelines published by the National Health and Medical Research Council. Queensland Health is however unaware and therefore concerned as to whether the potable water supply, once treated at the plant, is appropriately tested and stored on-site as to ensure its quality and protect it from cross-contamination and other potential contaminants.

The proponent should provide further clarification in relation to:

- Managing recycled water activities on-site highlighting compliance with the Australian Guidelines for Water Recycling – managing health and environmental risks (Phase 1) and (Phase 2) released by the National Environmental Protection Council. This document provides guidance on water quality and management planning for recycled water.
- 2. Providing adequate commitments to ensure that waters released / extracted from the mine site is appropriately managed, as to protect downstream drinking water sources or other reservoirs in the event of an off-site discharge. QH recommends that before any "mine water" is piped to a neighbouring property an appropriate risk assessment and water testing is undertaken to ensure the quality of the water is suitable for the intended use and that human health will not be compromised.
- 3. Storing, re-supplying and protecting (particularly from cross contamination) drinking water, to ensure water quality standards meet the Australian Drinking Water Guideline 2004 (ADWG). The proponent will also need to determine whether they will be regarded as a drinking water service provider as regulated by the *Water Supply (Safety and Reliability) Act 2008* and the *Public Health Act 2005*. If the proponent is not a drinking water service provider, then the proponent needs to develop a water quality management system.

PROPONENT RESPONSE

Accommodation camp and mine site sewerage systems will require on-site treatment and disposal. On-site systems will be sized, designed and managed to current standards for the mining industry. Generally, this would entail a secondary treatment system capable of producing recycled water suitable for irrigation via surface and/or sub-surface absorption beds and/or irrigation fields (at least Class C recycled water quality).

A detailed site assessment, including of site opportunities and constraints, soils and local climatic conditions will be coupled with MEDLI mass balance modelling to determine sustainable irrigation loads for the site, coupled with a suitably sized wet weather storage and buffer storage systems to manage variable loads and low irrigation demands during wet periods. During heavy rainfall events, recycled water will be temporarily stored in the wet weather storage, to be discharged at a later date. Signage will be established to restrict access to these areas, and sludge from the plant will be transported off-site by a regulated waste contractor to a regulated waste facility.

A management system will be developed (as a Site Based Management Plan (SBMP) or similar) to manage the treatment system and infrastructure, irrigation and required monitoring program to ensure the scheme remains sustainable over the long term. The SBMP will contain:

- A summary of the system
- Organisational structure and responsibility
- Objectives and Targets
- A Risk assessment and identification of environmental issues and potential impacts
- An Environmental Management Plan
- An environmental monitoring and inspection plan
- Procedures for communication, tracking, incident management, reporting, and training, and
- Procedures for periodic review and continual improvement.

Treated wastewater may be used in progressive revegetation works during the life of the project, and following the cessation of mining. Treated sludge will not be used on mine rehabilitation works.

Design and operational details of the STP including disposal methods will be incorporated in the revised EM Plan.

For other water sources on the site, the water management system has been designed such that there will be no controlled (or uncontrolled) releases of contaminated water to the environment (see also Issue Reference 6020 in Part C – 18 – Environmental Management Plan). Water balance modelling utilising 122 years of meteorological data to demonstrate the demand for water onsite and adequately sized dams will prevent discharge of contaminated water. It should be noted however there will be some uncontrolled discharge associated with sediment control structures during prolonged wet periods. However this water is expected to be of dischargeable quality as these sediment control structures will receive runoff from rehabilitated spoil areas. Refer to the *Mine Site Water Management System* report contained in *Appendices – Volume 2* of this SEIS.

Drinking water for the site will most likely be supplied by groundwater extraction or the Burdekin Falls Dam pipeline (see also Issue Reference 6038 in Part C – 03 – Nature Conservation) which will likely also supply Barcaldine Regional Council with drinking water. Hence water will be of acceptable quality with additional treatment through the proposed Drinking Water Treatment Plant (DWTP).

The DWTP will be developed and managed such that output water will meet the Australian Drinking Water Guidelines, and will operate under a Drinking Water Management Plan which will be developed prior to commissioning the plant, and based on the system chosen for the site.

It is not envisaged that the mine will be a water service provider under the Act.

SUBMITTER NO.	356	Issue Reference:	16031 / 4110
SUBMITTER TYPE	Government	TOR CATEGORY	Noise & Vibration / Health & Safety
Name	DTMR	RELEVANT EIS SECTION	Volume 5 – Appendices, Appendix 23 – Social Impact Assessment , p xiii; and Volume 1 – Project Overview, Chapter 5 – Cumulative Impacts, p77

DETAILS OF THE ISSUE

It is stated that the rail alignment is expected to traverse 36 properties which vary in size from 1,000ha to almost 40,000ha. Four houses are located within 2km of the proposed railway route. Coal train will increase the level of noise, dust and the risk of fire and decrease visual amenity.

It also states that' Waratah Coal will develop a best practice Noise And Vibration Management Plan for both construction and operation of its infrastructure'.

It is considered that the EIS should ensure that any potential health impacts the project may have on local communities are identified and that appropriate mitigation measures are in place so as to protect the nearby communities.

The department is supportive that Waratah Coal includes a Noise And Vibration Management Plan.

The department requests that the Noise And Vibration Management Plan be cognisant of, and undertake measures to mitigate, the potential impacts the project may have on residents, including air, water, and noise pollution (including dust and soil erosion).

Waratah Coal has commissioned a new *Draft EM Plan* for the mine and a *Draft Environmental Management Plan* (EMP) for the for rail (see *Appendices – Volume 2* of this SEIS). Both Plans cover the construction and operational phases of the project. It is acknowledged that the draft EMP included in the EIS provided much information on impacts and control measures for the construction phase and said less about the operational and decommissioning/ rehabilitation phases. This has now been addressed (in fact most of this information was contained in the EIS chapters and simply had not been repeated in the draft EMP). Environmental values and impacts have been transferred from the EIS to the *Draft EM Plan* and *Draft EMP* for all project phases. Environmental protection objectives have been developed.

Environmental Protection Objectives specific to Noise and Vibration are detailed in Section 2 of the *Supplementary Noise Assessment* report contained in *Appendices – Volume 2* of this SEIS.

SUBMITTER NO.	416	Issue Reference:	11054
Submitter Type	Government	TOR CATEGORY	Transport / Health & Safety
Nаме	Queensland Police Service	RELEVANT EIS SECTION	Vol 2, 13.2.5

DETAILS OF THE ISSUE

The assessment of vehicle safety based upon historical information will provide bias in interpretation because of the changing nature of the road usage from typically rural to servicing a number of major mining industrial projects.

The measurement of traffic crashes will need to be closely monitored for the inter-relationship between the various Galilee projects as they begin, in order to determine if and when additional safety measures are required due to the changing nature of the mix of types of vehicles.

PROPONENT RESPONSE

Please refer to *Traffic Engineering* report in *Appendices – Volume 2* of this SEIS.

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