Calga Quarry
Pollution Incident Response Management Plan

Contents

1. PREVENTATIVE MECHANISMS

1(a) Hazards to health and the environment:

To minimise risk to human health and the environment the site has an **Environmental Aspect Register** which includes pre-empted hazards, sources for those hazards, risk assessments and controls. This can be found in the **Environmental Management Plan.** For all work methods when performing a task refer to the IRMS (Integrated Risk Management System).

Hazardous areas on site:

- Diesel, Oil and Grease Storage
- Dust
- Tailings Dams
- Hydraulic Lines
- Tyre, Steel, Pipe, Parts Storage
- Water Dams.
- Chemical Treatment Station (Dam 7B/C)

RISK MATRIX:

A risk score was assigned to each of the list hazards using the follow risk matrix.

		CONSEQUENCE				
		Insignificant	Minor	Moderate	Serious	Major
LIKELIHOOD	Almost Certain	11	16	20	23	25
	Likely	7	12	17	21	24
	Occasional	4	8	13	18	22
	Unlikely	2	5	9	14	19
	Rare	1	3	6	10	15

RISK SCORE	RISK LEVEL	REQUIRED LEVEL OF ACTION AND TIME FRAME FOR ACTIONS
1-6	Low Risk	Check current controls for adequacy and communicate hazards identified and their controls to the work group. No further actions / controls necessary (possibly consider new controls).
7-15	Moderate Risk	Some action required. Action may be administrative and / or PPE if higher levels of controls are not practicable
16-19	High Risk	Immediate action required above Admin and PPE to control the hazard where possible. Look for longer term solutions to reduce risk on an ongoing basis
20-25	Extreme Risk	Activity must not commence / activity must stop immediately until actions have been implemented so far as to control the hazards to an acceptable level (below 20).

Consequence Rating	Insignificant	Minor	Moderate	Serious	Major
People	Report only. No injury	FAI	Recordable injury (MTI, RWI, Minor LTI)	Severe lost time injury	Fatality / Multiple Fatalities
Environment	Degradation confined within the work area with impacts readily addressed & reversible detrimental effects	Degradation confined within the work area with impacts readily addressed & reversible detrimental effects and breach of project of site EMP	On-site / Off-Site degradation which has persistent (<3 weeks) but reversible impact. Non-compliance with legal & contractual requirements requiring reporting to authorities	An incident resulting in prosecution under environmental laws	On-Site / Off-site degradation which may have irreversible effects and an accident resulting in prosecution under environmental laws.
Plant / Property	<$5K	<$5K - $20K	<$20K - $100K	<$100K - $500K	<$500K
Community	One off compliant / no media attention	Small number of complaints / low cost / local community media attention	Repeated complaints from same area, state / media attention	Community discontent and impact on viability of business / National media attention	Complete loss of trust / social unrest / dissension and likely closure of business / National media attention
Legal Compliance	Minor breach not attracting regulatory body	Issue resulting in notice / fine	Prosecution & penalty or fine	Prosecution suspension of operating licence / criminal conviction	Prosecution / loss of operating licence or closure of operations / imprisonment
Quality	Rework costs less than $5K	Rework costs between $5K and $10K	Rework costs between $10K and $50K	Rework costs between $50K and $100K	Rework costs greater than $100K

Diesel, Oil and Grease Storage: Risk Score 9

To prevent discharge into the water system, all hazardous liquid materials including diesel and lubricants, are stored in bunded areas or tanks. These bunds and tanks are routinely inspected and are cleared after any major rain event so as to maintain efficient capture levels. For diesel carried on mobile plant, fuel cart and delivery vehicles safety procedures are in place for minimising spill occurrence. Including emergency shut off procedures, spill kits and mobile bunding procedures (Emergency Site Plan).

Dust: Risk Score 12

Dust can be an issue to human health dependant on the amount of exposure and composition of the dust. To protect all persons working on site, site specific Job Safety Analysis's are in place for specific areas within the quarry/plant where PPE is mandated dependant on the work which includes wearing dust protection. Personal Dust and Noise monitoring and recording is conducted annually.

Dust suppression is in place by means of a 15,000 litre water cart. Water cart use is determined by daily monitoring of weather conditions and truck movements within the quarry. Monthly dust deposition gauges are collected, and the results recorded.

Tailings Dams Risk Score 2

The site has a series of tailings dams that capture clay and fine silts, the dams are monitored monthly as part of the quarry site inspection schedule with warning signage present on the dams.

Hydraulic Lines: Risk Score 13

To maintain hydraulic line ruptures regimented inspections are carried out and hoses are replaced before they fail due to wear. If a rupture does take place, the implementation of the spill kit occurs and area is sealed off by placing or creating bunding around spill area.

Tyre Storage: Risk Score 1

Tyres stored onsite are in an open area with no surrounding bushland within 30 metres. No hot work is to be performed in this area.

Water Storage and Treatment Dams: Risk Score 5

Onsite water storage is by use of dams, the runoff water is captured and used for production and dust suppression. Water quality is maintained to the licence requirements (see site water management plan) discharge water must be as per licence requirements 11295.

(1b) Pollutant Quantities:

Diesel

- 1 x 28,750 Litre tank above ground self-bunded
- 1 x 5000 Litre tank on mobile diesel truck
- 1 x 300 Litre water truck tank
- 1 x 300 Litre fuel truck tank
- 2 x 400 Litre wheel loader tanks
- 2 x 450 Litre articulated haul truck tank

Petroleum

- 2 x 20 Litre stored in oil storage bunded area.

Lubricants

- 2 x 20 Litre Meropa 220 in lubricant storage area.
- 2 x 205 Litre Delo 400 15W-40 in lubricant storage area.
- 1 x 205 Litre Delo Coolant in lubricant storage area.
- 2 x 205 Litre Textran TDH Premium in lubricant storage area.
- 1 x Box 450g Ultra Duty Grease in lubricant storage area.
- 1 x 205 Litre drum of Moly EP2 Grease in lubricant storage area.
- 2 x 20L Komatsu Coolant in lubricant storage area.

(1c) Pollutant Locations

All pollutants and spill kits are located on the site map in the Site Emergency and Traffic Management Plans.

(1d) Early Warning Systems

Automatic shut off & emergency stop systems fitted to all fuel delivery vehicles and on site diesel truck.

(1e) Plan Implementation and Testing

Site emergency drills are conducted on an annual basis, these involve both areas of safety and environmental incidents; these are recorded and filed.
This plan is to be used in conjunction with the Site Emergency Plan when conducting Emergency Drills.

2. INCIDENT RESPONSE

2(a)

STOP

Instigate the CALGA QUARRY

Site Emergency Plan

(Located at Crib Room, Weighbridge, Wash Plant Control Room, Quarry Site Vehicle)

2(b) Procedural Implementation:

As soon as the alarm is raised “Emergency, Emergency, Emergency” implement the Site Specific Emergency Plan.

When coordinating procedures to combat any pollution caused by the incident this will follow the **SITE EMERGENCY TEAM PROTOCOL** located in the relevant **section of the Site Emergency Plan**, where the communications officer will be responsible for contacting the required authorities and relay all necessary information back to persons at the incident location.

Specific processes are in place dependant on the type of incident that has occurred within the Site Emergency Plan other emergencies sections:

- **Environmental Incident/Spill** **Section 5**
- **Hazardous Material Spill** **Section 11**
- **Hydraulic Hose Rupture** **Section 12**

2(c) Contact List:

Notify relevant persons or departments of pollution incident as soon as practicable (within 24hrs).

➢ Appropriate Regulatory Authority (ARA)	**EPA**
➢ The Environment Protection Authority (EPA)	**131 555**
➢ The Local Authority (Central Coast Council)	**(02) 4325 8222**
➢ Fire and Rescue (NSW)	**000**

The ARA for Calga Sands Quarry is the EPA

For information relating to plan implementation and contact information for liaising managers and site contact information refer to the **Site Emergency Plan “page 6”** and the **Crisis Management Contact list** (located at the weighbridge / site office in the **Red Crisis Management Folder**).

Contact Details for the Owners and Occupiers (Residents and Caretakers) are as follows if applicable:

Owners – Hanson Construction Materials (02) 9354 2600

Occupiers – Paul Slough – 0418 166 212 / Erik Sleeman – 0408 684 061
These persons are to be contacted immediately following the incident.

If incident breaches boundaries surrounding neighbours are to be contacted through face to face or information left at place of residence by Hanson representative to notify of the situation, convey any possible impacts and procedures in place to rectify the situation.

3. RECORD AND REVIEW:

3(a) Reporting Incidents

Incidents are to be reported using section **2(c) Contact List** of this document.

Complete and submit incident report if required.

3(b) Investigation and Review

Following an incident an investigation will take place following the procedures of the **Safety Management System (Accident & Serious Incident Investigation)** where the findings will be reviewed by all relevant parties including any necessary outside parties. Another drill testing the plan must be completed within one month of any incident requiring implementation of the plan occurring.

Review History:

Date	By	Change	Reviewed by	Approved
16/09/2016	Jon Grindrod	Draft Plan issued to Risk for initial review	Ian Bradbury	Ian Bradbury
23/09/2017	Jon Grindrod	Review with no changes	Paul Slough	Ian Bradbury
28/09/2018	Shane Pescud	Changes to occupiers	Shane Pescud	Shane Pescud
8/10/2019	Shane Pescud	Reviewed with no changes	Shane Pescud	Shane Pescud
14/10/2020	Paul Slough	Changes to occupiers	Paul Slough	Paul Slough

4. APPENDIX A

Referenced Material:

IRMS-Integrated risk management System:

- This contains policies, work methods, forms and checklists. These are written to comply with AS9001, AS14001, AS4801, state based WHS and environmental legislation.
- It covers an overview of emergency process control.
- This is intranet based.

MSMS- Mine safety management System:

- This is procedural manual based on the IRMS and quarry safety legislation.
- Copies of the manual are available as a hard copy on site or on the Hanson intranet site.

Site Emergency Plan:

- This contains actions required to deal with minor potential safety and environmental incidents. It outlines site emergency teams and site maps. It addresses material spills, hydraulic hose ruptures, etc…
- An annual emergency drill is carried out to assess the emergency plan.
- Multiple hard copies are available on each site.

Crisis Management Manual:

- This is used for significant safety and environmental incidents.
- It covers what needs to be done if there is major oil/fuel spill, major Vehicle accident, Fire, etc…
- It also includes a crisis contact list covering contact details for internal employees and external emergency resources
- Available in **RED FOLDER** on each site.

EMP-Environmental Management plan:

- This is document detailing the overall environmental management of site. It forms part of the IRMS.
- It includes an impact and aspect register. The register environmental risks and how these are eliminated/controlled on site.