DALRADIAN
GOLD

Gold Deposits, Dalradian Gold Ltd.
Curraghinalt, Gortin, Co. Tyrone, Northern Ireland

Drilling Method Statement

Issued: April 2013

CONTENTS

APPENDICES

1.0 INTRODUCTION

1.1 Dalradian Gold Ltd

Dalradian Resources Inc. is a TSX-listed, Canadian based exploration company engaged in the acquisition, exploration and development of precious and base metals projects. With a European focus, our most advanced property is in Northern Ireland and around the high-grade mesothermal gold deposit, Curraghinalt.
The Company's wholly owned subsidiary, Dalradian Gold Limited (DLG), holds a 100% interest, subject to certain royalties, in mineral prospecting licenses and mining lease option agreements in counties Tyrone and Londonderry, Northern Ireland. The Department of Enterprise, Trade and Investment ("DETI") and the Crown Estate Commissioners ("CEC") have together granted to Dalradian base and precious metal mineral exploration rights to four (4) contiguous exploration licenses in Counties Tyrone and Londonderry, Northern Ireland comprising a total of 844 square kilometers, collectively known as the Tyrone Project.

Dalradian's flagship deposit, Curraghinalt hosts an NI 43-101 compliant measured mineral resource of 0.02 MT grading 21.51 g/t gold for 10,000 contained ounces, indicated mineral resource of 1.11 MT grading 12.84 g/t gold for 460,000 contained ounces and inferred mineral resource of 5.45 MT grading 12.74 g/t for 2,230,000 contained ounces. Dalradian's Preliminary Economic Assessment reported positive results for a proposed underground mine at Curraghinalt including an after-tax IRR of 41.9% and NPV of $467 million based on an 8% discount rate using a 3 year trailing average gold price of $1378 per ounce.

Dalradian's NI 43-101 report, "A Preliminary Economic Assessment of the Curraghinalt Gold Deposit, Tyrone Project, Northern Ireland" is dated September 6, 2012, and was prepared by Mr. B. Terrence Hennessey , P.GEO., Mr. Barnard Foo , P.ENG., Mr. Bogdan Damjanovic , P.ENG., Mr. Andre Villeneuve , P.ENG., and Mr. Christopher Jacobs , CEng MIMMM of Micon International Limited, and is available on SEDAR at www.sedar.com.

In Norway, Dalradian holds mineral rights for approximately 1.3 million hectares over three greenstone belts, as well as an area hosting an historical silver mining district. Dalradian is engaged in data acquisition and analysis over all its concessions, with the 2013 field program commencing shortly.

Dalradian's Common Shares are listed on the Toronto Stock Exchange under the symbol "DNA". For further information, please see www.dalradian.com.

1.2 Background to the Project

DGL is currently exploring the extent of precious metals in the Curraghinalt area, near Gortin, Co. Tyrone, refer to figure HY on page 26.

DGL has a total of four (4) mineral prospecting licenses awarded by the Department of Enterprise, Trade and Investment (DETI) and the Crown Estate Commissioners which permit the company to undertake base and precious metal exploration.

Although there are known base and precious metal resources throughout this area, DGL's focus is the 'Curraghinalt Gold Deposit', which is hosted in the Dalradian sequence in a licence area identified as DG1.

Mineral exploration work at the Curraghinalt Deposit has been undertaken since 1983, discovering and proving at least seven (7) primary gold-bearing veins, ranging in width up to 3.0 metres.

In addition to these resources, historical and ongoing regional geochemical, mapping and sampling work suggests additional veins may exist. The ongoing exploration work seeks to add to the estimated gold resource at Curraghinalt.

To date, approximately 85,000 meters of bedrock drilling has been completed in more than 250 drill holes.

In parallel with this exploration drilling programme DGL have contracted SLR Consulting Ltd to undertake environmental baseline studies for an Environmental and Social Impact Assessment (ESIA) for a possible future underground mine development at Curraghinalt, near Gortin, Co. Tyrone. The area of interest with the environmental monitoring locations is shown on Figure HY11 on page 26.

DGL have undertaken a review of the environmental management of their drill site operations. As part of this review DGL engaged SLR to advise them on best environmental management practices for these operations. The outcome of this review is the development and implementation of a specific Drilling Method Statement.

1.3 Purpose of the Method Statement

This Method Statement is a description of DGL's drilling activities and it has been prepared in order to describe the best environmental management, health and safety and community relation activities being implemented by DGL for their drill site operations. These including closed water management systems – minimal discharge, waste management practices, safe fuel storage measures, water quality monitoring, risk assessments, health and safety, emergency response and community relations procedures.

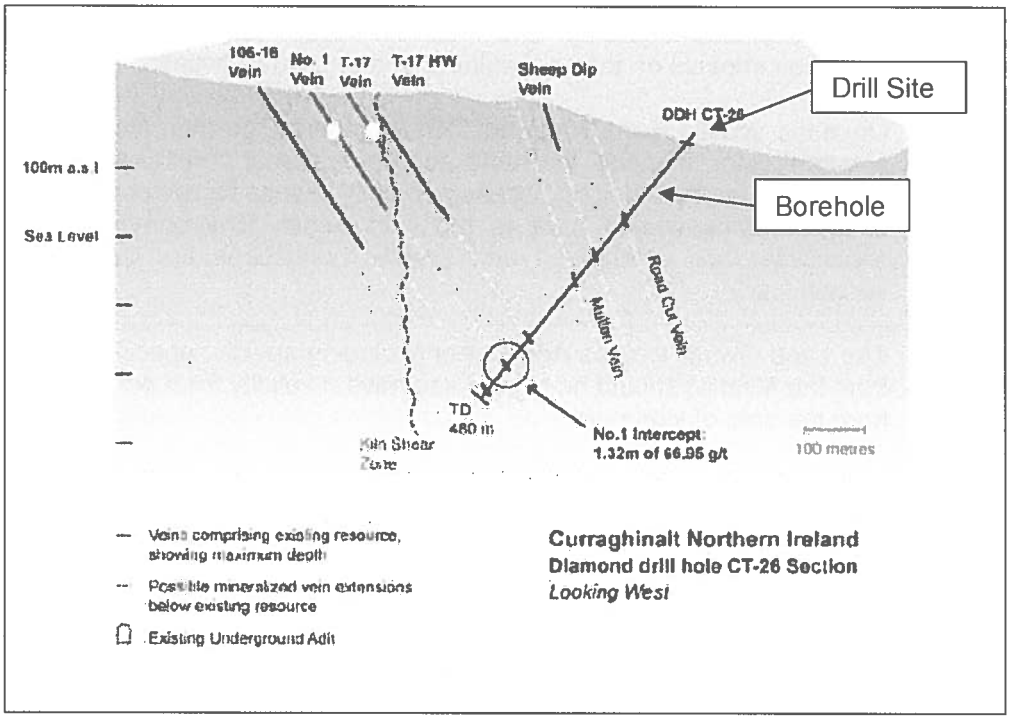
2.0 DRILLING OPERATIONS

2.1 Objectives of the Drilling Programme

The objective of the ongoing exploration programme is to identify the extent and volume of the potential resource in the Curraghinalt area.

The current exploration programme includes drilling of boreholes in order to obtain cores of rock for sampling, testing and geological analysis. A cross sectional view of drilling in Diagram 1 illustrates the objective behind the borehole drilling to identify the resource.

Diagram 1
Cross Section through the Curraghinalt Deposit indicating Drill Hole and Vein Intercepts at Depth



2.2 Pre Drilling Procedures and Stakeholder Engagement

Prior to drilling commencing, the proposed bore-hole site is audited against best practice and DGL's internal procedures using the following criteria:

2.2.1. Initial Site Selection and Landowner Engagement

- DGL's Drill Manager on duty identifies the next potential drill site on a map and informs the Stakeholder Engagement Coordinator (DGL).

- The Community Relations Manager (DGL) contacts the relevant landowner(s) seeking permission to visit that site and clearly explaining the potential activities that may be conducted at the drill site and time frames. If this is a new location or a new land owner, for example, the Community Relations

Manager (DGL) will deliver a draft copy of the Land Owner Access Agreement with the owner for review. Any verbal questions will be answered or clarified at the time of the meeting or if necessary the Community Relations Manager (DGL) will return with additional verbal or written explanations.

- Once oral permission has been granted from the land owner to inspect the potential drill site location, the land owner, the Corporate Social Responsibility team, DGL's Drill Manager and the Environmental Technician visits the site with the contractors Drilling Supervisor (Contractor). This team determines the location for the drill rig and associated equipment as well as the potential access routes. The land owner is asked to be is present to determine any sensitivities in relation to the proposed drilling activities.

- If the location is deemed suitable for drilling, the location is viewed in terms of access and DGL discusses with the land owner access routes. Every effort is made to accommodate the land owner on access route, especially minimizing operation impacts on their agricultural or domestic activities.

- Once the access route is agreed, DGL's General Foreman and the appointed sub-contractor, inspects the route and agrees what construction method will be used to facilitate drill rig access and daily access for support vehicles. This is then communicated back to the land owner. Environmental and social sensitivities are determined and specific mitigations are determined. See section 2.2.2.

- The Land Owner Access Agreement (including specific specific commitments from the Minute) should be signed and have a validity for a period of 4 months from the date of signature.

- DGL's Environmental Technician liaises with the drilling company to implement the general and specific commitments in the Land Owner Access Agreement.

- DGL can only abstract water from the authorised SWAP points (Surface Water Abstraction Points) or runoff contained within drainage ditches (See Section 3.1). Additional Land Owner Access Agreements are obtained if the water hoses need to cross adjacent properties.

- DGL's health and safety officer, at the initial meeting liaises with the drilling contractor's supervisor and discusses any health and safety issues that need to be considered prior to mobilisation. These include procedures for moving the rig, soil movement and management, noise and operating hours, stabilising the rig and location of the rig i.e. proximity to any services - overhead lines,

- An environmental and health and safety risk assessment is completed on site prior to drilling commencing and any issues are relayed to the drill manager and directly to the drill supervisor.

- Once all these steps listed above have been completed, the drill manager instructs the drilling sub-contractor that they can commence works.

- After works have commenced, further environmental and health & safety inspections are carried out on a daily basis until drilling at the location ceases.

The inspections are carried out to ensure efficient, safe and compliant drilling processes. The drill rig inspection sheet is provided in Appendix B.

2.2.2. Pre-drilling Environmental Assessment

- Environmental and social sensitivities are determined and specific mitigations are determined. An environmental inspection is carried out prior to the drill mobilising onto the site. This inspection identifies any environmental aspects that need to be addressed before a drill can be moved on site. The inspection includes:
    - Assessing the site for any potential water pollution pathways and receptors. This information is also used for any site preparation works required. Any potential pollution pathways are identified and mitigation measures are put in place.
    - Consideration is given to local flora and fauna e.g. preventing damage to trees.
    - Identify potential water abstraction points (see section 3.1).
    - Identify and reduce the impacts on any potential receptors that maybe be subjected to noise emissions such as houses and animals.

2.2.3. Health & Safety

- A pre drilling check is carried out by the drilling contractor to ensure a safe working procedure is in place before drilling can commence. This covers checking the engine and other moving parts. It also ensures that all workers have the correct PPE and that it is in good condition. For the full list see Safe Working procedure in Appendix B.

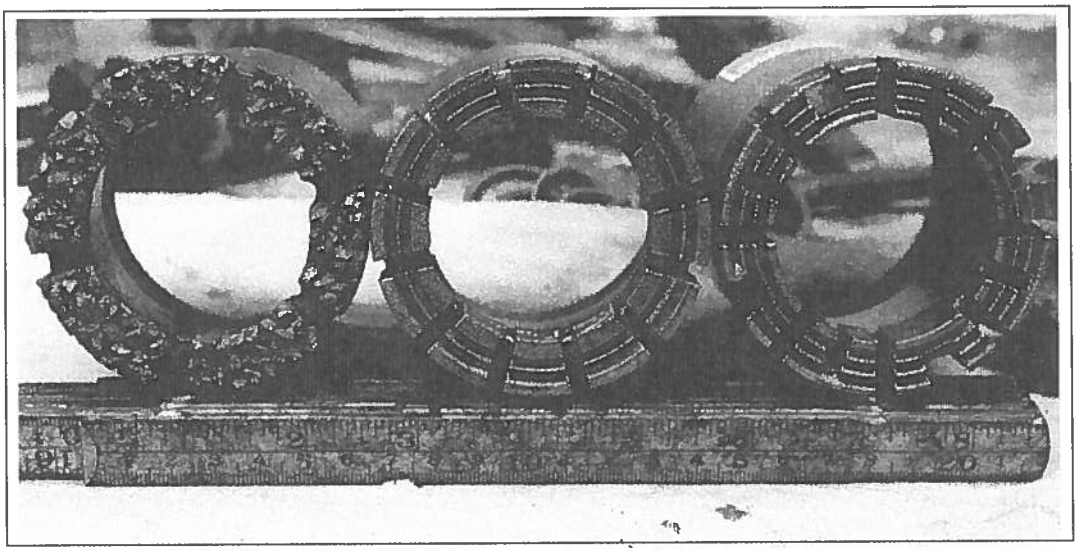
2.3 Drilling Techniques

The Curraghinalt exploration program uses rotary diamond drilling whereby a continuous sample of drill core is extracted via a wire-line system. This system extracts a solid length of core from depth, for later examination on the surface and testing.

The key technology of the diamond drill is the actual diamond 'bit' itself which is the head of the drill stem and cuts the rock at bottom of the borehole. The diamond drill 'bit' is composed of industrial diamonds set into a soft metallic matrix, as shown in Photo 1 below. The diamonds are scattered throughout the matrix of the drill bit and the cutting action relies on the matrix to slowly wear during the drilling, so as to expose more diamonds which cut the rock in the borehole.

The drill bit is mounted onto a drill stem, which is connected to a rotary drill rig. It is the rotary drill rig which turns and drives the diamond "bit' that cuts the rock.

Photo 1
Diamond Drilling 'bit' Heads



Water is injected into the drill stem from the surface during coring in order to wash out the rock cuttings produced by the bit as it advances. This is necessary in order to ensure the drilling head does not become blocked and jammed in the borehole during drilling.

The drill process described produces a solid intact "core" of rock which is retrieved from the borehole by way of a wire-line system and is lifted back to the surface. Once at the surface the core is taken to a storehouse in Omagh where it is logged, photographed and split longitudinally.

Half of the core is assayed to determine the composition, while the other half is permanently stored for future use and re-assaying if necessary.

There are five major "wire-line" tube sizes typically used in drilling, see Table 1 below. Larger tubes produce larger diameter rock cores and require more drill power to drive them. The choice of tube size is a trade-off between the rock core diameter desired and the depth that can be drilled with a particular drilling rig motor.

Table 1
Standard Wire-line Tube Sizes

Tube Size ID	Hole (outside) diameter (mm)	Core (inside) diameter (mm)
AQ	48	27
BQ	60	36.5
NQ	75.7	47.6
HQ	96	63.5
PQ	122.6	85

Although a larger diameter core (e.g. PG) is the most preferred it is also the most expensive. The drill rigs currently operating at Curraghinalt are drilling HQ diameter core.

2.4 Drilling Additives/Muds

Drilling additives/muds are used occasionally in the drilling process. Drilling additives/muds are added to the drill water and they stabilise broken rock around the borehole and lubricate the drill rods. Drilling additives/muds also increase the viscosity of the returning water to aid transporting to the surface the rock cuttings produced as the drill head advances at depth. The use of drilling additives/muds is kept to a minimum and is only used when necessary in the drilling process, i.e. where broken rock is encountered in the boreholes. The head driller at each rig decides when it is necessary to use drilling additives/muds as the decision is based on experience and the monitoring of the drilling as it is taking place. Major Drilling currently use two (2) different additives/muds see Table 2 below.

Table 2

Drilling Additive	Nature of use
Liqui-pol	Viscosifier and Stabiliser
AUS-FLOC	Flocculent

Liquid-pol is a non-hazardous substance that increases viscosity of the drill water as well as stabilising broken rock around the drill hole. It is added to the drilling water when necessary based on the drillers judgement and experience. Typically, six (6) litres of liquid-pol is used at each drill site each day.

AUS-FLOC (flocculent) is a non-hazardous substance that aids the settlement of the rock cuttings within the settlement tubs. Typically, around six (6) litres of this substance is used at each drill site every day.

The additives/muds are mixed with the drill water and these are removed from the site and taken to the Culmore WWTW as explained in Section 3.2.

MSDS information for these substances is presented in Appendix C.

2.5 Drilling Contractors & Rigs

There is currently only one drilling company working for DGL and operating three (3) drill rigs at the site - Major Drilling Ltd.

Major Drilling Rigs

Major Drilling have three (3) drill rigs on site. These are two (2) track mounted AVD 6000/6100 rigs and one (1) track mounted Duralite 1000M rig, see Photo 2 and 3. The AVD 6000 series rigs are capable of drilling effectively to a 1,500m depth while the Duralite rig can drill to a 1,000m depth.

Photo 2
AVD 6000/6100 Series Rig

Photo 3
Duralite Rig

3.0 DRILL SITE ENVIRONMENTAL MANAGEMENT

DGL has implemented closed water management systems at all their drilling exploration sites. These systems represent best environmental management practice by:

- Treating, recycling, and re-using the drilling waters.
- Minimising/reducing water abstraction from surface waters.
- Eliminating the requirement to discharge to surface waters.
- Eliminating the use of sumps which reduces surface impact, the risk of sump overflow and seepage into ground water.

3.1 Water Abstraction

DGL was granted two (2) Temporary Water Abstraction Licences (AIL/2011/0025 and AIL/2011/0026) by the NIEA Water Management Unit, Abstraction and Impoundment Licensing Team. Water abstracted under these licences is used for exclusively exploration drilling (see Appendix A)

The Temporary Water Abstraction Licences allow for the abstraction of water in the Curraghinalt area (AIL/2011/0025) and in the wider prospecting licence areas (AIL/2011/0026). DGL implement fully the conditions attached to the temporary licences granted by NIEA, (see Appendix A).

Water is abstracted from nearby surface water courses and used as the primary ingredient for drilling fluids in the drilling process. The water is pumped down the drill hole in order to circulate through the drill bit, and in the process clearing cuttings (sand and clay debris) from the cutting face at the end of the borehole. The cuttings are flushed up the outside of the drill rod in the drilling fluid to the surface where the drilling fluid is allowed to settle. This allows the removal of the solids and the settled water is re-used in the drilling process.

Initially, when the water management system is being set-up there is a requirement for up to 5 m^3 of water at each drill site to fill the closed loop system. The system is then topped up to account for the removal of core. Top up volumes are generally between $3m^3$ and $6m^3$/day per rig site per day. Top-up rates will vary depending upon the amount of meters drilled each day.

Due to the distribution of the drilling rigs across the site, DGL abstract water for drilling from up to three (3) different surface water courses at any one time. The drilling programme is managed so that two (2) rigs do not abstract from the same surface water abstraction point simultaneously.

NIEA has informed DGL that using water from drainage ditches does not require an Abstraction & Impoundment Licence. Therefore, DGL abstracts water from drainage ditches with the land owners consent and when it is practicable to do so.

3.2 Drill Site Water and Cuttings Management Process

DGL have implemented closed loop water management systems at each drill site, and will adopt this system at all future drill sites at Curraghinalt and other exploration locations within their licence areas.

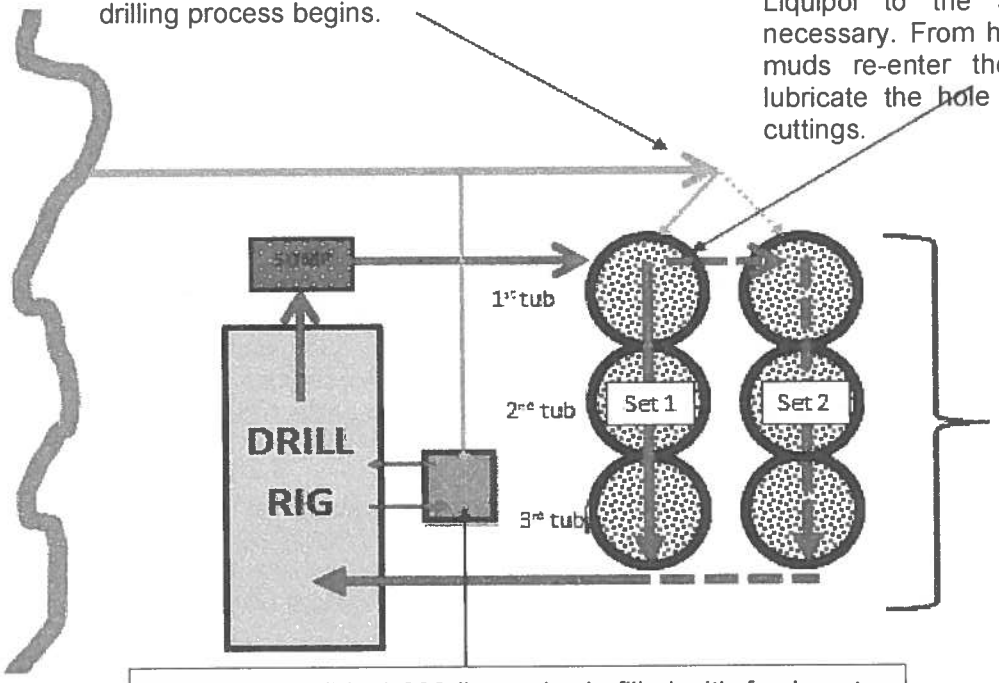
A closed system of settlement tanks are used for all drill rigs. Return drilling fluids are treated, recycled and re-used in the drilling process using a pump located at the end of the last tank. The closed water management system is depicted in Diagram 2.

Diagram 2

Drill site drilling fluid management system

Stage 1: Fresh water (green arrows) is abstracted from the water–course to fill the closed loop system (red arrows). Once inside the system this clean water (drilling fluid) is pumped into the borehole and the drilling process begins.

Stage 2. The returning drilling fluid is collected in the sump and pumped to the tubs of Set 1. Aus Floc is added to the 1st tub allowing cuttings to settle and Liquipol to the 3rd tub when necessary. From here the drilling muds re-enter the borehole to lubricate the hole and wash out cuttings.



Stage 3. Over time the tubs fill up with cuttings and the drilling fluid. The drilling fluid and cuttings is then removed from the tubs and transported in plastic barrels by tractor and trailer to a skip at a central location. The cuttings and drill fluids are emptied into a skip which allows the cuttings to settle to the bottom and the water to settle on top. The settled water is pumped into a tank adjacent to the skip and the cuttings are sent to landfill. See note.

Intercooler: This 1,000 litre cube is filled with fresh water and is used to cool the rigs intercooler. Once the water is spent it is sent to the temporary storage tank prior to it been hauled off site.

Note: When the Set 1 tubs fill up with cuttings Set 2 is then used. While Set 2 is in use, the tubs of Set 1 are emptied, allowing the cycle to revert to Set 1 once Set 2 is full. This is a continuous cycle.

Stage 1

Fresh water is pumped from an authorised extraction point or drainage ditch (when suitable) to fill the three (3) gravity fed settlement tubs of Set 1 (each settlement tub has a $1m^3$ capacity). In addition to this, one (1) or two (2) tubs of Set 2 are also filled (these 2 tubs are used as a back-up reservoirs to top up Set 1 as the water levels drop during drilling). The

initial abstraction volume to fill the required tubs prior to the commencement of drilling is approximately 5 m^3.

Stage 2

Once the closed loop system is full of fresh water drilling can begin. Water is drawn from the third tub of Set 1 into the drill drilling rod on the rig and pumped down the borehole. This drilling fluid lubricates the hole and washes out the cuttings produced by the turning of the drill bit. The returning drilling fluid re-surfaces from the boring and flows into a small sump. A submersible pump is located in this sump and pumps the drilling water into the first tub of Set 1. Here a flocculent (Aus-floc) is added to the water to aid the settlement of the suspended solids (cuttings). It then flows into the second tub which facilitates further settlement. The drilling fluid flows into the third tub where drilling additive (Liqui-pol) can be added based on the driller's judgement (see Photo 4). From here the drilling fluid is pumped from the third tub back down the borehole through the drill rod.

As core is extracted during the day it increases the overall volume of the boring. Water levels in the tubs decrease, which will cut off the circulation through the closed loop system if fresh water is not added. The system is then 'topped up' with the fresh water in reserve in the tubs of Set 2 to accommodate for the increased space in the boring.

Stage 3

Re-circulation of the drilling fluids continues until it reaches its point of expenditure and/or the settled solids fill the tubs and further settlement cannot occur. In most cases, the settled solids fill up the first tub and the majority of the second tub. At this point the drillers switch to using Set 2. When settlement in Set 1 is suspended, the cuttings are removed and transferred into barrels which are then loaded onto a tractor and trailer. The barrels are transferred to a waste storage area where the contents of the barrels are emptied into skips. Any excess water in Set 1 is removed using either an intermediate bulk container (ICB) or the dedicated pump tanker (Photo 5) depending on the volume that need to be hauled. This water is hauled to a dedicated 27,000 litre storage tanker where it is stored prior to removal off site.

The now empty tubs of Set 1 are filled with fresh water and these are used to top up Set 2. Set 2 is used until the settled solids (cuttings) fill the first two (2) tubs and the cycle can continue by switching back to the empty Set 1. This switching of sets to remove the cuttings is repeated during the drilling as needed.

Once the boring is completed and/or the drilling fluid is no longer suitable for drilling, the drilling fluid is transferred to a temporary 27,000 litre storage tank (see Photo 7) by a licensed waste contractor (KPF Contracts Ltd) using a dedicated pump tanker (Photo 5) or ICB. From here a waste contractor (Precision Group) will haul the waste water to the Culmore WWTW under Dalradian Gold Ltd.'s trade effluent agreement with NI Water (Ref No: T45047).

The cuttings have a water content that needs to be removed before the skip is collected. The cuttings are allowed to settle in the skip and the settled water content is pumped out of the skip and into the 27,000 litre tanker. The settled water content is typically 10-20% of the total skip volume. Once the water is removed the cuttings skip is transported site by Recyco Ltd and taken to the Cookstown District Council's Magheraglass Landfill.

Photo 4

Settlement tub Sets

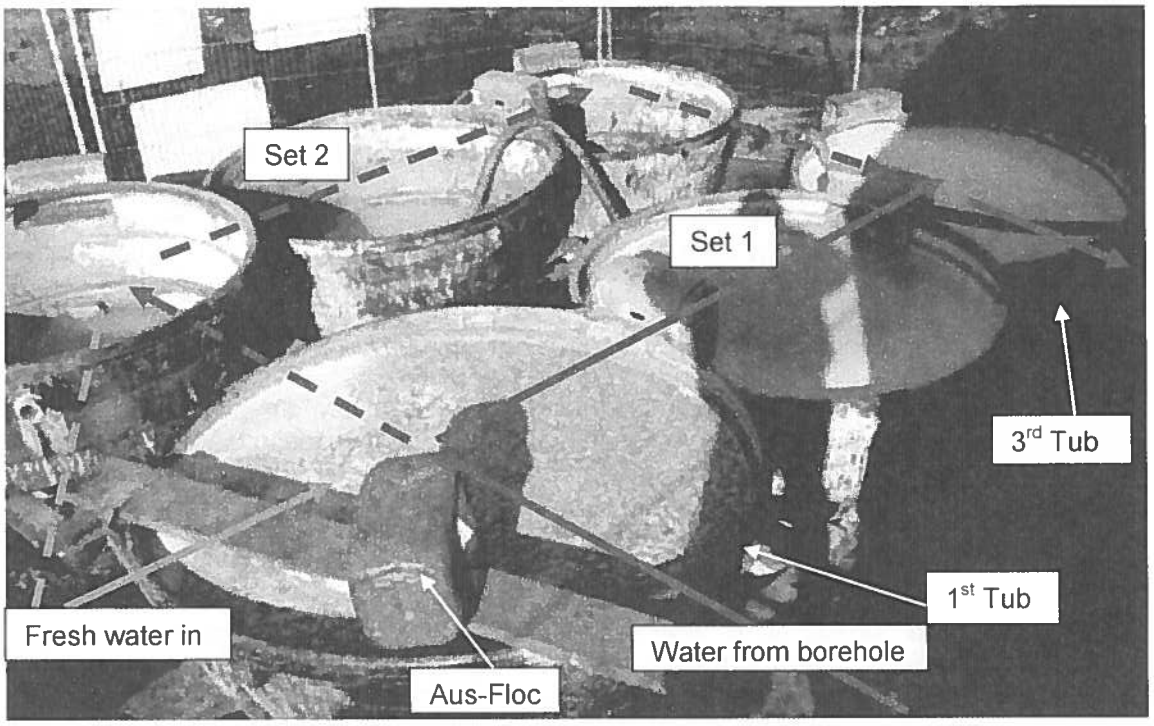


Photo 5

Dedicated Pump Tanker for Transporting Drilling Fluids to Storage Tank

Photo 6

Drill rig with settlement tubs

3.3 Waste Management

There are a variety of wastes produced in the drilling process. The main waste stream consists of cuttings (fine-grained rock particles producing during drilling) and drilling fluids. Other waste streams include wood, metals, oily rags, plastic and general household waste. DGL has Duty of Care obligations which include the removal of waste off site, accompanied by either by a season ticket and/or a signed transfer of waste note. A disposal certificate should be issued at final point of delivery.

DGL currently store waste skips and a 27,000litre tanker at a yard in a central location in the field (See Photos 7 and 8). Solid waste is taken from the drilling site to this central yard and segregated into skips. Waste water is taken from the settlement tubs and transferred to the 27,000 litre tanker at the waste storage yard (Photo 7).

DGL currently segregate the waste produced into the following waste streams:

Photo 7

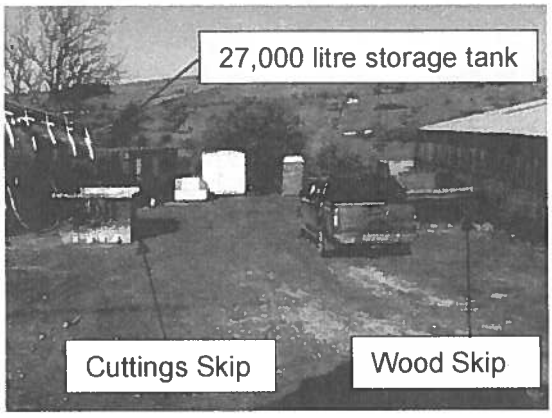
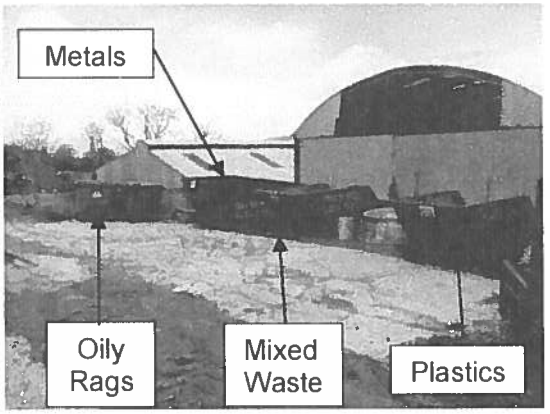


Photo 8



Drilling Fluids

Waste water is produced from the drilling process. The water needs to be changed if it becomes unsuitable for drilling and/or when the rig and the settlement system needs to move to a new site. The waste water is removed from the each tub and taken to the temporary storage tank before been hauled off site as described in Section 3.2

Water is also used to cool the rigs intercooler. Water is abstracted from the abstraction point and transferred to a 1,000 L cube. This water circulates through the rigs intercooler to keep the engine cool. This water is then taken via the 27,000 L to the Culmore WWTW.

Drill Cuttings

The drill cuttings are removed from the gravity fed settlement tubs by hand. Labourers are employed to shovel the cuttings into a number 50 litre barrels. The amount of cuttings removed from the rig site will depend on the type of ground the contractor is drilling through. Fault zones tend to produce more cuttings than 'normal' rock due to the existence of ground up material in these zones. Once the tubs are full they must be emptied. On average 1-2 m^3 is taken from a rig site each day by labourers and brought to the designated skip in the storage yard as described in Section 3.2.

Wood

Wood is generally used for supporting the rig on its platform and installing safety railings. On occasion this wood can break and is no longer of any use. This broken wood is then transported from the drill site to the dedicated wood skip. Recyco Ltd removes this wood off site and hauls it to their waste management facility at 89 Barony Road Omagh, Co. Tyrone, BT79 7QG. Here it is sorted into treated or untreated wood. It is then chipped and as biomass fuel.

Metal

Metal waste is generated when parts of the rig break. This metal waste is taken to our dedicated metals skip and Recyco Ltd removes it to their waste management facility where it is sold on to recycling companies.

Oily Rags

Oily rag waste is generated when small amounts of oil or fuel drip onto collection matts below machinery at the drill site. The matting absorbs hydrocarbons but not water. This matting is also used to absorb the oil/fuel in the drip trays. This oily rag waste is then transported to the dedicated oily rags bin (see Photo 9). Enva NI Ltd. is contracted to remove this waste and it is transported to their hazardous waste treatment facility and transfer station at The Old Mill, Drumaness, Co. Down, BT24 8LS (LN/12/13).

Plastic Waste

Plastic waste is generated from used packaging and empty drilling additive containers. This waste is segregated into a dedicated plastics skip where it is removed off site when full by Recyco Ltd.

General Waste

General waste is produced at the drill site. This can include bottles, sandwich wrappers, newspapers, drilling fluid containers, etc. This waste is transported off site by Recyco Ltd. to their waste management facility for segregation and recycling.

Waste Contractors Licence Information

Contractor	Function	Licence Number	Expiry Date
KPF Contracts Ltd	On-site waste Carrier	ROC UT 2699	28th April 2013
Recyco Ltd	Non-hazardous waste removal	ROC UT 2313 LN/11/15	10th Dec 2014 N/A
Precision Group	Waste water removal	ROC UT 88	4th Dec 2014
Magheraglass Landfill	Cuttings landfill destination	WML 11/06 P0143/06A	Existing Licence N/A
Culmore WWTW	Waste water destination	WML 13/61 LN/11/56	Existing Licence N/A
Enva NI Ltd.	Hazardous waste removal	LN/12/13 ROC UT 146	N/A 19/01/2015

3.4 Emergency Planning

DGL implement the following measures as part of their emergency planning procedures:

i. Contingency plan on site and at all DGL offices.

ii. External contractor on call to transport drilling fluids to the 10,000 litre storage tanks in the unlikely event the settlement tubs overflow.

iii. On site emergency contact list.

iv. Induction training is provided to all DGL employees and contractors.

v. Safe working procedures followed by workers in their daily tasks.

vi. Spill response plan.

vii. Accident/incident response plan

viii. Drill rig emergency response plan.

PLEASE SEE APPENDIX B FOR DETAILS OF THE ABOVE PLANS AND LISTS.

4.0 FUEL STORAGE

The drilling rigs and water pumps require diesel fuel. Diesel is delivered to the site via a large tanker truck. It is stored on site in mobile bowsers which are used at the drill site to refuel the fuel tanks for the drilling rig, refer to Photo 9. Mobile electrical generators are refuelled using jerry cans which are filled directly from the bowsers. These generators are stored and filled over drip trays (see Photo 10) to catch any spillage. Special hydrocarbon absorbing matting and spill kits are on standby to absorb leakage and small spill.

Photo 9
Fuel Bowser for Refuelling Rigs

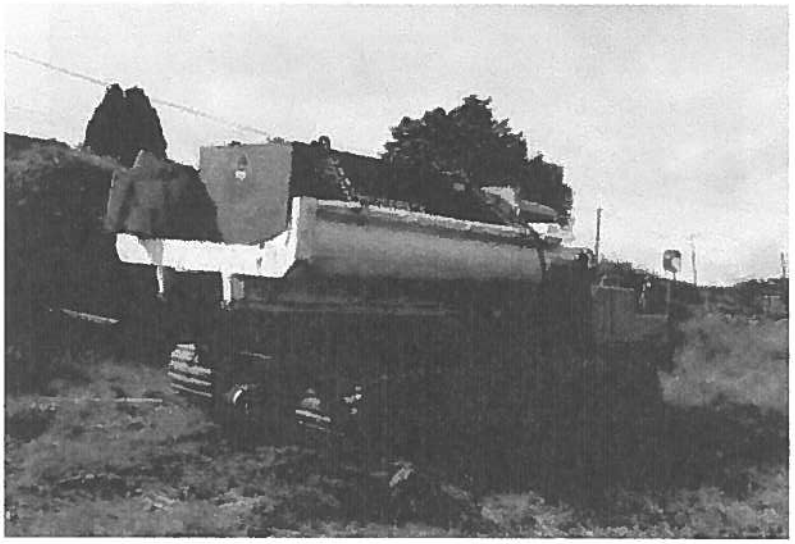
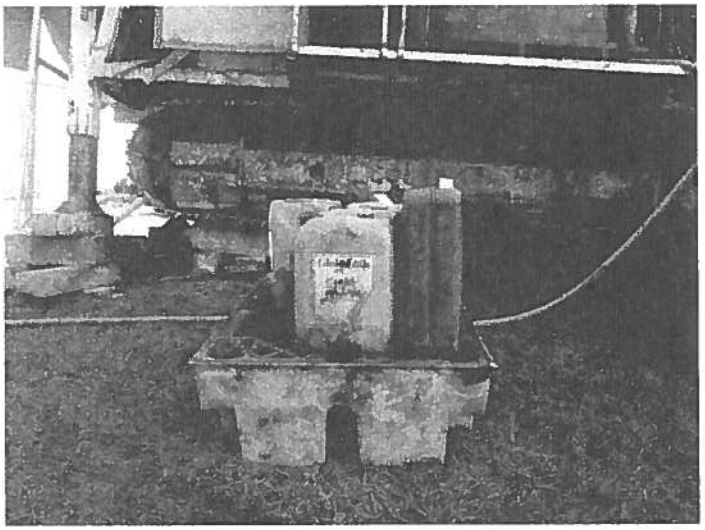


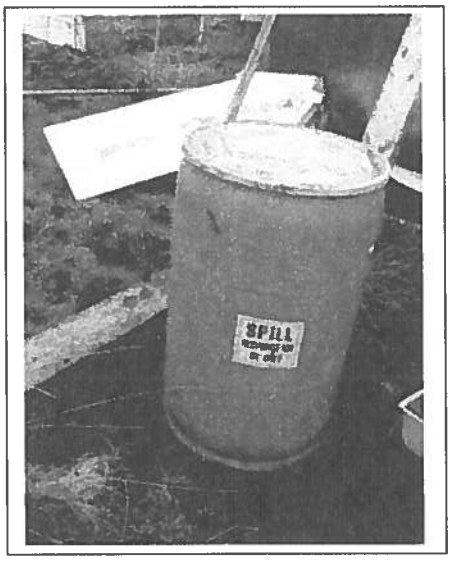
Photo 10
Fuel and Oil Containers on Drip Trays



Drip trays are used for storage of drilling additives fluids and oil used in the drilling process. Each drip tray is covered and each drip tray sump contains a disposable hydrocarbon absorbing mat. This mat absorbs drips from the containers used. The used matting is disposed in the oily rag bin.

A Spill Kit is provided at each drill site to respond to any accidental spills, refer to Photo 11. Preventative action can be taken immediately using the kits contents should such a spill arise to prevent any adverse impact on the local environment around the drill sites.

Photo 11
Emergency Spill Kit



5.0 DRILL SITE INSPECTIONS

A daily drill site inspection is undertaken by DGL for each drilling rig location to monitor and record work practices. This is a visual assessment and the results are recorded on an inspection form. (See appendix B). The inspections assess work practices relating to both Health and Safety and the Environmental practices of the drilling operations. Any issues or concerns that arise from these inspections are conveyed by the drill manager to the drilling contractor's supervisor. Each drill site inspection both assesses any discrepancies found on the day of the inspection and assess if the discrepancies, if any, from the previous inspection have been addressed.

6.0 ENVIRONMENTAL MONITORING

6.1 Water quality analysis

Surface water quality monitoring is being undertaken in a number of surface water courses in the vicinity of Curraghinalt, mainly in the Owenkillew River catchment area. This monitoring is undertaken by SLR Consulting with the assistance of DGL. Water samples are collected from various locations and shipped to ChemTest in Newmarket, CB8 0AL for chemical analysis. Duplicates are sent to ALcontrol in Hawarden (UK) to ensure QA/QC. All samples are collected by qualified personnel following QA/QC protocols and are shipped with a chain-of-custody to the labs.

Surface water samples are collected from 15 monitoring locations mainly within the Owenkillew catchment. The sampling locations are located on the following water courses:

- Curraghinalt Burn;
- Glenealy Burn;
- Owenkillew River;
- Owenreagh River
- Strule River

The surface water samples are analysed for the range of parameters determined in the Environmental Baseline Study (EBS) Scoping Report, May 2011. These parameters include standard water quality indicators such as metals, anions, cations, coliforms, herbicides and pesticides. There are three (3) main suites of parameters which are tested for. These are outlined in Tables 3a, 3b and 3c below. Suite A is conducted every two (2) months, Suite B and Suite C every quarter. The surface water sampling locations are noted in Table 4, and their locations are shown in Figure HY11. The analytical results are compared to the parameter limits outlined in the Salmonid Waters (2006/44/EC Annex I) Regulations and The WFD (Priority Substances and Classification) Regulations (Northern Ireland) 2011.

Table 3a
Suite A Physical and Chemical Parameters

Parameter	Parameter
Suspended Solids	Ammoniacal Nitrogen as NH3
Chloride	Ammoniacal Nitrogen as NH4
Ammonia as N	Conductivity @ 20°C
COD (Total)	Phosphate (ortho) as PO4
BOD	Calcium (diss.filt)
Alkalinity as CaCO3	Copper Dissolved, as Cu
TOC	Aluminium (diss. filt)
Total Dissolved Solids	Magnesium (diss.filt)
TPH (C_{10}-C_{40})	Mercury (diss.filt)

Sulphate	Molybdenum (diss.filt)
Nitrite as N	Nickel (diss.filt)
Nitrate as N	Potassium (diss.filt)
Manganese Dissolved, as Mn	Selenium (diss.filt)
Arsenic Dissolved, as As	Sodium (diss.filt)
Lead Dissolved, as Pb	Phosphorus (tot.unfilt)
Iron Dissolved, as Fe	Total Coliform confirmed
Zinc Dissolved, as Zn	Total Coliform presump
Chromium Dissolved, as Cr	Cadmium , Ultra-low Total as Cd
Chromium III	Oxygen, dissolved
Chromium VI	Cadmium (diss.filt) (low level) as Cd
Ammoniacal Nitrogen as N	

Table 3b
Suite B Physical and Chemical Parameters

Parameter	Parameter
Arsenic (tot.unfilt)	Manganese (tot.unfilt)
Aluminium (tot.unfilt)	Mercury (tot.unfilt)
Calcium (tot.unfilt)	Nickel (tot.unfilt)
Chromium (tot.unfilt)	Potassium (tot.unfilt)
Copper (tot.unfilt)	Selenium (tot.unfilt)
Iron (tot.unfilt)	Sodium (tot.unfilt)
Lead (tot unfilt)	Zinc (tot.unfilt)
Magnesium (tot.unfilt)	Manganese (tot.unfilt)

Table 3c
Suite B Physical and Chemical Parameters

Parameter
Pesticides Suite (Organochlorine)
Pesticides Suite (Organophosphorus)
Herbicide Suite

Table 4
Details of EBS Surface Water Sampling Locations

Sample ID	E	N	Site Location	Surface Watercourse
SW01	257053.456	386662.506	Adit Entrance	Adit Entrance
SW02	257116.994	286658.972	Attys Bridge	Curraghinalt Burn
SW03	258377.469	386593.314	Glenealy Bridge	Glenealy Burn
SW04	257100	387009	Burn Channel	Curraghinalt Burn
SW05	257150	387077	Main Channel	Owenkillew River
SW06	257108.918	387113.843	Main Channel	Owenkillew River
SW07	258763.551	386801.460	Greenan Bridge	Owenkillew River
SW08	253161.411	387111.383	Drumlea Rd. Bridge	Owenkillew River
SW09	253539.646	385900.742	Drumlea Bridge	Owenreagh River
SW10	261872.801	380730.479	Formil Br.	Owenreagh River
SW11	258200.217	382140.479	Cashel Br.	Owenreagh River
SW12	256183.350	383624.575	Staree	Owenkillew River
SW13	348980	386750	Beltrim Castle	Owenkillew River
SW14	241490.489	386348.055	Moyle Bridge	Strule River
SW15	239388.338	386266.502	A5 Bridge	Strule River

EBS Water Quality Programme

The surface water samples will be tested for list of parameters listed in Table 2a, 2b and 2c to characterise the baseline water quality and monitor for any impacts from the drilling exploration programme.

At present 17 rounds of baseline surface water quality monitoring has been conducted since June 2011. There is no evidence from the monitoring data that DGL drilling activities have affected water quality in any of the sampled water courses. Water quality results are assessed against limits given in the WFD (Priority Substances and Classification) Regulations (Northern Ireland) 2011 and the EC Directive on Salmonid Waters (2006/44/EC Annex I). Results from the water sampling downstream of any drilling activities are comparable with results found upstream indicating that drilling activities do not have a significant impact on the water quality in these water courses.

7.0 HEALTH AND SAFETY

The health and safety of employees and contractors is paramount to DGL. To this end, DGL has developed and implemented a rigorous H&S system. DGL provide individuals with information, instruction and training to reduce drilling risks down to as low as reasonably practicable. Inspections & external audits ensure that workers maintain a safe workplace and identify any additional training requirements.

DGL Staff

1. DGL endeavour to recruit experienced and competent staff.

2. Each new employee receives a thorough safety induction

3. DGL provides internal and external safety training on plant, equipment and manual handling techniques.

4. Drilling sites are formally inspected on a daily and weekly basis with **ALL** DGL staff undertaking an informal inspection during each visit.

Contractors

1. DGL only employs reputable, experienced and competent Drilling Contractors. This is determined using qualification questionnaires.

2. DGL monitors contractor safety during site inspections

3. DGL monitors contractor compliance with local legislation

4. Safety issues are discussed at weekly conference calls with the contractors or brought to everyone's attention at Safety Committee meetings.

7.1 Site Induction

All workers receive a Site Health & Safety Induction before beginning their employment or contract. Their details are recorded and their specific method statement and risk assessments explained to them.

Induction topics include:

- Drill site layout
- Fire / Emergency exits / Muster points / Emergency procedures
- First Aid / First Aiders/ Nearest Hospital & Emergency telephone numbers
- Personal Protective Equipment
- Welfare facilities
- Drill Site Hazards / precautions
- H&S law and employee responsibilities

- Method Statement & Risk assessment explanation and sign-off
- Environmental Considerations – SAC, ASSI, ANOB
- Spill Response Plan
- Community Relations

7.2 Method Statements and Risk Assessments – (RAMS)

A Method Statement is a document that gives specific instructions on how to safely perform a work related task, or operate a piece of plant or equipment.

A Risk Assessment is a careful examination of what, in your work, could cause harm to people (Hazards), so that you can weigh up whether you have taken enough precautions or should do more to prevent harm. The hazards and precautions are recorded on a document, which can be communicated to staff or referred to at a later time.

Method Statements and Risk Assessments (RAMS) are either generated in-house or are received from a contractor. Contractor RAMS are reviewed for suitability before being accepted, which are then communicated to and signed-off by workers during site induction.

In-house RAMS are compiled by the HS Officer and are used for work undertaken by Dalradian staff or workers employed on an hourly or labour only contract.

Examples can be found in Appendix B

7.3 Drill site and Workplace H&S inspections

Drill sites are subject to daily and weekly HS inspections. Daily inspections are conducted by the Drill manager, with the DGL HS Officer conducting a weekly inspection. The DGL HS Officer communicates all non-conformities to drill rig personnel, their supervisor and their contracts manager. Drill rig personnel and the HS Officer agree timescales to address and prioritise each non-conformity ensuring that those issues which have potential to cause injury or damage are rectified as soon as practicable.

Examples of H&S documents are found in Appendix B

8.0 METHOD STATEMENT DISSEMINATION & REVIEW

8.1 Dissemination

The drilling contractors and DGL employees operating the drilling rigs on site have been briefed on the requirements of this Method Statement by DGL through training and daily drill site inspections.

8.2 Review Process

The implementation and effectiveness of the Method Statement will be reviewed by DGL on an on-going basis. Any significant improvements in working methods on site will be added to

this Method Statement. Revisions of the Method Statement will be carried out only when significant changes are made.

9.0 CONCLUSION

This Drilling Method Statement sets out DGL's implementation of best environmental management, health and safety and community relations practice for the drilling operations.

This method statement review demonstrates DGL's proactive approach to environmental management, Health and Safety, and Community Relations. Continued implementation of the measures set out in the statement will ensure robust systems are in place to protect the environment, the workers and the community.

10.0 DGL CONTACT DETAILS

Dalradian Gold Limited has three offices in Northern Ireland, a field office in Gortin, a local office in Omagh and Head Office in Belfast.

The contact detail for the key Dalradian Gold personnel in Omagh is:

[redacted]
Managing Director,
Dalradian Gold Ltd,.
3 Killybrack Road,
Omagh BT79 7DG

Tel: [redacted]
Email: [redacted]com

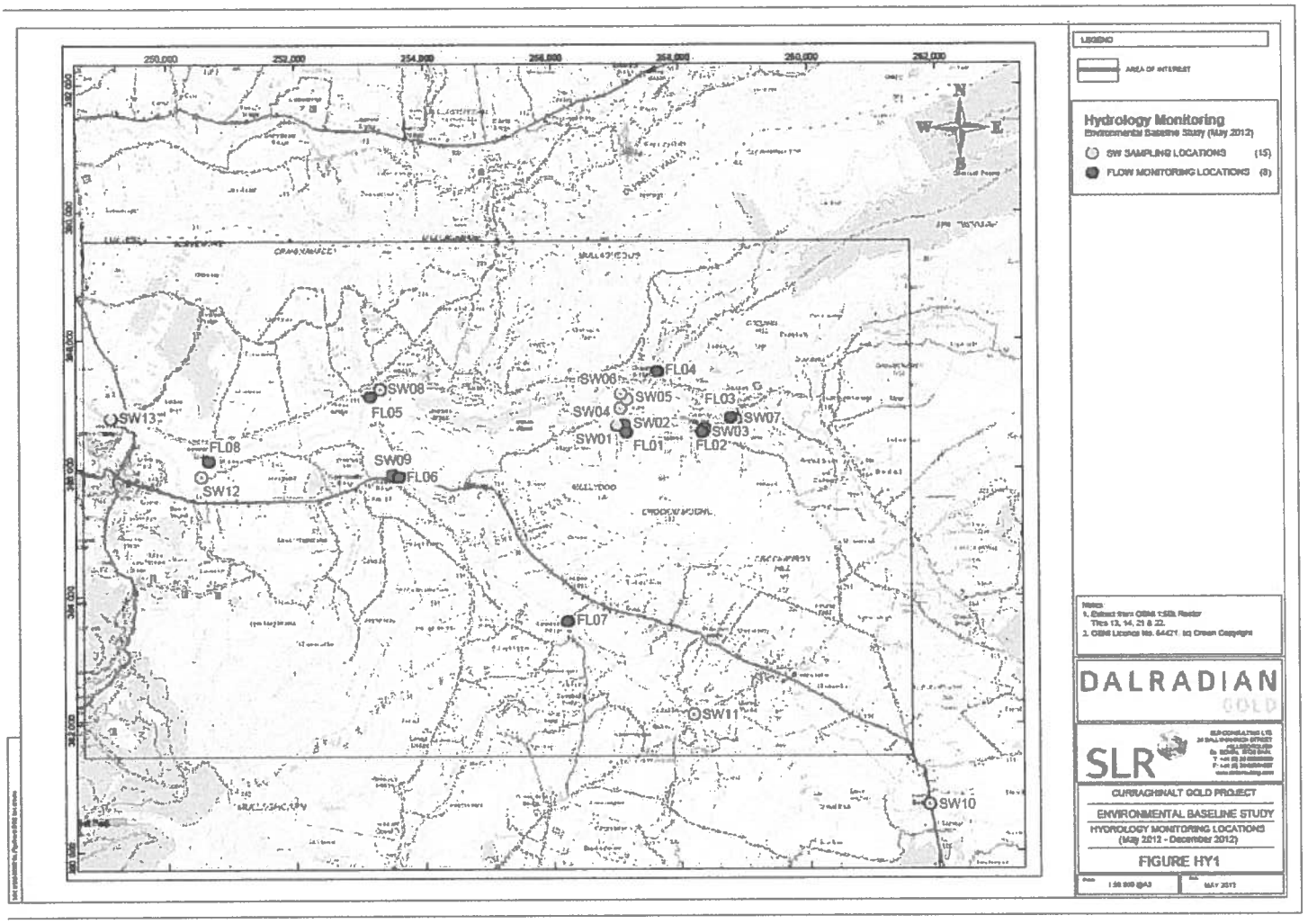
The contact detail for the key Dalradian Gold personnel in the Gortin field office is:

[redacted]
Environmental Technician,
Dalradian Gold Limited,
67 Main Street, Gortin,
Co. Tyrone, BT79 8NH

Tel: [redacted]
Email: [redacted]om

FIGURE

Figure HY11
EBS Monitoring Locations (1:50,000)



Appendix A -
Temporary Water Abstraction Licences AIL/2011/0025 & AIL/2011/0026

Northern Ireland Environment Agency

17 Antrim Road
Lisburn
Co Antrim
BT28 3AL

[redacted]
Dalradian Gold Ltd
92-98 Lisburn Road
First Floor Suite
BELFAST BT9 6AG

NIEA Reference No: AIL/2011/0025 & 0026

Date: 8th October, 2012

Dear [redacted]

Water Abstraction and Impoundment (Licensing) Regulations (Northern Ireland) 2006

Please find enclosed licence for temporary water abstractions near the Owenkillew River and its tributaries.

You should be aware that it is an offence under the regulations to fail to comply with any of the conditions of the licence and any such failure may result in prosecution.

If you require any further information please contact the Abstraction & Impoundment Licensing Team directly on 028 92 633470.

Yours sincerely

[redacted]

[redacted]
Abstraction Impoundment and Licensing Team
Northern Ireland Environment Agency
17 Antrim Road
Lisburn
BT28 3AL

[redacted]

[redacted]

Appendix B -
Health and Safety Documentation

Drill Rig Emergency Response Plan

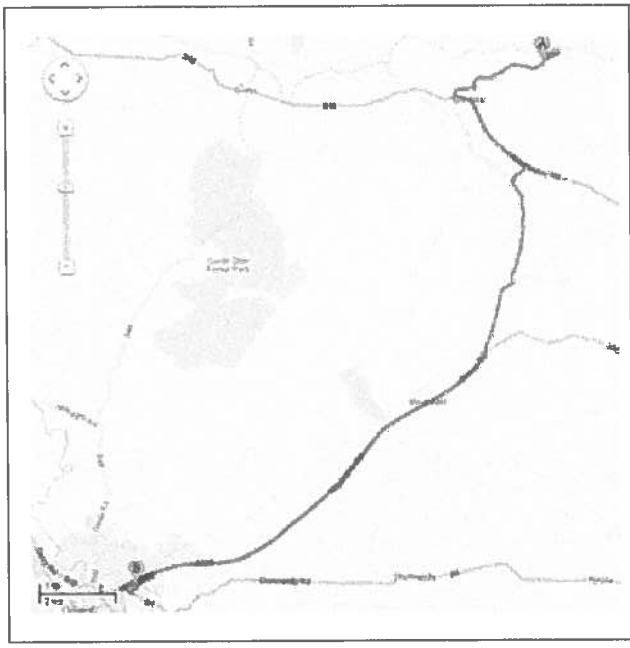
Drill Rig Emergency Response Plan	DALRADIAN GOLD

FIRST AIDER Garth Duncan/ Driller/ Off-sider

First Aid Box Locations At the work place / in DGL Vehicles / in Gortin Office

Emergency Services Contact Telephone Numbers	
Ambulance	999 or 112
Gortin Medical Centre (minor injuries)	02881 648 216 Mon – Fri 0830 to 1800hrs
Fire & Rescue Service	999 or 112
Police	999 or 112
Police Non Emergencies	0845 600 8000

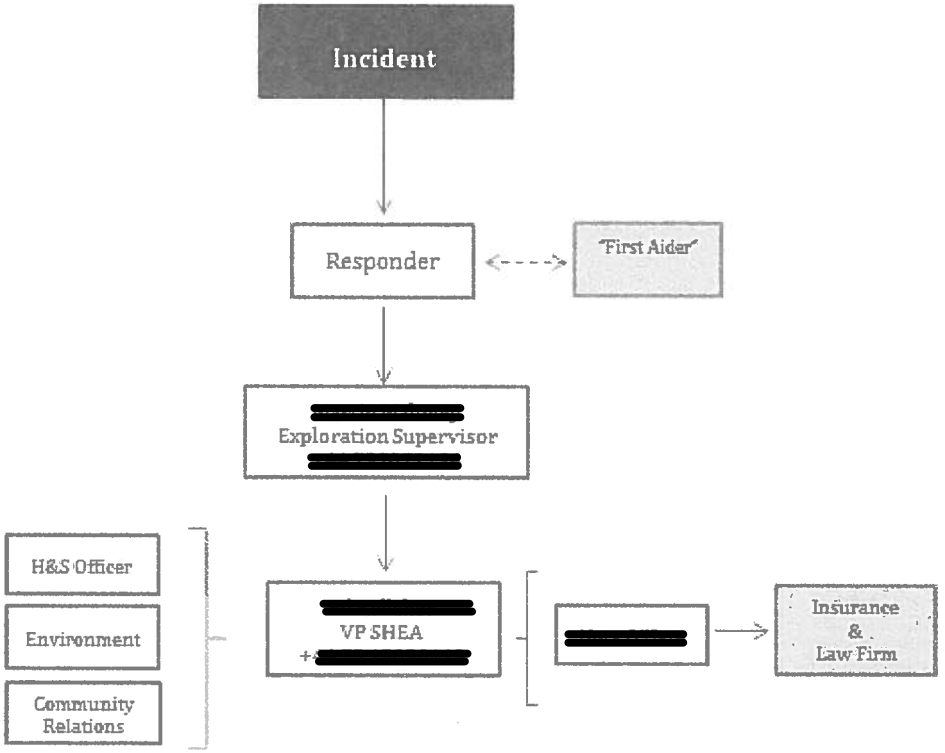
Tell the emergency Services	
STAY CALM, SPEAK CLEARLY – LISTEN TO THE EMERGENCY OPERATOR AND ANSWER THEIR QUESTIONS	
Address	The Dalradian Gold Laydown Area – which is in between numbers 45 & 47 Camcosy Rd, Gortin BT79 7SF (SEVEN Sierra Foxtrot)
Describe the casualty	I have a male / female casualty
Describe the injury	He/She is not BREATHING He/She is BLEEDING He/She has BROKEN BONES



1. From Adit field turn right onto Camcosy Rd and drive towards Rousky	Go 1.8 miles
2. Sharp left on to B46/ Crocknaboy Rd	Go 1.7 miles
3. Turn right on to Aughnamirigan Rd	Go 2.1 miles
4. Turn right onto Greencastle Rd	Go 0.2 miles
5. Slight left to stay on Greencastle Rd	Go 1.1 miles
6. Turn right onto Barony Rd / A505 Go through 1 roundabout and continue on straight on Killyclogher Rd	Go 7.2 miles
7. At the next roundabout take the 1st exit on to B4/Hospital Rd	Go 0.2 miles
8. Tyrone County Hospital is on your right	Go 0.1 miles

Incident Response Plan

HSE Management System	DALRADIAN GOLD **Communication Line During an Incident**			
Issue Date: 29/03/2013	Issue No: 1	Prepared by: [redacted]	Reviewed/Approved:	Procedure: Accident Communication Lines

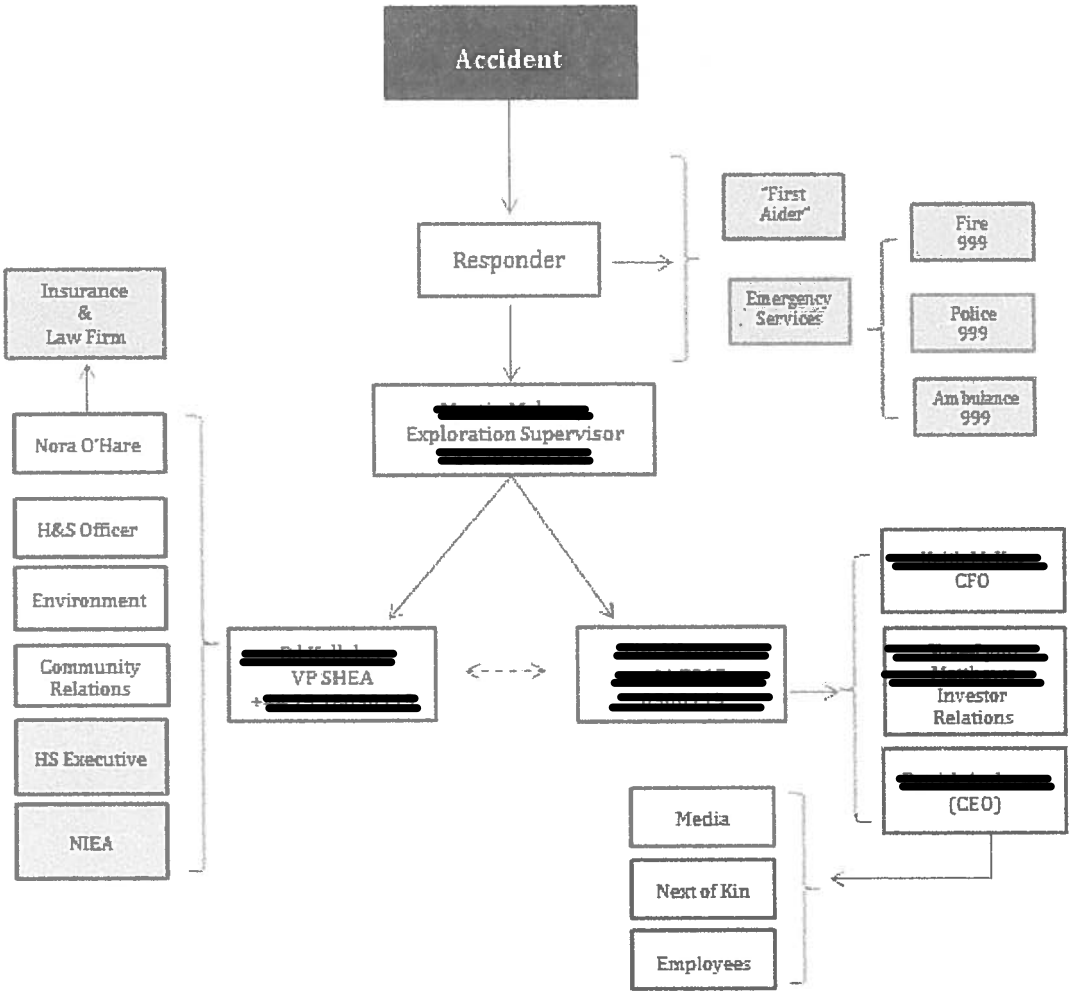


Important Notes

1. An incident is any occurrence that is not an "accident", but requires First Aid, minor environmental damage (eg., small oil spill onto ground surface), and/or minor damage to property (£500-£5,000).
2. Emails alone are not an effective means of communication: You must call and speak to your "Reports Personally."
3. An incident report needs (template attached) to be submitted to the VP SHEA & Permitting within 24 hours of the incident occurring.
4. A risk assessment must be carried out after the incident occurred to identify and eliminate/mitigate the hazard that resulted in the incident.

Accident Response Plan

HSE Management System	DALRADIAN GOLD Communication Line During an Accident			
Issue Date: 29/03/2013	Issue No: 1	Prepared by: [redacted]	Reviewed/Approved:	Procedure: Accident Communication Lines



Important Notes

1. An accident is any occurrence that requires (a) the help from Emergency Services or (b) any medical treatment, or results in (c) lost time at work, or (d) involvement by the NI Environmental Agency (due to significant environmental damage, such as a release of a chemical into a water body) or resulted in significant damage to property (>£5,000)
2. Emails alone are not an effective means of communication: You must call and speak to your "Reports Personally."
3. An accident report needs (template attached) to be submitted to the VP SHEA & Permitting within 8 hours of the accident occurring.
4. The activity resulting in the accident shall be suspended until the cause of the accident has been identified and authorisation to proceed from President of DGL has been given.

DALRADIAN

Emergency Procedures – Major Hazardous Chemical or Material Spill

Introduction

The effects of a major chemical or hazardous material spills are well known and documented around the world, such as the events surrounding the Deepwater Horizon oil disaster of 2010 other older disasters such as the Bhopal gas release in 1984. Most of these events were avoidable and preventable, and Dalradian Gold Ltd. will take all necessary steps to avoid similar type disasters.

In the event of a major hazardous chemical or material spill, it is the responsibility of all Dalradian Gold Ltd. personnel to act in a manner as to prevent injury or loss of life and take all reasonable steps to prevent the occurrence of an environmental disaster.

For these reason the procedures shown below are to be followed as appropriate.

Major Hazardous Chemical or Material Spills – what you MUST do:

In the event of a major hazardous chemical or material spill:

1. Evacuate the area and call for help **IMMEDIATELY**. If the spill has potential to affect other areas of the building or other buildings, activate the fire alarm to alert others and allow them to safely evacuate.

2. Notify your line manager or supervisor, or if not present, **DIAL 999** and ask for the Fire and Rescue Service, ensuring you are calling from a safe place. State the address of the premises and any other necessary details (i.e the type of chemical spilled and the area involved).

3. **IF POSSIBLE** try and ventilate the area (if it is inside a building).

4. **IF POSSIBLE** try and contain the spill using earth/sand or other absorbent materials (spill kits). Block any drains to prevent the spill from spreading further, or from leaking into watercourses where there may be the potential for a major environmental disaster.

5. **PROTECT YOURSELF**. Do not approach the spill area without wearing appropriate respiratory equipment (if the area is not sufficiently ventilated) and suitable protective clothing.

6. Absorb residual spilled solvent with compatible chemical binders such as bentonite, vermiculite or sawdust, and then transfer to a closed container for proper disposal.

Emergency Procedures – Major Hazardous Chemical or Material Spill

7. Spills may have to be reported to the proper authorities such as Northern Ireland Environment Agency (NIEA) if quantities exceed reportable volumes.

NB. If the spill happens to be of a flammable solvent or fuel, then evacuate the area and call for help **IMMEDIATELY. DIAL 999** and ask for the Fire and Rescue Service and explain the circumstances. **SMOKING IS NOT ALLOWED** and all potential sources of ignition should be switched off **IF IT IS SAFE TO DO SO.**

Evacuation Procedures

All employees, on hearing the fire alarm are to:

1. Stop work immediately.
2. Switch off any machinery & electrical equipment as appropriate.
3. Proceed to their designated assembly areas as quickly as possible (in an orderly fashion) by the designated routes marked out as follows ..... (assisting any persons unfamiliar with the premises or that may be disabled in such a manner that requires assistance).
4. Personnel are to assemble at the designated assembly point .....
5. Once at the assembly point a roll call shall be taken to ensure all personnel have been safely evacuated.

NB – It is necessary that those with disabilities that may prevent their safe evacuation must be risk assessed and provided with Personal Emergency Evacuation Plans (PEEPs) and if necessary paired with an able bodied assistant to help in their evacuation.

ONCE EVACUATED, A BUILDING/SITE MUST NOT BE RE-ENTERED UNTIL IT HAS BEEN DECLARED SAFE TO DO SO BY THE NORTHERN IRELAND FIRE AND RESCUE SERVICE OR OTHER EMERGENCY SERVICE

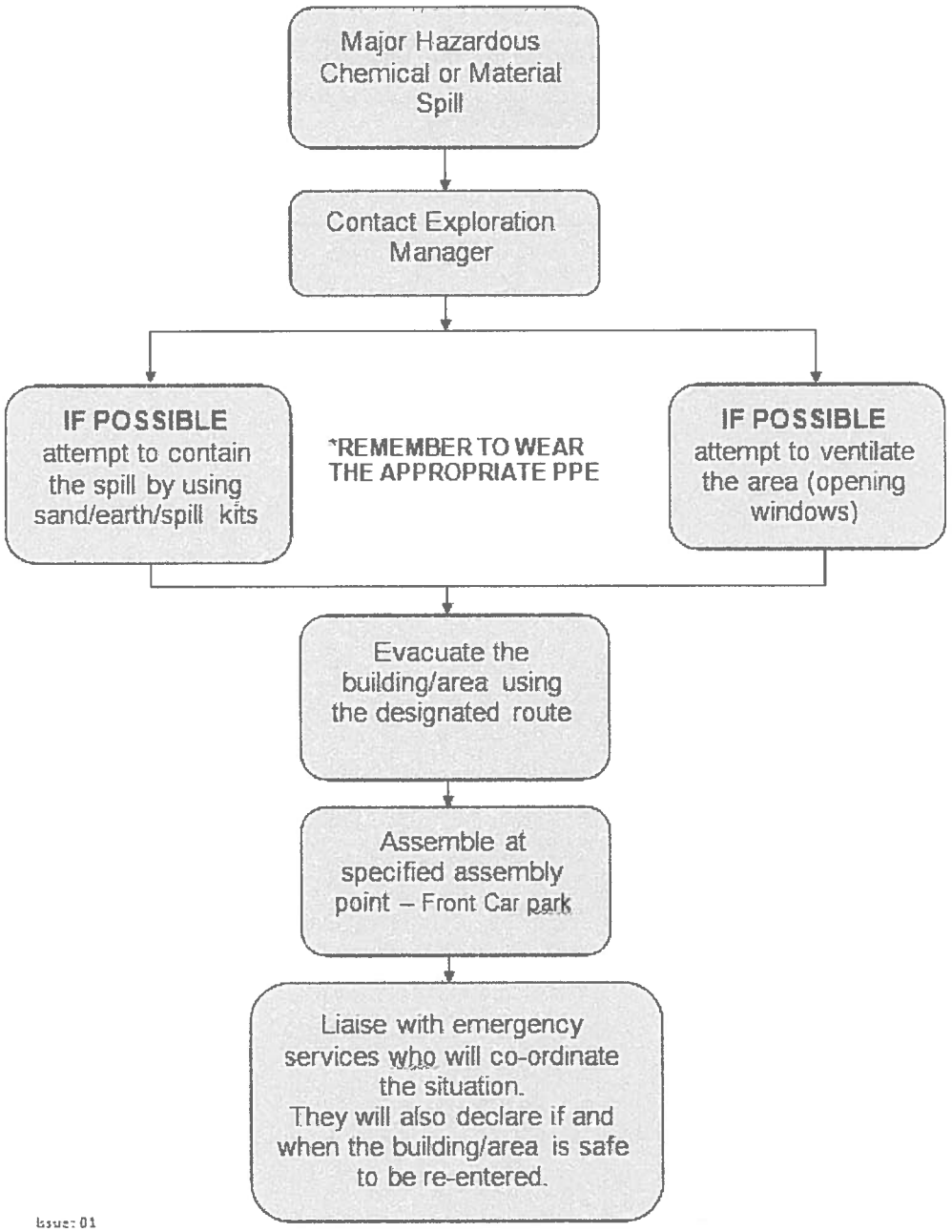
Emergency Procedures – Major Hazardous Chemical or Material Spill

Important Telephone Numbers

Northern Ireland Fire and Rescue Service (NIFRS)	**999**
Police Service of Northern Ireland (PSNI)	**999**
Ambulance Service	**999**

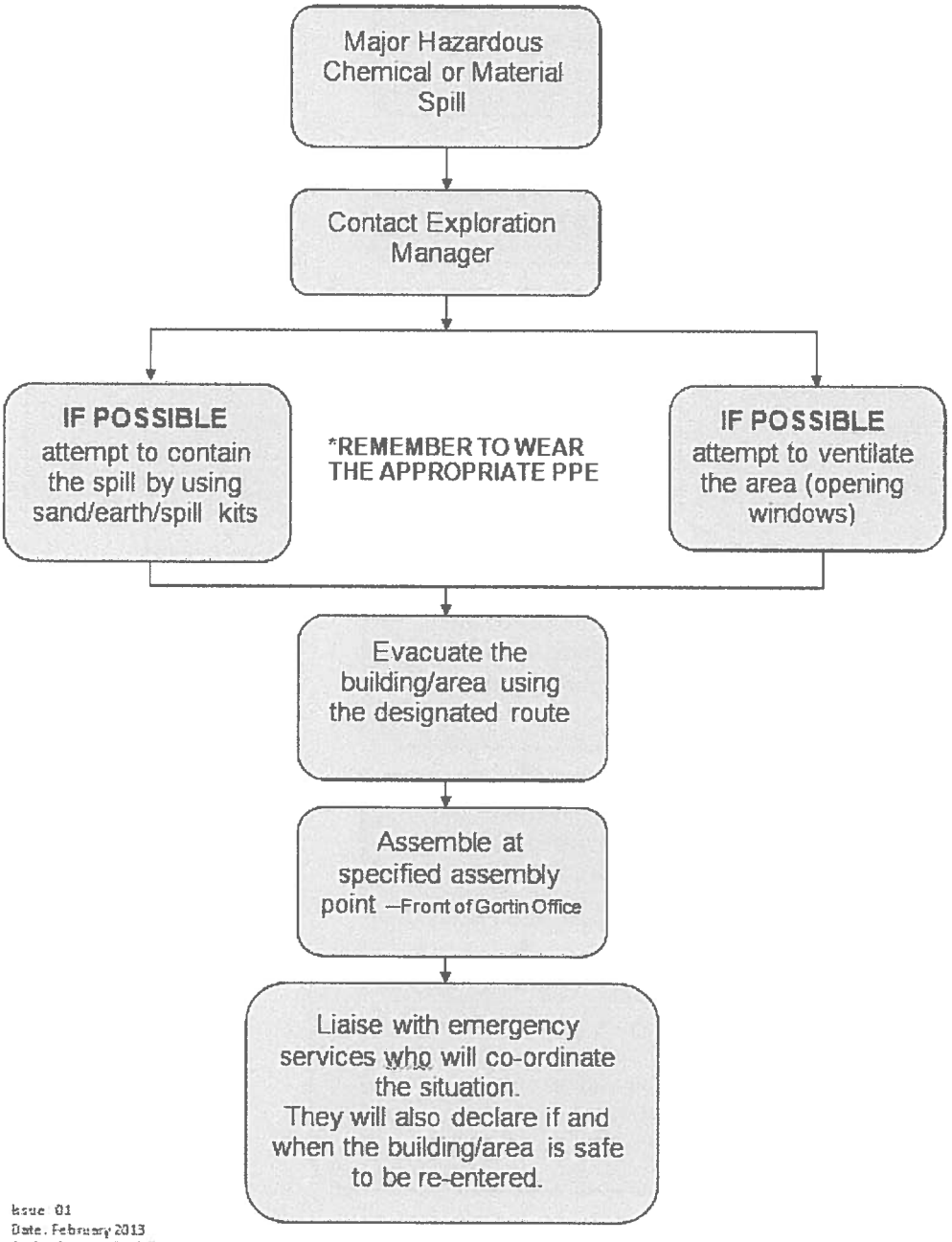
Emergency Procedures – Major Hazardous Chemical or Material Spill

Head Offices and Storage Facilities (Killybrack Road, Omagh)



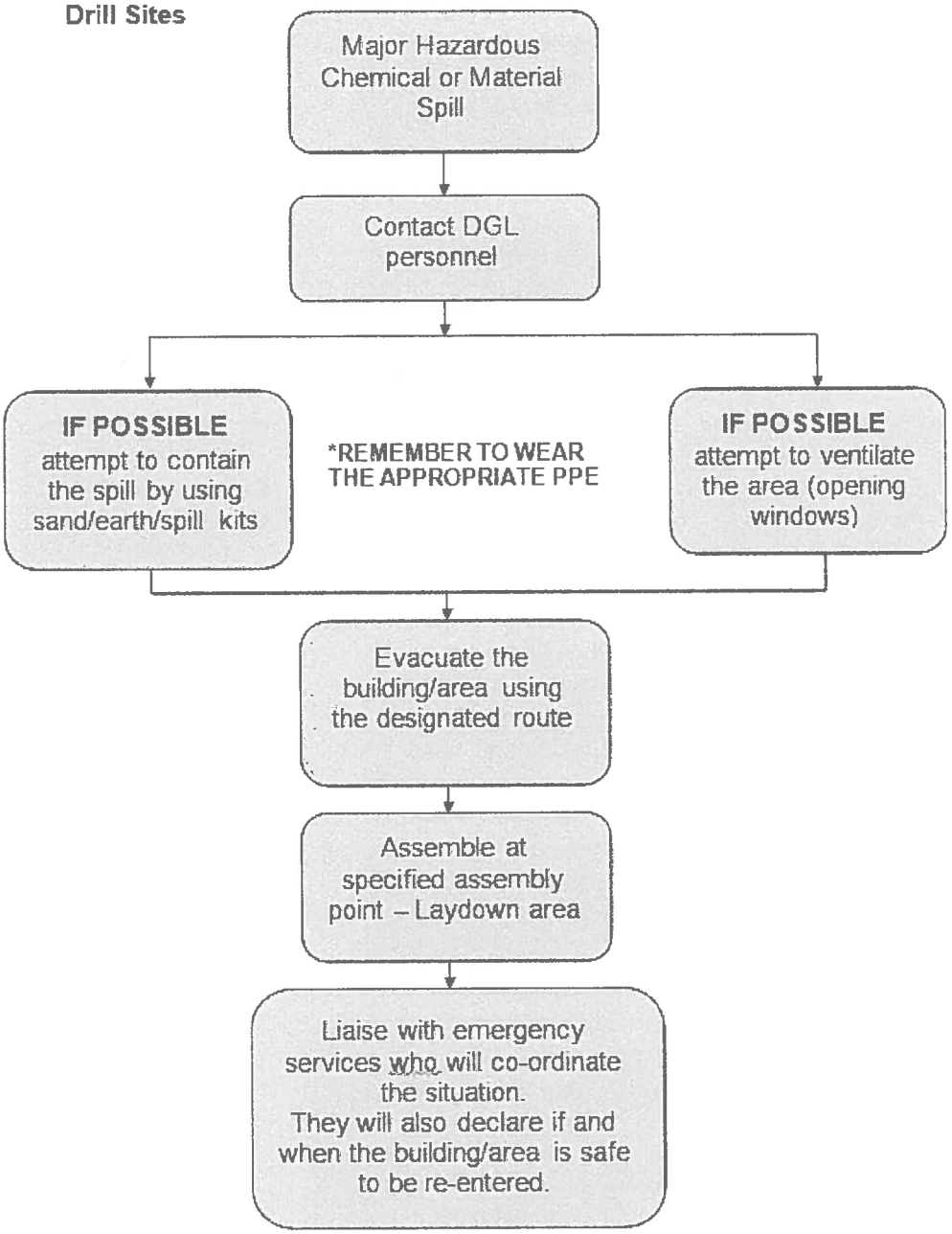
Emergency Procedures – Major Hazardous Chemical or Material Spill

Storehouse (Main Street, Gortin)



Emergency Procedures – Major Hazardous Chemical or Material Spill

Drill Sites



Emergency Procedures - Minor Hazardous Chemical or Material Spill

Introduction

The effects of a chemical or hazardous material spills can have serious consequences on the local environment. These events are avoidable and preventable, and Dalradian Gold Ltd. will take all necessary steps to avoid environmental damage caused by chemical spills in our operations.
Examples of such measures are listed below;

a) Trained, qualified and experience workers
b) Substances stored in suitable containers i.e. 25 litre drums or double skinned fuel containers
c) Safe working procedures
d) Communication and training of the spill response plan

In the event of a hazardous chemical or material spill, it is the responsibility of all Dalradian Gold Ltd and their contracting personnel to take all reasonable steps to prevent and reduce environmental damage.

Dalradian Gold Ltd.'s field operations take place or are adjacent to
a) SAC - Special Area of Conservation
b) ASSI – Area of Special Scientific Interest
c) ANOB – Area of Outstanding Natural Beauty

For these reasons all chemical substances used in our drilling operations **MUST** be environmentally friendly. However, the drilling process does generate waste by-products that although are not classed as a hazardous substances they can contain high or concentrated levels of naturally occurring substances e.g. Arsenic, which may have an environmental impact if a substantial uncontrolled release occurs.

Definitions

A spill is considered **MINOR** when it:
- Is under 25 litres
- Does not enter any waterway
- Is not toxic or corrosive chemical

A spill is considered **MAJOR** when it:
- Exceeds 25 litres
- Enters any waterway
- Involves toxic or corrosive chemical

Emergency Procedures - Minor Hazardous Chemical or Material Spill

Hazardous Chemical or Material Spills – what you MUST do:

In the event of a minor hazardous chemical or material spill:

1. **RAISE THE ALARM** – Stop work and notify all drill rig personnel.
2. **ELIMINATE** the source of the spill. This may be as simple as placing leaking containers on drip trays or turning an outlet pipe to OFF.
3. **CONTAIN THE SPILL.** Use bunding supplied in the spill kit to contain the spill within the smallest possible area and to prevent the spill reaching any water courses.
4. **CLEAN-UP THE SPILL.** Use the absorbent matting and/or granules to absorb liquid spillages. Place all collected materials in a sealed bag and prepare for disposal. **DOUBLE BAG IF NECESSARY**
5. **DISPOSE OF THE WASTE.** Place the bagged waste into the appropriate skip.
6. **REPORT THE SPILL**. Call the Environmental Engineer or Environmental Technician on 02882 246 289 and inform him of the spillage.

   Communicate the following points

   a. **Name of substance which was released**
   b. **Location of release**
   c. **Status of release** – has it been fully cleaned-up and disposed of? Has it entered any water courses?
   d. **Any additional actions required** – E.g. The skip needs emptied

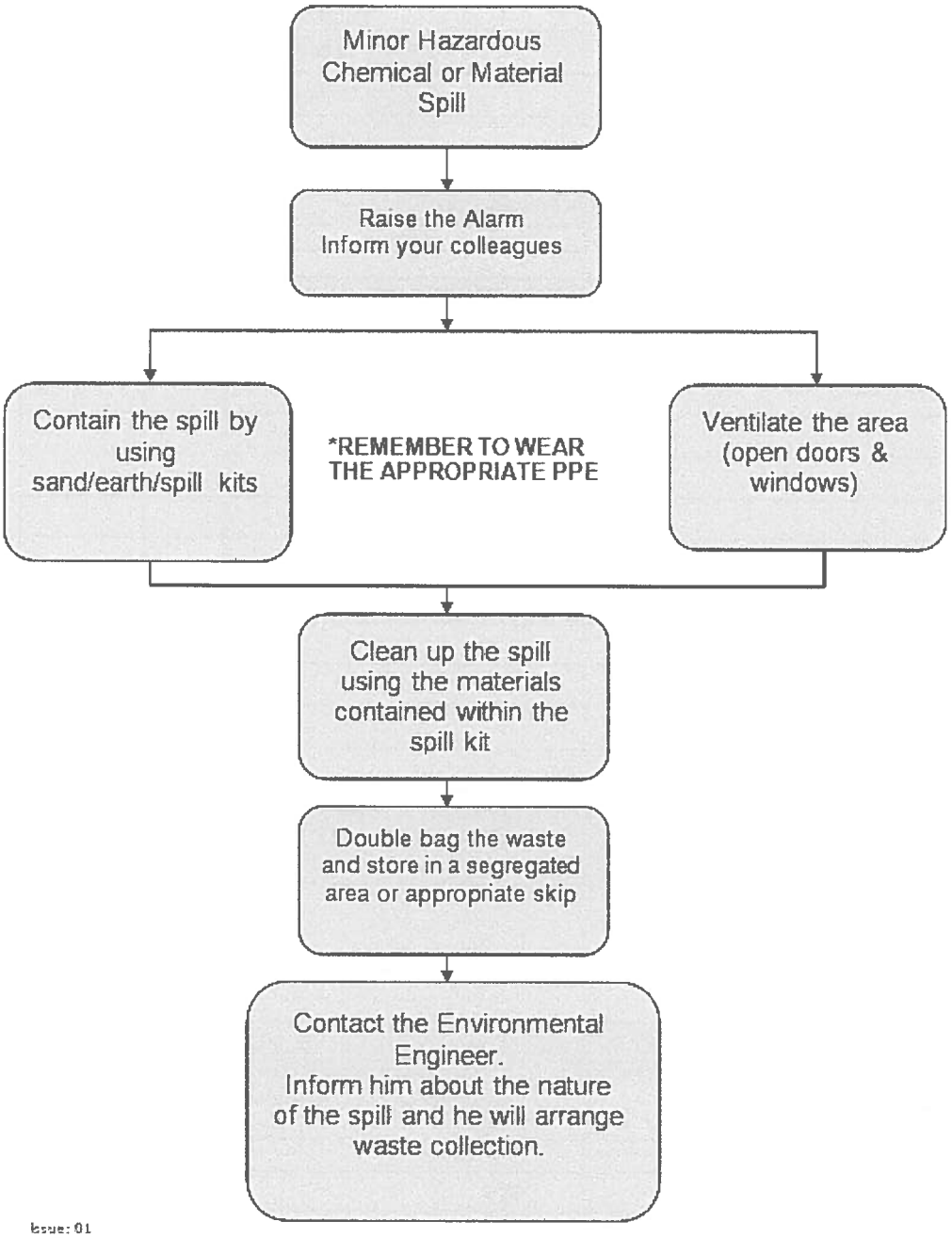
7. Spills may have to be reported to the proper authorities such as Northern Ireland Environment Agency (NIEA) if quantities exceed reportable volumes.

Important Telephone Numbers

Environmental Engineer	02882 246 289 or 07733 913 522
Northern Ireland Fire and Rescue Service (NIFRS)	999
Police Service of Northern Ireland (PSNI)	999
Ambulance Service	999

Emergency Procedures - Minor Hazardous Chemical or Material Spill

Dalradian Offices, Stores, Warehouses, Drill sites and Field based work sites.



Drill Rig Inspection Sheet

Drill Rig Safety Inspection Date:	Drill Rig:	Drill Hole:	DALRADIAN

Key Personnel	Distribution list			
Inspected by:	Dalradian Gold Ltd		Drilling Contractor	
	Ed Kelleher	○	Drilling Contracts Manager	○
	Martin Moloney	○	Drilling H&S Manager	○
	File	○	Drilling Supervisor	○

Assessment of Drill Site Operations			
Good	Fair	Poor	Unsatisfactory

Ref :	Summary of Non-conformities / Observations / Items for Action / Improvements / Suggestions	Action by	Proposed Timescale

Status of previous Non – Conformities/ Observations / Items for Action / Improvements / Suggestions		
Date of First Report	Description of issue	Current status

Communication Sign-off	
All matters recorded in this report have been discussed with the Drilling Supervisor	I have noted and received this report. I will take appropriate actions to reduce or eliminate the identified issues
Print Name:	Print Name:
Sign:	Sign:
Date:	Date:

Drill Rig Safety Inspection Date:	Drill Rig:	Drill Hole:	DALRADIAN

Drill Site Inspection Check List

Rating: / – satisfactory Blank – N/A or Not checked I – Improvement P – Operation Stopped

1.0	**Drill Rig**		3.2	First aid Kit	☐	5.12	Clean Water Discharge	☐
1.1	Housekeeping	☐	3.3	Emergency Response Plan	☐	**6.0**	**Workplace**	
1.2	Working at height protection	☐	3.4	Means of Communication	☐	6.1	Housekeeping	☐
1.3	Hoist Line	☐	3.5	First Aider	☐	6.2	Walkways	☐
1.4	Wire line	☐	3.6	PPE & Clothing	☐	6.3	Working at height	☐
1.5	Guarding	☐	3.7	Training (Job Specific)	☐	6.4	Fire Fighting Equipment	☐
1.6	Whip Checks	☐	3.8	TBT / Take Fives	☐	6.5	Trailing leads / hoses	☐
1.7	Outriggers	☐	3.9	Toilets	☐	6.6	Ground conditions	☐
1.8	Oil Levels	☐	3.10	Means of Heating Food	☐	6.7	Fencing	☐
1.9	Anchors	☐	**4.0**	**Plant & Support Vehicles**		6.8	Safety signage	☐
1.10	Mast Safety Chains	☐	4.1	Certifications	☐	6.9	3 Emergency Exits	☐
1.11	Water intake	☐	4.2	Lights	☐	6.10	Lighting	☐
1.12	Water pump	☐	4.3	Tyres	☐	6.11	Security	☐
1.13	Emergency Shut-down switch	☐	4.3	Road Worthiness	☐	6.12	Waste Disposal	☐
1.14	Oil Leaks	☐	**5.0**	**Environmental**		6.13	Vehicle Access	☐
2.0	**Fuels, Liquids & Gases**		5.1	Sump operation	☐	6.14	Pedestrian Access	☐
2.1	Bulk fuel Storage	☐	5.2	Settlement tanks (overflowing / leaks?)	☐	**7.0**	**Electrical Equipment**	
2.2	Portable fuel Storage	☐	5.3	Leaks	☐		Electrical cables	☐
2.3	Fire Extinguisher	☐	5.4	Spillages	☐		Generator Earthed	☐
2.4	Fuel leakages	☐	5.5	Litter	☐		Generator on Drip tray	☐
2.5	Fuel Hoses	☐	5.6	Absorbent Matting	☐		Fuel leakages	☐
2.6	Liquid storage	☐	5.7	Spill kit available	☐	**Any other issues**		
2.7	Safe storage of gases	☐	5.8	MSDS information	☐			
2.8	Spillages	☐	5.9	Drip trays	☐			
3.0	**Personnel & Welfare**		5.10	Noise	☐			
3.1	Accident/ incident/ near-miss reporting	☐	5.11	Excess water	☐			

Comments:

Ref	Category	Max Points	Score	Ref	Category	Max Points	Score
1.0	Drill Rig	20		5.0	Environmental	20	
2.0	Fuels Liquids & Gases	10		6.0	Workplace	20	
3.0	Personnel & Welfare	10		7.0	Electrical Equipment	10	
4.0	Plant & Support Vehicles	10			Totals	100	

Drill Rig Safety Inspection Date:	Drill Rig:	Drill Hole:	DALRADIAN

Ref:	Description	Action Taken / Action Required

Driller's acceptance

I acknowledge the issues described above and will take appropriate action to rectify the matters as soon as practicably possible. Where issues are beyond by responsibilities, I will bring the matter to the attention of my supervisor and instigate appropriate control measures to reduce the likelihood of an accident or environmental damage until the issue has been dealt with accordingly.

Driller Name (Block Capitals)		Sign
Inspector Name (Block Capitals)		Sign

Drill Rig Safety Inspection Date:	Drill Rig:	Drill Hole:	DALRADIAN

DRILL RIG COPY – TO BE LEFT AT SITE

Ref:	Description	Action Taken / Action Required

Driller's acceptance

I acknowledge the issues described above and will take appropriate action to rectify the matters as soon as practicably possible. Where issues are beyond by responsibilities, I will bring the matter to the attention of my supervisor and instigate appropriate control measures to reduce the likelihood of an accident or environmental damage until the issue has been dealt with accordingly.

Driller Name (Block Capitals)		Sign
Inspector Name (Block Capitals)		Sign

Waste Water Collection and Transport

Title:	Waste Water transport – Subcontractor Issue	Method statement No.	MS002
Date:	10th September 2012	Revision	REV A

Subcontractor Details		
Company Name		
Accepted by	Print name below	Sign below
	Date	

Written by	Garth Duncan
Job Title	H&S Officer
Date	16th January 2013

Revision Details		
Rev No.	Date	Description
1	16 Jan 13	All waste water will be stored separately before collection by the licensed waste contractor. The combined storage facility at Vincent McCullough's Yard has been removed

1.0 Scope of Work

1.1 The following is a brief outline of the work

The work can be broken down in to 5 key elements.

a) Collection of waste water from the drill site settlement tanks /Temporary storage tanks

b) Transportation of waste water to storage facility

c) Delivery of waste water to temporary -holding tank

d) Installation of waste water receptor hose at storage tanks

e) Inspection of Storage tanks – to be conducted by Dalradian personnel ONLY.

Collection waste water from Drill site settlement tanks

Every effort will be made to locate temporary storage tanks as close to the drill rig as possible to facilitate the pumping of waste water from the drill rig to the temporary storage tank. Where this is not possible, waste water will be collected by pump tanker and transported to the temporary storage tank. In this case the following procedures will apply.

The operative will drive on to the drill site in a tractor towing a pump tanker. The operative will place the hose from the pump tanker in to the first settlement tank and operate the pump to extract the waste water. Once one tank is empty he will move on to the subsequent tanks until all settlement tanks have been emptied and all waste water removed.

The operative may visit more than one Drill site in the course of his working day.

Transportation of Waste water

Waste water has now been collected in the pump tank and will be transported to the storage facilities. The operative will drive his tractor to one of the 3 storage locations. These are large 10,00 litre tanks placed by the gate way to the drill site.

Delivery of waste water to temporary storage tank

The operative will insert the pump tank hose in the storage tank receptor hose, operate the pump tank and deliver the water to the storage tank.

Installation of Storage tank Receptor hose

In order to reduce the need for the operator to work at height, a receptor hose will be inserted and secured to storage tank inlets. The receptor hose will allow delivery of waste water by making the pump tank / storage tank connection at ground level.

Inspection of storage tanks – Dalradian Personnel ONLY

A Dalradian employee will climb a secured ladder and remove the inlet lid and look inside the tank to assess remaining storage capacity. The ladder will be secured by having a second worker 'foot' the ladder.

Location

Collection from all drill sites Taken via adjacent track ways and farmland Temporary Storage tanks will be sited at drill sites adjacent to the Camcosy Rd The temporary storage tanks are mobile and may be moved to aid collection vehicle access; drill site locations may be unsuitable for tractor and pump tank access/egress.

1.2 Start Finish dates and times

Please indicate in the box below the duration of the work

The work will take approximately 3 hours to include collection, transport and storage. This will be undertaken on an 'as & when' basis at the request of a supervisor from the drilling contractor. On-going work as per drill programme

1.3 Number of Operatives involved

One – collection delivery operative Two – Installation of receptor hose in storage tanks Two – inspection of storage tanks

2.0 Plant, Equipment, Tools Materials and PPE

Plant: Tractor & pump tanker

Equipment: electric pump and hosing

Tools: NONE

Materials: Rope and piece of timber

Standard PPE for all operatives:

Hard Hat, Gloves, Hi-Vis Clothing and Safety Boots

When entering the drill site the operative will wear Drill site PPE, which in addition to the above includes safety goggles and ear defenders.

Please list any other items not specified by the above

3.0 Sequence and Method of Work

Collection of Waste Water – Drill sites

a) Drive tractor and pump tank to the drill site and park adjacent to the settlement tanks
b) Bring the tractor to a safe stop following the safe stop procedure of
    - Fully apply the handbrake
    - Ensure that all controls of equipment are left safe
    - Stop the engine
    - Remove the key
c) Don the additional drill site PPE, i.e. Safety goggles and ear protection.
d) Attract the Driller's attention and inform him of your task.
e) You may have to receive a Drill site induction from the Driller.
f) Connect the hose to the pump tank and insert the other end into the first settlement tank
g) Operate the controls of the pump tank to extract the waste water from all the settlement tanks moving the hoses as appropriate.
h) Once the extraction has been completed retract and store the hoses safety.
i) Notify the driller of your intension to leave
j) Leave the drill site
k) END OF TASK

Transport waste water to the storage locations

a) Drive the tractor, towing the pump tank to the main storage facility, in accordance with the highway code and road legislation

Deliver the waste water to the storage tanks

a) When reaching the storage facility, park the tractor and pump tank adjacent to the storage tank
b) Bring the tractor to a safe stop following the safe stop procedure of
    - Fully apply the handbrake
    - Ensure that all controls of equipment are left safe
    - Stop the engine
    - Remove the key
c) Attach the pump tank hose to the storage tank hose
d) Open receptor hose valves and operate the pump tank to deliver the waste water
e) When delivery is complete, close the receptor hose valve and shut down pump tank.
f) Leave storage facility area
g) END OF TASK

Installation of waste water receptor hose at storage tanks

a) To be conducted by 2 operatives
b) Arrive at the storage tank location
c) Uncoil receptor hose and tie a rope to outlet end of hose
d) One operative will foot the ladder while the other climbs to the top and undoes the tank inlet lid.
e) The second operative now passes the rope to the upper operative, while still footing the ladder.
f) The upper operative drops the hose into the storage tank and then secures the hose using the rope and a short piece of timber
g) Cover the inlet as best possible using the inlet lid

h) Climb down the ladder and store/remove ladder.
i) The insertion hose is now connected. All waste water delivery can now be made at ground level.
j) END OF TASK

Inspection of Storage Tanks to assess remaining capacity

a) Two operatives, the DGL worker will carry out inspection
b) The DGL operative will climb access ladder while the second operative foots the ladder.
c) The DGL operative will remove any lids and look inside the storage tank to assess it's remaining capacity
d) Once inspection has taken place, the DGL operative will climb down the ladder
e) Store the ladder safety or remove ladder from site
f) END OF TASK

4.0 Outline of Hazards and Controls

1. Moving Plant to and from sites
   The sub-contractor must satisfy himself that the all plant can gain access to the land without causing damage to low hanging branches, gates entrances or overhead services. The sub-contractor is advised to assess the route for possible obstructions. All reversing of plant will be under the control of a banksman.
2. Operatives being struck by moving plant.
   Controls: Trained and competent machine driver and operatives.
   All workers to wear Hi-Vis clothing
   Drivers must notify drill rig personnel before of their presence at the drill rig and do not proceed until the driller has given permission to do so
   Reversing and difficult manoeuvres will be under the control of a banksman.
3. Entrapment and entanglement in moving machine parts.
   Controls: All plant and equipment will have moving parts guarded as required under legislation.
   Operatives to avoid wearing loose clothing i.e. draw strings from 'hoodies'.
   Competent operatives employed who are familiar with their machinery and its dangers.
4. Working at height
   All ladders will be footed by a second worker
   Operatives will climb a ladder maintaining 3 points of contact at all times.
   All ladders will be footed by a second worker

5. Damage to hearing – operatives will wear ear protection when at the drill site
6. Damage to eyes – operatives will wear safety goggles when drill site
7. Falls - Operatives will use gates and stiles to access land.
   Operatives will use hand hold when gaining access to tractor cabs
   Operatives will remove mud from boots before climbing ladders

8. Slips and trips
   Competent workers employed that are familiar with the uneven terrain associated with farm land.

Avoid walking on slippery areas and boggy land
Walk slowly taking, being aware of the weather and the working environment
Do not walk with hands in pockets

A full risk assessment accompanies this document.

5.0 **COSHH** – No hazardous substances are associated with this work

6.0 Supervision & Authorisation for Method Statement Amendment

Please print the name and contact telephone number of the supervisor in charge of these works in the box below.

Shane Feehan Dalradian Gold Ltd – 02882 246 289 Michael Feherty KPF Contracts- 02880 771 777 Garth Duncan HS Officer - 02882 246 289

Authorisation to amend this document must be sought by contacting Dalradian Health and Safety Officer, Garth Duncan on 02882 246 289

7.0 Training and Competency

Labourers will have a minimum of a CSR card and plant operatives will be competent in the use of machinery by demonstrating their competency through qualifications, training and experience. Please indicate in the box below

8.0 Welfare, First Aid and Emergency Arrangements

Please indicate the level of welfare provision required for these specific works in the box below.

Toilet facilities are present at the laydown area in Terence Brogan's farmyard.

A welfare unit which includes – A toilet, drying room, heated rest area, microwave, kettle and first aid box – is located in the 'Adit' field and can be provided for all workers involved in this task.

First Aid:

A first Aid box will be held at the work site – state it's exact location in the box below

A First Aid box is located at each drill site in the drillers hut.
All drillers and off-siders are first aid trained
A First Aid box is also located in the Adit Welfare unit.

The First Aider is – Print their name and contact detail in the box below

All Canadian Drillers

9.0 **Signage** – No specific signage is required for these works.

10.0 Operatives Acceptance and sign-off

I have read the site specific Method Statement, Risk Assessments and all supporting documentation for my task or had it explained to me.
I fully understand its contents and confirm that I will adhere to all instructions contained within.
I agree that NO ATTEMPT will be made to carry out any other works not detailed on this Method Statement.
Furthermore, I agree to abide by all site rules and will stop work and report any site conditions that have potential to cause injury, accident or ill health to myself or others.

You are signing this form as a statement of truth. Failure to disclose something that is relevant could harm you or others and will be used as a defence against any claim brought by you.

PRINT NAME	SIGN	DATE

Risk Assessments

Location: Drill sites & waste water storage areas	Assessment Date: 10 Sept 2012	Review Date: 09 Sept 2013	Assessor Name: Garth Duncan
Activity: transfer of waste water Ref MS002		Reviewed by:	Risk Assessment Number:RA002

Hazard Description	People at Risk	Initial Assessment			Control measures	Residual Risk			Further actions
		s	L	r		s	l	r	
Plant movement	Operatives, other workers & public	5	5	25	Trained competent drivers with appropriate vehicle license. Reversing and difficult maneuverers kept to a minimum and under the control of a banksman. Routes do not have low hanging branches, overhead services which will make contact with plant. Loading and unloading not will take place from public roads. Drivers will operate the tractor with adherence to the highway code, driver training and road legislation All operatives to wear Hi-Vis Clothing Waste water collection operative will notify the driller of his presence on site	5	1	5	Communicate INDG 185 entitled tractor Action to worker
Entrapment and entanglement by moving parts	Operatives	5	5	25	All equipment will have moving parts guarded Operatives will not wear loose clothing Competent operatives employed who are familiar with their machinery and and its dangers	5	1	5	Communicate INDG 185 entitled tractor Action to worker
Working at height	Operatives	5	5	20	Working at height will be reduced by the installation of receptor hoses at each storage tank to enable waste water delivery to me made from ground level	5	2	10	

Hazard Description	People at Risk	Initial Assessment			Control measures	Residual Risk			Further actions
		s	L	r		s	l	r	
Working at height (cont.)	Operatives	5	5	20	Ladders will be footed by a second operative Operatives will climb a ladder maintaining 3 points of contact at all times Operatives will not climb ladders while holding other items Operatives will use hand hold when accessing tractor cabs Operatives will remove excess mud from their boots before climbing ladders	5	2	10	Operatives must not attempt to climb an unsecured ladder. SEEK ASSISTANCE OR STOP WORK AND REPORT THIS TO YOUR SUPERVISOR
Damage to hearing	Operatives	3	5	15	All operatives will wear hearing protection PPE when in the vicinity of a drill site	3	1	3	All operatives must be issued with ear defenders by their employer
Damage to eyes	Operatives	3	5	15	All operatives will wear eye protection PPE when in the vicinity of a drill site	3	1	3	All operatives will have eye protection ppe issued to them by their employer
Slips trips and falls	Operatives	4	5	20	Competent workers have been employed that experienced rural workers who are familiar with the uneven terrain of farmland. Waste storage tanks will be situated on firm ground Operatives are advised to take care when walking over boggy land and place each step with care paying maximum attention to their surroundings and chosen path. Avoid walking on slippery, muddy surfaces and boggy ground	4	1	4	All operatives must choose their access path to avoid soft, boggy, muddy or slippery ground – do not take short-cuts. Do not allow yourself to get distracted when walking over uneven terrain.

Location: Drill sites & waste water storage areas	Assessment Date: 10 Sept 2012	Review Date: 09 Sept 2013	Assessor Name: Garth Duncan
Activity: transfer of waste water Ref MS002		Reviewed by:	Risk Assessment Number:RA002

Hazard Description	People at Risk	Initial Assessment			Control measures	Residual Risk			Further actions
		s	L	r		s	l	r	
Plant movement	Operatives, other workers & public	5	5	25	Trained competent drivers with appropriate vehicle license. Reversing and difficult maneuverers kept to a minimum and under the control of a banksman. Routes do not have low hanging branches, overhead services which will make contact with plant. Loading and unloading not will take place from public roads. Drivers will operate the tractor with adherence to the highway code, driver training and road legislation All operatives to wear Hi-Vis Clothing Waste water collection operative will notify the driller of his presence on site	5	1	5	Communicate INDG 185 entitled tractor Action to worker
Entrapment and entanglement by moving parts	Operatives	5	5	25	All equipment will have moving parts guarded Operatives will not wear loose clothing Competent operatives employed who are familiar with their machinery and and its dangers	5	1	5	Communicate INDG 185 entitled tractor Action to worker
Working at height	Operatives	5	5	20	Working at height will be reduced by the installation of receptor hoses at each storage tank to enable waste water delivery to me made from ground level	5	2	10	

Hazard Description	People at Risk	Initial Assessment			Control measures	Residual Risk			Further actions
		s	L	r		s	l	r	
Working at height (cont.)	Operatives	5	5	20	Ladders will be footed by a second operative Operatives will climb a ladder maintaining 3 points of contact at all times Operatives will not climb ladders while holding other items Operatives will use hand hold when accessing tractor cabs Operatives will remove excess mud from their boots before climbing ladders	5	2	10	Operatives must not attempt to climb an unsecured ladder. SEEK ASSISTANCE OR STOP WORK AND REPORT THIS TO YOUR SUPERVISOR
Damage to hearing	Operatives	3	5	15	All operatives will wear hearing protection PPE when in the vicinity of a drill site	3	1	3	All operatives must be issued with ear defenders by their employer
Damage to eyes	Operatives	3	5	15	All operatives will wear eye protection PPE when in the vicinity of a drill site	3	1	3	All operatives will have eye protection ppe issued to them by their employer
Slips trips and falls	Operatives	4	5	20	Competent workers have been employed that experienced rural workers who are familiar with the uneven terrain of farmland. Waste storage tanks will be situated on firm ground Operatives are advised to take care when walking over boggy land and place each step with care paying maximum attention to their surroundings and chosen path. Avoid walking on slippery, muddy surfaces and boggy ground	4	1	4	All operatives must choose their access path to avoid soft, boggy, muddy or slippery ground – do not take short-cuts. Do not allow yourself to get distracted when walking over uneven terrain.

Safe Working Procedure

	Work Tasks / Job Steps *Describe the tasks / steps involved in the work – in sequence*	**Hazards Identified for each Task / Step** *Include relevant details about the energy where applicable and leave blank if there are none*	**Control Measures / Safe Procedures for each Task / Step** *Detailcontrols to be implemented, based on the hierarchy of control options* *1) Eliminate the hazard 3) Engineer a control 5) Use correct PPE* *2) Substitute the hazard 4) Apply administrative controls*	**Risk Score** *Use Risk Scorecard*
1	Pre-Operation and 5 Point Safety Check Must Be Completed Accurately At The Start Of Shift	Pre-Operation and 5 Point Safety Check Must Be Completed Accurately At The Start Of Shift	Pre-Operation and 5 Point Safety Check Must Be Completed Accurately At The Start Of Shift	
2	Check Engine - oil level - water level - diesel level	Burns when radiator is hot Burns when radiator is hot	Check level while radiator is cool Wear appropriate PPE-protective safety glasses and gloves	7
3	Visually inspect - belts - hoses (hydraulic, oil, water) - for oil and water leaks - condition of safety chains/whipchecks	Burns when is hot	Wear appropriate PPE-protective safety glasses and gloves	
4	Check on drill - hydraulic oil level - taps and valves are closed - all levers are in neutral - air filters - blow out if dirty	Personal injury	Make sure all levers are in neutral Wear appropriate PPE-protective safety glasses and gloves	7
5	Check drill set up	Personal injury Equipment damage		7
6	Check drill mast	Personal injury Equipment damage		7
7	Check personal protection equipment available and in good working order and condition			7
8	Check for emergency and spill reporting plans and contact numbers			7
9	Check on site communications are available and in good working order	Unable to reach emergency services	Make a scheduled call to supervisor or other predetermined number to ensure communications are in good working order	7
10	Check condition of fire extinguishers and first aid boxes are available and in good			7
11	Daily Time Report (DTR) has both the 5-point Safety System and Pre-Start Safety Check list and sign off to be completed daily and signed off by supervisor.			

Appendix C -
MSDS Documentation

AMC Liqui-Pol

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
AMC Liqui-Pol

PRODUCT USE
Drilling fluid additive.

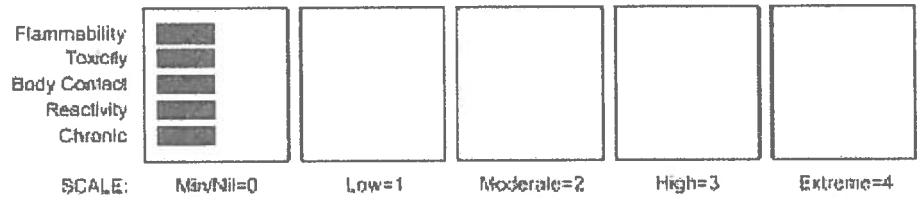
SUPPLIER
Company: AMC
Address
PO Box 1141
Osborne Park
WA 6916
Australia
Telephone: 61 8 9445 4000
Emergency Tel:1800 039 008 or +613 9573 3112
Emergency Tel:+800 24 36 22 55
Fax: 61 8 9445 4040

Company: AMC
Address.
5 Pitano Court
Osborne Park
WA 6017
Australia
Telephone: +61 8 9445 4000
Emergency Tel:1800 039 008 or +61 3 9573 3112
Emergency Tel:+800 24 36 22 55
Fax: +61 8 9445 4040

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE
NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.

CHEMWATCH HAZARD RATINGS



RISK
•None under normal operating conditions.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
carrier fluid		10-<30
anionic water soluble polymer		10-<30
activators, emulsifiers and neutralisers		<1
water		balance

continued...

Section 4 - FIRST AID MEASURES

SWALLOWED
- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness, i.e. becoming unconscious.

EYE
- If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN
- If skin or hair contact occurs:
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED
- If fumes, aerosols or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN
Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

FIRE FIGHTING
- Use water delivered as a fine spray to control fire and cool adjacent area.
- Do not approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.

FIRE/EXPLOSION HAZARD
- Non combustible.
- Not considered a significant fire risk, however containers may burn.

FIRE INCOMPATIBILITY
- None known.

HAZCHEM
None

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
Slippery when spilt.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.

continued...

MAJOR SPILLS
- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact with the substance, by using protective equipment.
- Prevent spillage from entering drains, sewers or water courses.

Very slippery when spilled. Do not use water initially, apply absorbent material such as sand, earth, sawdust or vermiculite then shovel into suitable container for removal. Then use large amounts of water to remove traces of the material.
[AMC]

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING
- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.

SUITABLE CONTAINER
- Polyethylene or polypropylene container.
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

25 kg plastic pail or 20 kg boxes.

STORAGE INCOMPATIBILITY
Avoid contamination of water, foodstuffs, feed or seed.

STORAGE REQUIREMENTS
- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

MATERIAL DATA
AMC LIQUI-POL:
Not available

PERSONAL PROTECTION

EYE
- Safety glasses with side shields
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed

continued...

hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

HANDS/FEET
■ Wear general protective gloves, eg. light weight rubber gloves.

OTHER
■ No special equipment needed when handling small quantities.
OTHERWISE:
• Overalls.
• Barrier cream.
• Eyewash unit.

ENGINEERING CONTROLS
■ Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
The basic types of engineering controls are:
Process controls which involve changing the way a job activity or process is done to reduce the risk.
Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE
Translucent to white viscous liquid with a slight odour; dispersible in water.

PHYSICAL PROPERTIES
Liquid.

State	Liquid	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	Not Available
Boiling Range (°C)	~105	Solubility in water (g/L)	Partly Miscible
Flash Point (°C)	Not Available	pH (1% solution)	Not Available
Decomposition Temp (°C)	Not Available	pH (as supplied)	7.0- 8.0 [5g/L]
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	Not Available
Upper Explosive Limit (%)	Not Available	Specific Gravity (water=1)	1.10
Lower Explosive Limit (%)	Not Available	Relative Vapour Density (air=1)	Not Available
Volatile Component (%vol)	Not Applicable	Evaporation Rate	Not Available

Section 10 - STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY
• Presence of incompatible materials.
• Product is considered stable.
• Hazardous polymerisation will not occur.
For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED
■ The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (eg. liver, kidney) damage is evident. Present definitions of harmful or

continued...

toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

EYE
■ Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

SKIN
■ The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

INHALED
■ The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

CHRONIC HEALTH EFFECTS
■ Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

TOXICITY AND IRRITATION
No data for the material.

Section 12 - ECOLOGICAL INFORMATION

No data
May be harmful to fauna if not disposed of according to Section 13 and legislative requirements. [AMC]

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
AMC Liqui- Pol	No Data Available	No Data Available		

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Bury residue in an authorised landfill.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM:
None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

continued...

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE
None

REGULATIONS

No data for AMC Liqui-Pol (CW: 60815)

Section 16 - OTHER INFORMATION

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

Issue Date: 19-Feb-2010
Print Date: 24-Aug-2012

This is the end of the MSDS.

AMC Aus-Floc L

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
AMC Aus-Floc L

PRODUCT USE
Solids/liquids seperation aid.

SUPPLIER

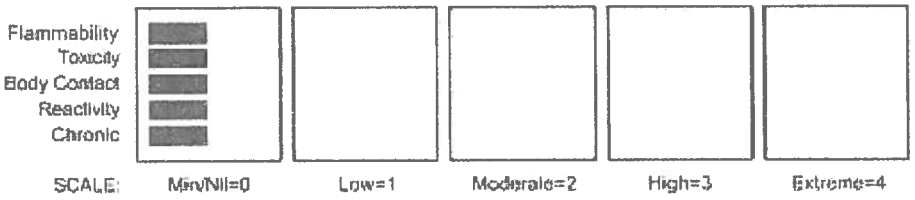
Company: AMC
Address:
5 Piteo Court
Osborne Park
WA, 6017
Australia
Telephone: +61 8 9445 4000
Emergency Tel:+61 400 966 951
Fax: +61 8 9445 4040

Company: AMC
Address:
PO Box 1141
Osborne Park
WA, 6916
Australia
Telephone: +61 8 9445 4000
Emergency Tel:+61 400 966 951
Fax: +61 8 9445 4040

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE
NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.

CHEMWATCH HAZARD RATINGS



RISK
•None under normal operating conditions.

SAFETY
•None under normal operating conditions.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
anionic acrylic copolymer		100

Section 4 - FIRST AID MEASURES

SWALLOWED
• If swallowed do NOT induce vomiting.
• If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

continued...

• Observe the patient carefully.
• Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

EYE
■ If this product comes in contact with the eyes:
• Wash out immediately with fresh running water.
• Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
• Seek medical attention without delay; if pain persists or recurs seek medical attention.
• Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN
■ If skin or hair contact occurs:
• Flush skin and hair with running water (and soap if available).
• Seek medical attention in event of irritation.

INHALED
• If fumes or combustion products are inhaled remove from contaminated area.
• Other measures are usually unnecessary.

NOTES TO PHYSICIAN
■ Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
• There is no restriction on the type of extinguisher which may be used.
• Use extinguishing media suitable for surrounding area.

FIRE FIGHTING
• Use water delivered as a fine spray to control fire and cool adjacent area.
• Do not approach containers suspected to be hot.
• Cool fire exposed containers with water spray from a protected location.
• If safe to do so, remove containers from path of fire.

FIRE/EXPLOSION HAZARD
• Non combustible.
• Not considered a significant fire risk, however containers may burn.

FIRE INCOMPATIBILITY
■ None known.

HAZCHEM
None

PERSONAL PROTECTION
Glasses:
Chemical goggles.

Gloves:
When handling larger quantities:

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
• Clean up all spills immediately.
• Avoid breathing vapours and contact with skin and eyes.
• Control personal contact by using protective equipment.
• Contain and absorb spill with sand, earth, inert material or vermiculite.

MAJOR SPILLS
• Clear area of personnel and move upwind.
• Alert Fire Brigade and tell them location and nature of hazard.
• Control personal contact by using protective equipment.
• Prevent spillage from entering drains, sewers or water courses.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

continued...

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING
- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.

SUITABLE CONTAINER
- Polyethylene or polypropylene container.
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

25 litre plastic cubes.

STORAGE INCOMPATIBILITY
- Avoid contamination of water, foodstuffs, feed or seed.

STORAGE REQUIREMENTS
- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

PERSONAL PROTECTION

EYE
- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59]

HANDS/FEET
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity.

Wear general protective gloves, eg. light weight rubber gloves.

OTHER
- No special equipment needed when handling small quantities.

OTHERWISE:
- Overalls.
- Barrier cream.
- Eyewash unit.

ENGINEERING CONTROLS
- General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator.

continued...

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE
Translucent to white viscous liquid with a slight acrylic odour; mixes with water.

PHYSICAL PROPERTIES
Liquid.
Mixes with water.

State	Liquid	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	Not Available
Boiling Range (°C)	~105	Solubility in water (g/L)	Miscible
Flash Point (°C)	Not Applicable	pH (1% solution)	~6.0
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not Available
Autoignition Temp (°C)	Not Applicable	Vapour Pressure (kPa)	Not Available
Upper Explosive Limit (%)	Not Applicable	Specific Gravity (water=1)	1.12
Lower Explosive Limit (%)	Not Applicable	Relative Vapour Density (air=1)	Not Available
Volatile Component (%vol)	Not Available	Evaporation Rate	Not Available

Section 10 - STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY
- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS
ACUTE HEALTH EFFECTS
- Generally not applicable.

CHRONIC HEALTH EFFECTS
- Generally not applicable.

TOXICITY AND IRRITATION
AMC AUS-FLOC L:
■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

TOXICITY
Oral (Rat) LD50: >2000 mg/kg

IRRITATION

Section 12 - ECOLOGICAL INFORMATION

No data
May be harmful to fauna if not disposed of according to Section 13 and legislative requirements. [AMC]

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or incineration in a licenced apparatus (after admixture with suitable combustible material).

continued...

- Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM:
None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE None

REGULATIONS

No data for AMC Aus-Floc L (CW: 6089-08)

Section 16 - OTHER INFORMATION

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

Issue Date: 22-Jan-2010
Print Date: 9-Feb-2011

This is the end of the MSDS.