

APPENDIX 11

HAZARDOUS WASTE AND SAFETY PLANS

11A – Emergency Preparation and Response Plan

11B – Hazardous Waste Management Plan

11C – Traffic Management Plan

11D – Evacuation Procedures/Emergency Warning System

11E – Fuel Management and Spill Response Plan

Appendix 11A – Emergency Preparation and Response Plan

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Introduction:

This plan is being prepared for the Yellowjacket Gold Project located near Atlin, BC. The Yellowjacket Gold Project is a small mining operation involving approximately 10 – 12 workers on site per shift. There will be a small open pit mining operation as well as milling operation on site. Staff will consist of both independent contractors as well as seasonal full time employees. All employees and independent contractors will be required to have on site safety training and emergency response training prior to commencing work.

Purpose of the Plan:

The purpose of this plan is to try and foresee any incidents or accidents that could take place on the mine site and have emergency response policies and procedures in place. The goal of the emergency response plan is to assist mine staff and rescuers in responding to emergencies in a safe and timely manner. The first step will be a mine and milling site hazard evaluation. The priority is to minimize the possibility of having an incident while identifying the best ways to respond.

Major site hazards include:

- *Injuries caused by machinery associated with the milling operation*
- *Injuries caused by machinery associated with the mining operation*
- *Fire*
- *Fuel Spill*
- *Non-trauma medical emergency*

Inspection of the on site equipment is necessary to make sure there is proper signage and all guards are in place. This will be done as part of the preliminary milling equipment set up. After the equipment is assembled and inspected safe work policies can be created.

Emergency Management Team:

There will a designated Health and Safety officer on site and this person will be the Incident Commander in all emergency situations. This person will direct workers to safe areas and give instructions to emergency resources should there be a need.

In the event that outside emergency services need to be summoned it will be the duty of the incident commander to make the phone call or depending on the situation assign someone else with this responsibility.

Health and Safety Officer/Incident Commander Responsibilities

- **Asses the initial situation**
- **Summon medical or first aid if necessary**
- **Ensure there is no further danger or risk to employees**
- **Evacuate workers if a danger exists**
- **Coordinate spill response activities**

- Use available response equipment and personnel to contain or control the situation
- Ensure the health and safety of employees, contractors, and any other people who may be responding to the emergency
- Coordinate the post emergency review and incident investigation

There will be an Occupational First Aid Level 3 Attendant on site at all times and in the case of a medical emergency or injury this person will be summoned. The first aid attendant will be able to swiftly respond to all medical emergencies with the proper equipment. It will be the duty of the first aid attendant to decide if there is a need to transport the injured worker to a higher level of care.

Pre-Incident planning and training:

Mine staff will undergo emergency response training as part of their job orientation. Each employee will be trained in their expected role in various emergencies. Drills and emergency practices will take place on a bi-monthly basis. All visitors to the mine site will undergo a mine site orientation that will cover what they should do in an event of an emergency.

Response Structure:

The on duty Health and Safety Officer / Incident Commander should be immediately notified of any emergencies or incidents on the mine site. This will be the person responsible for coordinating a response to the incident. If there is a medical emergency or any other injury requiring First Aid, the First Aid Attendant should be immediately notified followed by the on duty Health and Safety Officer / Incident Commander.

Alerting and Warning:

All workers and vehicles will be equipped with radios that will be used to notify workers in the event of an emergency. Workers will be notified with the following information:

- *the nature of the emergency*
- *if there is a need to evacuate to the emergency assembly point*
- *if there are any hazards that they need to be aware of*

Assessment and Notification:

It will be the duty of the on duty Health and Safety Officer / Incident Commander to summon emergency services. If any other government agencies need to be notified as with large fuel spill again it will be the duty of the incident commander. If the mine manager is not on site it will also be the duty of the

Incident Commander to contact this person with the preliminary details of the incident.

Emergency Response Details:

Injury or Medical Emergency

- *Ensure there is no further danger to the injured person or bystanders*
- *Do not move the injured worker unless there is an immediate danger*
- *Call the First Aid Attendant on the radio with the following information*
 1. *The exact location of the injured worker and the best way to get to that location*
 2. *The nature and extent of injuries*
 3. *The number of people requiring medical attention*
 4. *If a danger exists to rescuers and responders*
 5. *If an ETV is required*
 6. *If there is a need for any other specialised equipment*

Fire

- *Ensure that no one is in immediate danger*
- *Notify the on duty Health and Safety Officer / Incident Commander*
- *Ensure all employees in the immediate area are made aware of the fire*
- *If it is a small fire and you are trained to do so fight it with a fire extinguisher*
- *If it is a large fire that cannot be contained move any combustible materials away from the fire (if it is safe to do so), evacuate the area, and proceed to the emergency assembly point*
- *It will be the responsibility of the incident commander to contact and coordinate emergency services if the need exists.*

Spill Response

(see appendix D4 for detailed spill response procedures)

Begin containment of the spill and contact the on duty Health and Safety Officer / Incident Commander with the following information:

- The location of the spill
- Nature, extent, and approximate volume of the spill
- If fuel loss is continuing or has been stopped
- If there have been any injuries or if there is a need for medical attention
- If there is a fire or the potential for a fire to start
- Any persons, property or installations that are immediately threatened
- The best way for responders to proceed to the spill site
- Any other information that will assist to quickly contain the spill and minimize environmental damage

Exercise Log

Fire drills and emergency drills will be practiced on a bi-monthly basis. Drills will be documented and reviewed by the health and safety committee to address any concerns raised during the practices. It will be the job of the health and safety committee to make and implement any changes that will improve the emergency preparedness within the mine site.

Date	Type of Exercise	Comments

Summary:

The Emergency Response Plan will evolve as the mine commences operations and specific hazards are identified. As the plan evolves more detailed response plans and policies will be put in place to minimize the danger and improve the overall health and safety of the mine and milling site.

Appendix 11B – Hazardous Waste Management Plan

All appropriate garbage will be taken to local landfill and disposed of there. Restricted materials such as used motor oil will be picked up and disposed of by a licensed carrier. There is one portable toilet on site and waste will be pumped out on a weekly basis and disposed of by a licensed company.

Material Safety Data Sheets will be made available for identified hazardous substances. As the milling facility is a gravity only circuit, the only hazardous wastes identified will be constrained to petroleum based products related to the operation of machinery. Hazardous wastes will be contained in appropriate labelled containers, and stored in dedicated, secure storage areas that have secondary containment. Secondary containment for hazardous waste and waste oils will be provided that meet current industry standards. Hazard signs indicating the nature of the stored material will be attached to storage facilities or containment structures.

Waste oil may be recycled or reused, and records of waste oil removal and recycling will be kept. Oil-water separators will be maintained regularly, and the sludge from the separators will be collected and disposed of in an appropriate manner off-site. Suitable emergency response equipment will be available at the storage site and employees will be trained in the handling of hazardous waste.

Appendix 11C – Traffic Management Plan

The on property entrance to the Yellowjacket mine will have a locked gate and only be accessible by authorized personnel. All visitors to the mine will be required to report to the first aid office, which will be located at the entrance gate. Traffic signs will be installed within the mine and traffic flow will be controlled with these signs. There will be limited traffic within the mine but all operators will be expected to follow the posted signage. Every mine vehicle will have a radio installed in it and vehicle operators will be able to communicate with each other and the main office via radio.

The intersection of the Yellowjacket Gold Project access road and the Surprise Lake Road will be marked in both directions with large easily visible signage indicating a different traffic pattern and the possibility of trucks turning. If required, any brush that may be obscuring the main turnoff will be removed to improve sightlines.

Appendix 11D – Evacuation Procedures

It will be the function of the on duty health and safety officer / incident commander to order a mine site evacuation should the need arise. Some of the conditions that might facilitate such an order could be a fire, unstable mine conditions, or a large chemical or fuel spill. All employees and visitors will be instructed on safe evacuation and emergency response procedures prior to entering the mine site or commencing work at the Yellowjacket Gold Project Site.

In the event of an emergency that requires the mine site be evacuated, workers will be notified via radio to proceed to the emergency assembly point. The emergency assembly point is the first aid building located at the mine entrance. Routes to the emergency assembly point will be well marked. If an evacuation order is given workers will be expected to quickly proceed to the emergency assembly point after ensuring their equipment is shut down and left in a safe manner.

As employees arrive at the emergency assembly point the incident commander will take a head count and ensure that all the mine employees are accounted for. It will be the duty of the incident commander to ensure that the proper authorities are notified if there is a need to respond to an on site emergency. The incident commander will be the person responsible for giving the all clear and no employees or visitors will be allowed to re-enter the worksite without the permission of the incident commander.

If there is an injured worker that requires evacuation from the mine site there will be an ETV on site. Mine operations will cease until the first aid attendant is back on site with the ETV.

There are air services and helicopter services in Atlin if there is a need to evacuate an injured worker to Whitehorse or other larger centre with more capable medical facilities.

Appendix 11E – Emergency Warning System

All employees and vehicles in the mine site will be equipped with radios. In the event of an emergency, employees will be notified via radio to evacuate the mine site and to proceed to the emergency assembly point. Workers and visitors will be instructed on safe mine evacuation procedures as part of their mine site orientation.

Appendix 11F – Fuel Management and Spill Response

Site Information

Low sulphur diesel fuel will be delivered by truck from Whitehorse and stored in an above ground double walled 20,000 litre storage tank located on site. The fuel site will have berms built around the fuel storage area and there will be a spill kit available to handle a major leak. Fuelling will take place in the designated area next to the fuel tank.

In the event of a major leak away from the fuelling site all vehicles will be equipped with spill containment equipment

In the event that fuel enters the waterway there will be spill management equipment down stream from the mine site where spilled materials can be collected and contained before they travel further down the waterway.

All spills must be reported immediately to the on duty Health and Safety Officer / Incident Commander.

Health and Safety Officer / Incident Commander Responsibilities

- Asses the initial situation
- Ensure there are no injured workers and everyone is out of the danger area
- Evacuate workers if a danger exists
- Coordinate spill response activities
- Use available response equipment and personnel to contain or control the situation
- Ensure the health and safety of employees, contractors, and any other people who may be responding to the emergency
- Report the spill to the necessary government agencies if needed
- Arrange video and photographic documentation of the spill
- Coordinate a post emergency review

Spill Response Plan:

1) Report to the on duty Health and Safety Officer / Incident Commander with as much of the following information as possible

- The location of the spill
- Nature, extent, and approximate volume of the spill
- If fuel loss is continuing or has been stopped
- If there have been any injuries or if there is a need for medical attention
- If there is a fire or the potential for a fire to start
- Any persons, property or installations that are immediately threatened
- The best way for responders to proceed to the spill site

- Any other information that will assist to quickly contain the spill and minimize environmental damage

2) Immediate Clean Up Methodology

- Remove any flame or spark from the area
- Stop operations if necessary
- Assess the size / volume of the spill and determine if it can be contained using the available equipment or if there is a need for further resources to help contain the spill
- Create berms to contain the spill
- Use absorbent pads to soak up remaining fuel
- Wear proper personal protection equipment (PPE) while working with fuels
- If water has entered the waterway initiate containment procedures

3) Report to Relevant Authorities if needed:

Fire Department
 Police
 BC Environmental Agency
 PRZ and EPL Management

The table below illustrates the size of spill that needs to be reported to the BC Environmental Agency

*Environmental Management Act
 Spill Reporting Regulation*

Item	Column 1 Substance spilled	Column 2 Specified amount
1	<i>Class 1, Explosives as defined in section 2.9 of the Federal Regulations</i>	<i>Any quantity that could pose a danger to public safety or 50 kg</i>
2	<i>Class 2.1, Flammable Gases, other than natural gas, as defined in section 2.14 (a) of the Federal Regulations</i>	<i>10 kg</i>

3	<i>Class 2.2 Non-Flammable and Non-Toxic Gases as defined in section 2.14 (b) of the Federal Regulations</i>	<i>10 kg</i>
4	<i>Class 2.3, Toxic Gases as defined in section 2.14 (c) of the Federal Regulations</i>	<i>5 kg</i>
5	<i>Class 3, Flammable Liquids as defined in section 2.18 of the Federal Regulations</i>	<i>100 L</i>
6	<i>Class 4, Flammable Solids as defined in section 2.20 of the Federal Regulations</i>	<i>25 kg</i>
7	<i>Class 5.1, Oxidizing Substances as defined in section 2.24 (a) of the Federal Regulations</i>	<i>50 kg or 50 L</i>
8	<i>Class 5.2, Organic Peroxides as defined in section 2.24 (b) of the Federal Regulations</i>	<i>1 kg or 1 L</i>
9	<i>Class 6.1, Toxic Substances as defined in section 2.27 (a) of the Federal Regulations</i>	<i>5 kg or 5 L</i>

10	<i>Class 6.2, Infectious Substances as defined in section 2.27 (b) of the Federal Regulations</i>	<i>1 kg or 1 L, or less if the waste poses a danger to public safety or the environment</i>
11	<i>Class 7, Radioactive Materials as defined in section 2.37 of the Federal Regulations</i>	<i>Any quantity that could pose a danger to public safety and an emission level greater than the emission level established in section 20 of the "Packaging and Transport of Nuclear Substances Regulations"</i>
12	<i>Class 8, Corrosives as defined in section 2.40 of the Federal Regulations</i>	<i>5 kg or 5 L</i>
13	<i>Class 9, Miscellaneous Products, Substances or Organisms as defined in section 2.43 of the Federal Regulations</i>	<i>25 kg or 25 L</i>
14	<i>waste containing dioxin as defined in section 1 of the Hazardous Waste Regulation</i>	<i>1 kg or 1 L, or less if the waste poses a danger to public safety or the environment</i>
15	<i>leachable toxic waste as defined in section 1 of the Hazardous Waste Regulation</i>	<i>25 kg or 25 L</i>
16	<i>waste containing polycyclic aromatic hydrocarbons as defined in section 1 of the hazardous</i>	<i>5 kg or 5 L</i>

	<i>Waste Regulation</i>	
17	<i>waste asbestos as defined in section 1 of the Hazardous Waste Regulation</i>	50 kg
18	<i>waste oil as defined in section 1 of the Hazardous Waste Regulation</i>	100 L
19	<i>waste containing a pest control product as defined in section 1 of the Hazardous Waste Regulation</i>	5 kg or 5 L
20	<i>PCB Wastes as defined in section 1 of the Hazardous Waste Regulation</i>	25 kg or 25 L
21	waste containing tetrachloroethylene as defined in section 1 of the Hazardous Waste Regulation	50 kg or 50 L
22	biomedical waste as defined in section 1 of the Hazardous Waste Regulation	1 kg or 1 L, or less if the waste poses a danger to public safety or the environment
23	A hazardous waste as defined in section 1 of the Hazardous Waste Regulation and not covered under items 1 – 22	25 kg or 25 L
24	A substance, not covered by items 1 to 23, that can	200 kg or 200 L

	cause pollution	
25	Natural gas	10 kg, if there is a breakage in a pipeline or fitting operated above 100 psi that results in a sudden and uncontrolled release of natural gas

4) Communications and Documentation

- Prepare an initial report and a written fact list concerning the spill
- Take video and still pictures of the spill area and subsequent clean up activities
- Do not talk to any member of the press
- Make your supervisor or management aware of the fuel spill

5) Handling and Disposal Protocols

- Disposal of absorbent materials and residuals of the clean up should be treated as chemical waste and disposed of accordingly

6) Post Incident Review and Investigation

- Investigate the cause of the spill
- Identify any problems in the spill response or actions
- Identify and environmental damage that may have occurred
- Determine if there needs to be any policy changes to prevent a recurrence
- Complete and incident report and submit to all the relevant authorities.

Response Actions to be taken if a fire has been detected:

- Notify neighbouring facilities and employees that may be affected
- Evacuate non-essential personnel form the scene of the incident
- Clear access to scene for emergency vehicles
- Contact the Health and Safety Officer / Incident Commander with the details so he can direct emergency vehicles to the scene
- Evacuate to the emergency assembly point so a head count can be taken
- Make sure that emergency exits are open and unobstructed at all times