



Chapter 14: Environmental Responsibility Plan

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Purpose

The purpose of this chapter is to provide an outline as to the commitment of Wapiti Gravel Suppliers to the protection of the environment.

Objectives

The objective is to provide a program that will ensure that management, in conjunction with active employee involvement, provides protection and consideration for the environment through:

- Having a management plan that complies with all applicable Federal, Provincial and Municipal/Local environment laws, regulations, permits, licenses, and agreements.
- Using Subcontractors that comply with all conditions of the permits necessary for the contract and use suitable equipment, facilities and precautions for the protection of the environment.
- Employee education and training.
- Formal and Informal worksite inspections, audits, and corrective measures.
- Annual review and revision if necessary of the Environmental Policy and all applicable procedures.

Special Terms

WHMIS..... WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM
GHS.....GLOBALLY HARMONIZED SYSTEM
MSDS MATERIAL DATA SAFETY SHEET
WGS..... WAPITI GRAVEL SUPPLIERS
OH&S OCCUPATIONAL HEALTH AND SAFETY
EMS ENVIRONMENTS MANAGEMENT SYSTEM
ENVIRONMENT..... LAND, WATER, AIR, PLANT, ANIMAL, AQUATIC AND HUMAN SPECIES

14.1 Environmental Management System

Overview

An Environmental Management System (EMS) refers to managing an organization's environmental program in a systematic, planned, and documented manner. It includes organizational structure, planning, and resources for developing, implementing, and maintaining policy for employee and environmental protection.

The International Organization for Standardization (ISO), which is widely known as ISO, is an international body composed of representatives from various national standards organizations, representing over eighty percent of the countries in the world.

The ISO-14001 is the international specification for an environmental management system. It is the only ISO environmental standard which is currently possible to be certified for externally.

The Wapiti Gravel Suppliers EMS is based upon the design of this international standard. As such, it contains the following components, with a brief explanation of their intent:

- Policy Statement
- Aspect List (list of potential environmental concerns, including matrix for determining action)
- Legal Requirements (highlights key components of regulations applying to our industry)
- Objectives/Targets (ties in with aspect list, where objectives and targets are set)
- Personnel & Responsibilities (identify levels of personnel and their responsibilities in the EMS)
- Training & Awareness Plan (identifies all personnel's responsibilities to training and awareness)

- Internal Communication (addresses lines and types of communication within the company/corporation)
- External Communication (addresses communication to sources outside the company)
- Document List/Control Plan (identifies required documentation, reviewing, and storage)
- Operational Control (offers more detailed approach to action needed for objectives and targets)
- Emergency Preparedness/Response (makes a statement regarding emergency preparedness and response)
- Monitoring/Measurement (addresses methods and timetable for monitoring/measuring noncompliant events and company objectives, including yearly audit)
- Evaluation of Compliance (describes roles, responsibilities, and methods of evaluating compliance)
- Nonconformity Corrective & Preventive Action (describes the process and responsibilities for addressing identified nonconformities within the EMS, including flowchart of corrective steps)
- Record Control Plan (lays out plan for record types, retention, storage, and access)
- Internal Audit Plan (lays out plan for yearly audit, including process, timetable, review items)
- Management Review (a commitment to a timely management review of audit.)

Wapiti Gravel Suppliers has a Company Environmental Team, made up of the President/General Manager, the Health Safety and Environment Manager and representatives from other areas of the company. Some of the responsibilities of this team are to review incidents, set and review goals and targets, and review audits. The HSE Manager is also the communication link to the Corporate Environmental Advisor.

The complete EMS manual is kept with the HSE Department, and is available for review upon request. Because of its large content size, and recognizing that the majority of its contents are directed towards company and corporate management, this manual is not issued or duplicated in its entirety.

The rest of this chapter is dedicated to condensed information from the EMS, including policies, protection plan, spill contingencies, and environmental best practices to assist all personnel in protecting the environment in their daily duties within Wapiti Gravel Suppliers.

14.2 Environmental Protection Policy

Wapiti Gravel Suppliers

Wapiti Gravel Suppliers recognizes the link between environmental protection and our long-term economic success. With this knowledge in mind, we will be a responsible steward of resources and make a commitment to continuously improve our environmental effectiveness and performance.

In delivering on this commitment Wapiti Gravel Suppliers will:

- Comply with applicable environmental laws and regulations.
- Commit to the use of processes, practices, techniques, materials, products, services or energy to avoid, reduce or control pollution.
- Regularly evaluate our activities and measure our environmental performance against established goals through an environmental audit program and management review.

Bill Turner –President / General Manager

December 1, 2010

14.3 Environmental Protection Plan

General

To aid employee understanding and to monitor and enforce the policies detailed within this plan, WGS will institute the following:

1. Annual training of employees:
 - (a) WHMIS/GHS Introduction
 - (b) Detailed WHMIS for specific products used by specific work units
 - (c) Spill Contingency Plan Training
 - (d) Overview of WGS Environmental Policies
 - (e) The proper handling, storage, and disposal of wastes
 - This will include but not be limited to:
 - o General instruction through direct communication and/or safety meetings on disposal of non-hazardous wastes, trash, or scrap materials.
 - o If wastes generated are classified as hazardous, employees will be trained to ensure proper disposal.

Training will be coordinated and recorded by the HSE Department

2. The Foreman will be responsible for the everyday monitoring of employee performance against WGS's policies.
3. The Manager, HSE Manager, Superintendents, and Foremen will conduct daily informal inspections and random documented formal inspections to monitor employee and subcontractor performance against environmental policies.
4. WGS will incorporate environmental inspections into its monthly safety inspections and review environmental issues at monthly safety meetings.

5. The Manager in conjunction with the Foreman/Superintendent will provide all subcontractors with a copy of pertinent environmental policies and monitor their performance against company policies.
6. Provide each supervisor, work unit and vehicle with a spill response plan and appropriate materials for each product that they might encounter in conducting their job.
7. The HSE Manger will be responsible for the coordination and monitoring of the transportation, handling and disposal of hazardous or waste materials.
8. Provide a Dangerous Goods list to all employees
9. Provide access to a complete set of Material Safety Data sheets at the office/shop and each location.

These 9 points will be discussed in further detail within the following policies.

Training

The purpose is to recognize and commit WGS to effective environmental safety training. This training policy will assist employee environmental awareness and upgrade employee skills in preventing and responding to environmental accidents.

Scope:

All employees will be given an introductory course in WHMIS/GHS and then each individual work unit will be given WHMIS/GHS training by their supervisor, in conjunction with the HSE Department, for specific products which are used within a work site. This final training will take place on the job site.

In conjunction with WHMIS/GHS, all employees will be given training under our "Spill Contingency Plan" where needed. This will include training in possible spill sites, spill prevention (materials available for use), spill containment, spill cleanup procedures, proper waste disposal, and communication procedures.

Each work unit as needed will be given training regarding "Environment Work Practices" pertinent to their work responsibilities.

Training will be conducted annually to update employees on new environmental considerations. All new employees will be given the above mentioned training at the start of their employment.

Environmental considerations and updates will be incorporated into monthly safety meetings so that total company awareness and knowledge is increased continuously.

It is the responsibility of the HSE Department to coordinate the above mentioned training, in conjunction with appropriate supervisors or foremen, to all employees.

The HSE Department will document all training.

Environmental – Equipment Maintenance

The purpose is to maintain all tools and equipment in a condition that will maximize the safety of all personnel, and minimize damage to property and to the environment.

A Preventative Maintenance Program shall be maintained and shall include the following components:

- Adherence to applicable regulations, industry standards, manufacturer's specifications, elapsed time, operating hours, and kilometers travelled, and requests.
- Services of appropriately qualified maintenance personnel; and
- Scheduling and documentation of all maintenance work.

The supervisor shall be responsible for the application of the program in his/her area of responsibility. All employees shall regularly check tools and equipment that they are working with, and shall ensure the "lock out/tag out" procedure is utilized to place defective tools and/or equipment out of service that pose a hazard due to a need of repair or replacement.

The safety information in this policy does not take precedence over O.H. & S. Regulations. All employees should be familiar with the O.H. & S. Act, Regulations and Code and the specifications of the manufacturer.

Inspections

The purpose is to control losses of human and material resources by identifying and correcting environmentally unsound conditions.

Wapiti Gravel Suppliers will maintain a comprehensive program of environmental inspections at all facilities and job sites.

The Division Manager and President are responsible for the overall operation of the program.

Project Managers, Superintendents, and Foremen are responsible for conducting documented formal inspections and informal inspections of areas and job sites where their crews are working or may be working that they have control over.

These inspections must involve new and experienced workers. It must be clearly communicated to the worker that they are being involved in a formal documented or informal inspection.

Workers are responsible for their whole hearted participation in and contributions to the inspection program.

The results of these inspections must be clearly communicated to all affected workers on the jobsite either directly or through a safety/tailgate meeting. A copy must also be posted on the jobsite until the completion of the job.

Dangerous Goods List

Acetylene

Diesel Fuel

Propane cylinders

Oxygen

Spill Contingencies

Organization and Responsibilities

Each individual within each work division shall be responsible for chemical and oil spill prevention. The HSE Manager and the Area Supervisor will coordinate, organize and supervise the oil and chemical abatement program as directed by the appropriate government agency(s). The Project Managers along with the Project Supervisors will be responsible for:

- Establishing oil and chemical spill control measures such as valves, piping, dykes, berms, etc. and maintaining these in good conditions.

The HSE Manager will be responsible for:

1. Coordinating personnel training in oil and chemical spill containment and cleanup techniques.
2. Document all training of employees.
3. Record all spills for company and government records.
4. Keep abreast with the new developments in oil and chemical spill abatement and waste oil and chemical disposal.
5. Be the coordinator for the company and outside government agencies in the event of a spill.

Public Relations

All spills will be reported to the General Manager/ President. The President or his designate will relate the information to the press.

The HSE Department is responsible for collecting all factual information including samples.

Action Plan

In the event of a spill it is difficult to apply any hard and fast rigid rules to resolve the problem. However, there are three basic steps which must be applied:

1. Recognize the problem such as type of spill, source and quantity.
2. Do what you can to stop the spill or leak.
3. Report the spill to the supervisors and project manager as per the communication flow chart as well as to the HSE Department.
4. The HSE Department will assist in determining if the spill is reportable to any regulatory agencies.

Oil and Fuel Spill Prevention

Spill prevention is by far the most important part of a contingency plan. A good prevention program pays good dividends in the end.

Oil and Fuel Storage

Storage of waste oil and other "Special Waste" shall be in accordance with the Waste Control Regulation, pursuant to the Environment Protection & Enhancement Act. Storage of fuel and other flammable materials shall be in accordance with the standards in the Alberta Fire Code.

1. Where drains are located in or near an oil storage area, they must be isolated by an oil interceptor with a capacity equal to 10% in excess of maximum estimated potential oil spill.
2. All tanks are to be built on land and not over water.
3. Storage areas shall be regularly inspected and fuel containers monitored for unexplained losses.
4. Disposable cans and drums may be used as collection containers if they are stored in a **dyked area**. The use of open pails is unacceptable.
5. Oil storage bulk must be above ground and must have a dyke and shut off valve next to the tank and inside the dyke. Fuel tanks shall be installed underground only if they are for light fuel and in the vicinity of combustible materials. Insurance underwriters will have the final say in deciding the construction and location of the tank.

6. **Dyked** areas are not to be used for storage. They must be kept free for any escaped oil accumulation. The drain valve installed at the bottom of a dyke must not be left open. It is designed to drain accumulated rain water.
7. When servicing machinery, all precautions must be taken to ensure that no oil or grease is spilled or buried. Waste oil is collected and stored in a used oil tank. The level of this tank must be closely monitored to prevent it from overflowing.

Preventative Maintenance of Oil System

Refueling and hydraulic hoses must be replaced when damaged or chafed.

Fuel Dispensing

1. Fueling or servicing of any mobile construction equipment or vehicle within 50 m. of a water course shall be prohibited unless site-specific conditions allow for complete containment of fuel losses.
2. Trucks and other machinery shall be fueled in an area of significant clay fill or on a concrete surface.
3. Fuel dispensing shall be in compliance with the Alberta Fire Code.

Spill Response Plan

Each vehicle and work unit will be provided with a Spill Response Plan for each individual product they might encounter in conducting their job. Each response plan will provide an easy-to-follow set of instruction to use in the event of a spill. This will include potential health and environmental hazards, personal protective equipment, first-aid, emergency contact list, and procedures for immediate containment.

Spill Investigation

All significant oil and chemical spills have to be reported to government agencies and all spills shall be investigated. The Manager and Superintendent, in the

presence of the HSE Department and the person or persons involved in that spill, shall meet and establish what has happened and how it will be prevented from occurring in the future.

Potential Private Carrier Spills

Because of the large variety of potential private carrier spills WGS employees may come across, emphasis is placed on proper reporting procedures. A “Dangerous Goods Spills on Highways” card is provided for every WGS vehicle. The card lists the proper reporting procedures.

The reporting employee shall also contact his Foreman. The Foreman will use the appropriate “Guide” listed in his “Initial Emergency Response Book” to inform his crew of the inherent dangers of the product spill.

Until the police and response vehicles arrive at the site, WGS employees will provide traffic control around the site. Depending upon the hazard, they may even set up and sign appropriate detour routes.

Upon request of the response team, WGS employees may be involved in providing equipment and materials for spill containment (dyking) purposes.

It is important to note that WGS employees are not trained in the actual cleanup of the spill. Through contact with the Coordination and Information Center 1-800-272-9600 the appropriate agency will be contacted to respond. These agencies have the trained men and equipment to respond to dangerous goods occurrences.

Concrete and Cement

1. ASSESS THE SITUATION (SAFETY IS #1)

Potential Health Hazards

- Powder cause eye irritation
- Ingestion could cause irritation of the throat
- Inhalation of powder may affect lungs and respiratory tract

Potential Environmental Hazards

- May pollute waterways
- Harmful to aquatic life
- What are the volume, location and circumstances of the spill?

Personal Protective Equipment

- Wear gloves and boots impervious to moisture
- Wear safety goggles in dusty or misty conditions

First Aid

- Remove to fresh air if inhaled
- Wash eyes with plenty of water
- Wash exposed body areas with soap and water
- DO NOT induce vomiting if ingested

2. CONTAIN AND ABSORB

- Dike spill with earth, sand, aggregate, etc. and prevent the spill from entering sewers, watercourse, low areas or water systems.
- Shovel up spilled material

** Consult with appropriate government agencies for further advice on cleanup and disposal of concrete and contaminated soil.**

Solvents

1. ASSESS THE SITUATION (SAFETY IS #1)

Potential Health Hazards

- Prolonged or repeated contact leads to irritation and dermatitis.
- Eye contact may cause slight irritation.
- High concentrations of vapor or mist may irritate the respiratory tract and affect the central nervous system.
- Aspiration into the lungs during ingestion or vomiting may cause mild to severe preliminary injury or death.

Potential Environmental Hazards

- May pollute waterways
- Toxic gases will form upon combustion
- Harmful to aquatic life and water systems
- What are the volume, location and circumstances of the spill?

Personal Protective Equipment

- Use of nitric or neoprene gloves to prevent contact with skin.
- Where there is likelihood of spillage or splashing, wear chemical goggles or face shields.
- Wear solvent resistant boots

First Aid

- For direct contact, flush eyes and skin with plenty of water
- DO NOT induce vomiting if swallowed.
- If inhaled, remove to fresh air immediately.

2. CONTAIN AND ABSORB

- Eliminate source of ignition if it is safe to do so.
- Prevent additional discharge of material, if possible, without hazard.
- Dike spill with earth, sand, aggregate, etc. and prevent the spill from entering sewers, watercourse or low areas.
- Absorb onto sand or suitable absorbent materials.
- Shovel into closable container.
- Protect the spill area from rainfall (i.e. tarp the spill area), until the contaminated area can be neutralized.

** Consult with appropriate government agencies for further advice on cleanup and disposal of solvents and contaminated soil.**

Herbicides

1. ASSESS THE SITUATION (SAFETY IS #1)

Potential Health Hazards

- Contact may cause severe burns.
- Vapor or dust may be irritation or poisonous.
- Fire may produce irritation, poisonous and/or corrosive gases.

Potential Environmental Hazards

- Poisonous
- May pollute waterways
- Harmful to aquatic life
- What are the volume, location and circumstances of the spill?

Personal Protective Equipment

- Use suitable chemical resistant rubber gloves and boots

First Aid

- If irritated, remove to fresh air.
- Remove contaminated clothing and shoes.
- Immediately flush skin or eyes with running water for at least 15 minutes, in case of contact with material.

2. CONTAIN AND ABSORB

- Eliminate all ignition sources if it is safe to do so.
- Prevent additional discharge of material, if possible, without hazard.
- Dike spill with earth, sand, aggregate, etc. and prevent the spill from entering sewers, watercourse or low areas.
- Use suitable non-flammable absorbants.
- Protect the spill area from rainfall (i.e. tarp the spill area), until the contaminated area can be neutralized.

** Consult with appropriate government agencies for further advice on cleanup and disposal of herbicides and contaminated soil.**

Yellow and White Traffic Paint

1. ASSESS THE SITUATION (SAFETY IS #1)

Potential Health Hazards

- Prolonged inhalation affects nose, throat, lungs and the respiratory system.
- Liquid vapors or mist are irritating to eyes and may cause damage.
- Prolonged exposure can also cause damage to the central nervous system.

Potential Environmental Hazards

- Extremely flammable material
- May pollute waterways

- Harmful to aquatic life and water systems
- What are the volume, location and circumstances of the spill?

Personal Protective Equipment

- Use suitable chemical resistant rubber gloves.

First Aid

- If skin contact is made, wash with soap and water.
- Remove to fresh air if inhaled.
- If swallowed DO NOT induce vomiting.

2. CONTAIN AND ABSORB

- Stop or reduce leak if safe to do so.
- Dike spill with earth, sand, aggregate, etc. and prevent these products from entering sewers or water systems.
- Soak up with non-flammable absorbent materials.
- Protect the spill from rainfall (i.e. tarp the spill area), until the contaminated area can be neutralized.

** Consult with appropriate government agencies for further advice on cleanup and disposal of contaminated soil and product.**

Hot & Cold Mix Asphaltic Concrete

1. ASSESS THE SITUATION (SAFETY IS #1)

Potential Health Hazards

- Contact may cause skin and eye irritation
- Hot mix contact may cause severe burns

Potential Environmental Hazards

- May pollute waterways
- Harmful to aquatic life
- What are the volume, location and circumstances of the spill?

Personal Protective Equipment

- Chemical resistant gloves and clothing if direct contact is likely to occur.
- Chemical resistant work boots.

First Aid

- Remove to fresh air if inhaled.
- If ingested, consult physician.
- Flush with water if eye or skin contact occurs.

2. CONTAIN AND ABSORB

- Dike spill with earth, sand, aggregate, etc. and prevent the spill from entering sewers, watercourse or low areas.
- Shovel up any spilled material.
- Protect the spill area from rainfall (i.e. tarp the spill area), until the contaminated area can be neutralized

** Consult with appropriate government agencies for further advice on cleanup and disposal of hot & cold mix and contaminated soil and product.**

14.4 Environmental Work Practices

Excavation & Disposal of Excavated Materials

Safe environmental procedures are established for excavation and disposal of excavated material.

Procedures

1. Excavation

All waste that may be generated during the work to be completed will be estimated prior to the commencement of activities. This is done in order to ensure the appropriate containers and need for waste removal, if necessary, can be determined as similar wastes and scrap materials are generated for every project.

The onsite Supervisor, Superintendent, and Division Manager will be responsible for managing waste generated on the worksite. WGS will ensure that project related wastes are stored and maintained in an organized fashion to encourage proper disposal and minimize risks to employees.

- E.g. Proper waste receptacles must be provided for trash materials that may be reused or recycled during a project as waste should be recycled whenever practical.

WGS encourages proper segregation of waste materials to ensure opportunities for reuse and recycling.

All excavated slopes shall be left in a stable condition.

Any aquatic plants uprooted or cut during excavation shall be removed and disposed of on land in an approved disposal site. Such plants shall not be deposited in another body of water. If noxious weeds are known to be present in the area, equipment shall be thoroughly washed and inspected before it proceeds from one area to the next.

Where terrain instability is encountered during trenching, drainage shall be provided to ensure stability of trench and side slopes.

2. Disposal of Excavated Materials

WGS will coordinate with the project site or owner to ensure the proper disposal of wastes and scrap materials as well as whether wastes and scrap materials will be taken off site or will be disposed of onsite.

WGS has provided safe work procedures listed above and requires all gloves, and other PPE to be worn at all times while handling waste, scrap, or leftover materials.

Contamination of surface and ground waters as a result of the location or operation of the disposed materials shall be avoided.

Spoil sites shall be located a minimum of 20 m back from the high water mark on any stream.

Aggregate Processing, Gravel Pits and Borrow Sites

The purpose is to establish environmentally safe procedures for aggregate processing and gravel pit and borrow site operations.

Procedures

1. Permits

Alberta Environment Protection and Enhancement Act

Wapiti Gravel Suppliers or any Subcontractors shall obtain approval under the Alberta Environment Protection and Enhancement Act for gravel and borrow pits. Such approval is necessary for environmental protection and ongoing and eventual reclamation. Approval shall be obtained prior to the commencement of work on a quarry or pit.

(a) Aggregate Processing

Dust emissions from aggregate processing, including rock quarrying, rock crushing or gravel washing operations shall be in accordance with total particulates in air emissions set by the Alberta Environment Protection and Enhancement Act, Waste Management Branch, or if not specifically stated in a permit, in accordance with applicable standards for Pit and Quarrying Reclamation in Alberta user guide.

Effluent discharges from aggregate processing operations shall be in compliance with the Alberta Environment Protection and Enhancement Act.

(b) Gravel Pits and Borrow Sites

Gravel and borrow pits shall be excavated such that interference with ground water is minimized. Borrow processing activities shall be

situated away from fish-bearing streams and shall be operated in a manner which would avoid direct habitat disruption and minimize siltation effects.

The topsoil from borrow areas shall be stripped and stockpiled for later distribution on the disturbed area. The stockpiles shall be located on the uphill side of the excavated area so that they can act as surface runoff diversions.

Borrow sites shall be separated from lakes and streams by an adequate buffer zone.

Gravel pits, borrow and restoration of gravel pit sites shall be operated in accordance with the Alberta Environment Protection and Enhancement Act and Guide to Pit and Quarry Reclamation in Alberta.

Asphalt Paving Plants

The purpose is to establish and maintain environmentally safe procedures for asphalt paving plants.

Policy

- Permits
- Alberta Environmental Protection and Enhancement Act (which includes Code of Practice for Asphalt Plants)
- Waste Control Regulation

This permit shall be obtained by Subcontractor for air emissions from asphalt plants.

Particulate emissions from equipment used to manufacture asphalt paving shall be in compliance with the Alberta Environmental Protection and Enhancement Act.

Waste water shall not be discharged directly to water bodies unless specifically permitted by the appropriate government agencies.

The burner system will be assessed annually for efficiency. The overall plant and site will be subject to, at minimum, one formal environmental inspection.

Restoration of Disturbed Sites

The purpose is to establish environmentally safe procedures for the restoration of disturbed sites.

Procedures

All disturbed stream banks shall be restored to finished, stable slopes. Stream banks shall be stabilized in a manner appropriate to the soils encountered.

When use of borrow material is no longer necessary, such sites shall be regarded so that the disturbed area conforms to the local topography and is properly drained.

Burning

To establish environmentally safe procedures for burning

Procedures

Burning of construction refuse, including but not restricted to trees, branches, waste wood or construction materials, shall only be undertaken in accordance with the conditions and requirements of a burning permit where required and shall, in all cases comply with the requirement of the Alberta Forest & Alberta Environment Protection and Enhancement Act. We and our Subcontractors shall obtain all necessary permits from the Ministry of Forests and obtain clearance from the Alberta Environment Protection Branch prior to commencement of any burning operations.

No burn area shall be located within 200 m of any stream, river or lake, unless otherwise authorized.

Wapiti Gravel Suppliers employees shall be familiar with and shall comply with the firefighting responsibilities and obligations as set out in the above-noted regulation and the Alberta Forest Services.

Heritage Sites

The purpose is to establish procedures for the protection of Heritage Sites.

Procedures

During construction activities, if an artifact or feature of potential archaeological or historic significance is encountered, the discovery will not be disturbed. The discovery will be reported to the manager, who will immediately contact the Alberta Community Development. Work will be stopped in the area until a qualified archaeologist/historian is brought in to examine the find.

Wildlife

The purpose is to establish procedures for the use of firearms and the protection of wildlife.

Procedures

The use or possession of firearms by construction personnel on the construction sites or on associated facilities sites shall be prohibited except for avalanche uses. There shall be no harassment of wildlife in any manner. Feeding of wildlife shall be prohibited.

All waste products and food stuffs from camps or other project sites which may attract wildlife shall be stored in animal proof containers or containment areas and the waste products incinerated or hauled away to an approved landfill. Hazardous chemicals, fuels and other noxious or toxic substances shall be stored in covered containers and/or fenced areas, so that wildlife cannot gain access to them.

Noise Prevention

The purpose is to establish procedures to protect the environment from noise pollution.

Procedures

Internal combustion engines, generators, compressors and other such equipment shall be fitted with noise suppression equipment to reduce noise influence on adjacent environs and/or communities. Wapiti Gravel Suppliers shall maintain all noise suppression equipment so that it meets manufacturer's specifications.

Dust Suppression Plan

Dust control is used to minimize health and safety hazards caused by environmental and material conditions on site.

Procedures

Dust control material may be applied to selected locations or roadways within the construction site. Identify the section of the site to be treated. Blade and treat as required. The following products and application rates can be used to suppress dust:

- | | |
|-----------------------------|--------------------------------|
| 1. Flake Calcium Chloride | 0.75 Kg/m ² |
| 2. Liquid Calcium Chloride | 0.75 to 1.25 Kg/m ² |
| 3. Petroleum based products | suppliers recommended rate |
| 4. Water | as required |

If using Flake Calcium Chloride:

- Apply water liberally to the prepared surface.
- Apply flake product at required rate.
- Thoroughly mix the gravel/soil and flakes by windrowing and then spread over the roadway.
- Lightly re-water and compact with a rubber tired roller.

If using Liquid Chemical Products:

- Apply water liberally to the prepared surface.
- Apply liquid product at required rate.
- Compact with rubber-tired roller.

If using Petroleum Products:

- Lightly dampen the prepared surface in accordance with the supplier's recommendations.
- Apply and mix the dust control product in accordance with the supplier's recommended rate and procedure.

If using water:

- Apply water liberally to the prepared surface.
- Blade and re-water as required keeping the dust under control.

Erosion Sediment Control

Erosion sediment control is used to prevent environmental erosion problems during site development, by controlling and filtering silt laden run-off. Woven silt fence geotextiles provide an efficient system for controlling sediment run-off from construction sites. These fabrics contain overland flow and filter suspended soil particles from water, preventing environmental damage to areas adjacent to construction sites. The following products can be used to prevent sediment from entering streams, ponds, culverts or sewer systems.

1. Tenax silt Fence
2. Synthetic Industries Woven Silt Film
3. Armtec Prefabricated Silt Fence

When using a silt fence for sediment control, install as per manufacturer's recommended procedures and check periodically to ensure the fence is performing as intended.

Project Environmental Checklist

Name of Project : _____

Address /Location: _____ Dated: _____

Project Superintendent: _____

No.	Topic or Item	Yes	Or	No	N/A
1.	Has an on-site designate been selected?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
2.	Have the Environmental Acknowledgement forms (sub-checklist) been received from applicable subcontractor?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
3.	Has a list of the on-site environmental sensitive products/containments been developed?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
4.	Has a chemical substitution been completed which would provide less hazardous and more environmentally friendly products?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
5.	Is current health hazards information on products available?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
6.	Have the necessary environmental permits/licenses been arranged for?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
7.	Has a procedure for safe storage and handling of products been completed?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
8.	Have arrangements for an on-site spill containment kit been established?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
9.	Has a spill containment and response plan been developed?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
10.	Has a communication system been established with the on-site environmental designate and the loss prevention officer pursuant to notification of Alberta Environmental	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
11.	In the event of a spill, a retrieval, transportation and disposal of products been addressed?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
12.	Is emergency response equipment and personal protective equipment available on-site?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
13.	Have contact numbers for registered environmental consultants or labs for emission analysis or product sampling been established?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
14.	Is there a system in place to accommodate audits/inspections by Alberta Environmental?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

Name of Environmental Designate: _____

Please Print

Signature