



2023

Robert B. Somerville Co. Limited

Environmental Management Standards

PRESIDENT'S MESSAGE

Robert B. Somerville (Somerville) is committed to a strong Environmental Program that protects the natural environment, Employees, subcontractors, clients, property, and the public from accidents and or incidents.

We believe that through the development of sound policies, diligent inspections, use of leading-edge technologies and constant Employee training, our goal of zero incidents can be achieved.

The Environmental Management Standards (EMS) has been developed to ensure that the environment is the focus of management, Employees, and subcontractors in order to reduce the risk of incidents in all of our activities.

The policies and procedures detailed in this EMS are mandatory and apply to all Employees and subcontractors. They have been developed to ensure that all of Somerville's activities are conducted in a consistent manner, ensuring compliance with all federal and provincial Acts and Regulations.

Failure to comply with the policies of this EMS can result in immediate dismissal for Employees and termination of the contract for subcontractors.

Please read the EMS carefully and in its entirety as it forms the foundation of our Environmental Program.



Paul Mease
President,
Robert B. Somerville Co. Limited

January 3, 2023



Table of Contents

- 1.0 Scope 4
 - 1.1 Introduction..... 4
 - 1.2 How to Use This Document 4
 - 1.3 Terms and Definitions 5
- 2.0 Policy..... 6
 - 2.1 Environmental Policy..... 6
- 3.0 Plan 7
 - 3.1 Environmental Management Philosophy 7
 - 3.2 Environmental Protection Plan..... 7
 - 3.2.1 Archaeology and Heritage Management Plan 8
 - 3.2.2 Transportation of Dangerous Goods..... 8
 - 3.2.3 Noise Control Plans..... 8
 - 3.2.4 Dust and Air Quality Control Plan 8
 - 3.2.5 Erosion and Sediment Control 9
 - 3.2.6 Vegetation Removal Plans..... 10
 - 3.2.7 Site Re-Vegetation 10
 - 3.2.8 Waste Management Plans 10
 - 3.2.9 Soil, Slurry, and Water Management Plans 11
 - 3.2.10 Imported Soil and Backfill Management Plans 12
 - 3.2.11 Environmental Monitoring Plans 12
 - 3.2.12 Spills and Emergency Preparedness and Response Plan 12
 - 3.2.13 Designated Substances Plan 13
 - 3.2.14 Clean-up and Restoration Plan 13
- 4.0 Do..... 14
 - 4.1 Roles, Responsibilities, Accountability, Authority 14
 - 4.2 Environmental Training 14
 - 4.3 Working Near Environmentally Sensitive Areas 14
 - 4.3.1 Wetlands 14
 - 4.3.2 Wildlife, Plants, and Habitats 15
 - 4.3.3 Watercourses 15
 - 4.3.4 Vegetation 17
 - 4.3.5 Heritage resources..... 17
- 5.0 Check 18
 - 5.1 Environmental Inspection..... 18
 - 5.1.1 Part – Time Environmental Inspector..... 18

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	 SOMERVILLE
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

5.1.2 No Environmental Inspector 18

5.1.3 Documentation and Communication 18

6.0 Act 20

6.1 Management Review 20

6.2 Learning Organization 20

6.3 Environmental Alert 20

7.0 Appendix I - Federal, Provincial, and Territorial Ministries and Department Contacts 21

8.0 Appendix II – Federal Legislation 22

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

1.0 Scope

1.1 Introduction

The protection of the Environment is a key component at all levels of our organization beginning with management and leading to supervisors, Employees, and subcontractors. An effective EMS consists of clear and concise objectives that are understandable and attainable by all members of the organization. Involvement and personal commitment are critical for the success of the EMS. It is the responsibility of everyone to perform work in a manner that is as safe as possible, consistent with good construction practices and procedures.

The strategy of the Somerville EMS is to develop sound policies that are current with federal and provincial legislation, are complemented with safe work procedures and are continually monitored.

The EMS ensures “Due Diligence” through consistent application of all policies and procedures, ensuring Somerville achieves the following objectives:

- › Zero tolerance to risk
- › Zero environmental incidents
- › Zero regulatory orders

The management of Somerville is committed to ensuring that Employees are comfortable with the policies and procedures contained in this EMS. Training will be provided on an on-going basis and will be supplemented with training on federal and provincial Acts and Regulations, and job/task specific functions.

The Somerville EMS is developed by the Director HSEQ and the Executives. It is their responsibility to ensure that the EMS is kept current with all federal and provincial legislation. The EMS is readily available to all Employees and subcontractors at all project and office locations.

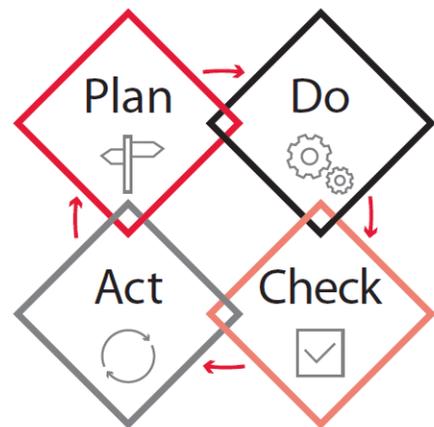
Project specific Environmental amendments to the EMS will be developed by the site Supervisor. Upon approval, project specific amendments will be incorporated by placing them in the “Project Specific Environmental Protection Plan”.

Proposed changes to the EMS must be forwarded to the Director HSEQ for review, approval, and incorporation into the EMS by the Executives.

1.2 How to Use This Document

Throughout the EMS, references are made to supporting Somerville documents. These documents contain mandatory requirements and are available on the Somerville BIS website. The Lessons learned report and safety moments will continue to be available on the BIS website.

Modifications to this document are made annually to ensure it is up to date. The EMS is a controlled document. While it may be printed, the electronic version posted online is the only controlled copy. If using a printed copy of the EMS, always check with the online source to ensure the version you are using is current. Similar to the HSE Standards Manual, the EMS follows the same Plan, Do, Check, Act process.



2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

1.3 Terms and Definitions

Employee	Regular, occasional, temporary, contractual, full, or part-time Employee working at all levels of Somerville
EMS	Environmental Management Standards
Environment	Surroundings in which sites operate, including air, water, land, natural resources, flora, fauna, humans, and their interrelationships
EPP	The Environmental Protection Plan is a project/site-specific guidance document to measure and achieve compliance with the Environmental protection and mitigation requirements of a project, including permits and approvals. The EPP will also include general and specific management strategies to avoid and mitigate Environmental Impacts during project works
Executives	Executive Committee – consisting of the President, the Divisional VP's and the Director HSEQ
HSEQ	Health, Safety, Environment, and Quality
PPE	Personal Protective Equipment
Project(s) / Operation(s)	A contracted (scope of work) endeavour which has a beginning and end, defined resources and is undertaken to create a unique product or service. Project(s)/Operation(s) are used interchangeable throughout the HSEMS and related documents
Shall	A process that must be performed
Should	A process that is strongly recommended
Site	An office, Project, and/or Operation
Somerville	Short form for Robert B. Somerville
SOP	Standard Operating Procedure
Subcontractor	Contractors' Contractor
VP	Vice President

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

2.0 Policy

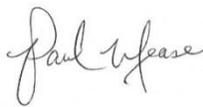
2.1 Environmental Policy

Somerville Co. Limited is committed to developing and operating our head office and sites in an environmentally responsible manner, in compliance with relevant environmental legislation, and within an overall framework which is environmentally, economically and socially sustainable. Our commitment is reflected in Somerville’s day to day operations to minimize impacts on the natural environment and local community.

Somerville, as employer, is committed to continual improvement and prevention of pollution. It is our policy to set environmental objectives and targets and implement action plans for significant environmental aspects identified at our head office and our sites. It is also our policy to monitor progress, utilize best management practices and apply cost effective technology to strive to improve performance. As president of Somerville, I am personally committed to ensuring that our company demonstrates these objectives on a consistent basis.

To successfully implement this policy, Somerville will utilize an EMS which meets the specifications of the ISO14000 international standards series, which includes

- › Utilizing environmental audits to ensure compliance with applicable laws, regulations, as well as policies, objectives, and targets
- › Conducting regular environmental monitoring aspects such as water quality, air quality, noise, site development, hazardous substances and spill incidents
- › Continually developing and promoting environmental standards applicable to day to day Somerville operations which impact the environment
- › Management will ensure all employees receive training on their specific work functions to ensure environmental competence
- › Communicating environmental policy, roles, responsibilities, objectives, and targets to Somerville staff
- › Workers are responsible for conducting their activities in a manner that ensures all company and legislative and environmental regulations and policies are followed on a daily basis



Paul Mease
 President,
 Somerville Co. Limited

January 3, 2023

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	 SOMERVILLE
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

3.0 Plan

3.1 Environmental Management Philosophy

It is the firm belief of Somerville that all its business be conducted in a manner that promotes safe, healthy, and environmentally friendly working conditions and attitudes. It is the responsibility of Somerville's management to establish, implement and maintain optimum operating standards to ensure physical, health and environmental damage hazards are eliminated or guarded against, and to develop work procedures that will meet or exceed all required Federal, Provincial, and Municipal regulatory requirements. Somerville is committed to reducing impact related to land, water and air pollution, chemical and oil spills, land conservation and management, and wildlife protection.

3.2 Environmental Protection Plan

An Environmental Protection Plan (EPP) outlines the environmental compliance requirements and responsibilities for Somerville and its subcontractors throughout the duration of projects. The EPP will be implemented on all projects and any site-specific plans will be incorporated into the project. Most EPPs will be provided by the Owner and will be adhered to throughout the duration of the project. In the event an EPP is not provided by the Owner, Somerville will develop a project specific EPP with focus on the following sections:

- › Archaeology and Heritage Management Plan
- › Transportation of Dangerous Goods
- › Noise Control Plan
- › Dust and Air Quality Control Plan
- › Erosion and Sediment Control Plans
- › Vegetation Removal Plan
- › Waste Management Plan
- › Soil, Slurry, and Water Management Plan
- › Imported Soil and Backfill Management Plan
- › Environmental Monitoring Plan
- › Spills and Emergency Preparedness and Response Plan
- › Clean-up and Restoration Plan

As part of the EPP process Somerville will identify the most-up-to-date Federal, Provincial, and Municipal Environmental Policies and Legislation. These policies and legislation will be referenced in the EPP. These plans will represent the minimum requirements for the projects. Additional Standard Operating Procedures (SOPs) may be developed for specific tasks.

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

3.2.1 Archaeology and Heritage Management Plan

The archaeological and heritage management plan will outline the procedure in the event artifacts, cultural remains, such as human burials or other archaeological or heritage resources are encountered during stages of construction. If suspected artifacts or human remains are encountered, Somerville will immediately:

- › Ensure that all construction operations in the immediate vicinity of the discovery are halted and are not continued until a licensed archaeologist has carried out further analysis
- › Contact the environmental site inspector, and
- › Ensure that the find area is temporarily excluded (e.g., by means of flagging tape, caution tape, snow fencing, etc.) from the remainder of the work area

3.2.2 Transportation of Dangerous Goods

Somerville will ensure that all dangerous goods (as defined in the Federal Transportation of Dangerous Goods Act and the attendant Regulations) are managed (handled, stored, transported, and shipped) in compliance with the legislation and best management practices. Transportation of dangerous goods training will be required for any Employee responsible for transportation of these types of materials.

3.2.3 Noise Control Plans

The noise control plan will outline specific noise compliance requirements for the work area. Somerville will reference local Noise By-Laws and Provincial legislation to ensure compliance. All internal combustion engines will be equipped with a functional muffler. In the event additional noise controls are required, Somerville will consult with a noise engineer to design site specific mitigation. Noise exemption permits may be applied for in jurisdictions that allow for such a permit to be filed.

3.2.4 Dust and Air Quality Control Plan

The dust and air quality control plan will detail the methods of managing and monitoring dust, auditing, and reporting on the effectiveness of the dust control measures. Dust may result from mobile and stationary diesel- and gas-powered equipment/vehicles, through the excavation and handling of soils or aggregates, during the movement of construction equipment/vehicles, and the cutting, sanding, and grinding associated with construction activities. The dust management and air quality plan will include site-specific controls; however, some general management practices include:

- › Use new or well-maintained heavy equipment and machinery that is fitted with fully functional emission control systems/exhaust systems, baffles, and engine covers
- › Regularly inspect and maintain all emission control devices on machinery to ensure that their air emissions are within manufacturer and legislative limits
- › Discourage on-site vehicle and equipment idling where practical
- › Control dust generation from construction activities, storage piles and exposed soils/surfaces with water sprays or similar dust suppression techniques in accordance with local legislation
- › Transport wet materials in suitable watertight haulage vehicles
- › Schedule and plan construction activities to minimize exposed soil areas at any given time. Monitor exposed soil areas for dust generation potential and restore them as soon as possible

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

- › Cover exposed fill/stockpiles that may be sources of fugitive dust with tarpaulins, soil binders or other appropriate means to avoid wind erosion, where practical
- › Schedule and plan cutting and grinding activities to limit dust and noise releases
- › Minimize vehicle traffic on exposed soils and enforce speed limits within the site and rights-of-way
- › Avoid site preparation, excavation, and construction activities during windy and prolonged dry periods, and
- › Not light fires or burn rubbish on site

The environmental inspector will be responsible for recording dust and air quality daily observations in the environmental inspection.

3.2.5 Erosion and Sediment Control

The Erosion and Sediment Control Plan (ESCP) will detail the methods of minimizing, managing, and monitoring soil erosion during construction and controlling the subsequent release of sediments into nearby watercourses. Soil erosion and sediment transport can be increased through any construction activities and movement of heavy machinery, particularly where the natural vegetative cover has been removed and/or the exposed soil left for long periods of time. Runoff on steep slopes can accelerate these problems. Where erosion and sedimentation pose problems, Somerville will:

- › Limit clearing and grubbing to areas required for access and construction activities
- › Keep the time that bare soils are exposed to a minimum through revegetation (sodding, mulching, hydroseeding), installation of erosion control mats or crushed stone, gabion baskets or rip rap, as directed by the client
- › Reduce runoff velocities by grading slopes, introduction of terraces, berms or cross-ditches, and
- › Leave a roughened ground surface in areas of gravel soils, side slopes and inclines to increase water retention

If soil enters a watercourse (either directly or through a storm sewer), the sediment can impair water quality and adversely affect aquatic habitat. Suspended sediment can directly impair the respiration of aquatic biota and can indirectly inhibit plant productivity and damage spawning areas. Deposited sediments can also reduce a watercourse’s capacity and thereby potentially increase its risk of flooding.

Watercourse discharges are subject to the following acts, which prohibit discharging or depositing material in any water (such as rivers, streams, or lakes), or on any bank that may degrade the quality of surface water:

- › The Federal Fisheries Act applies to all waters that provide fish habitat and prohibits the destruction of fish habitat and the release of deleterious substances into aquatic environments
- › Part 8 of the Canadian Environmental Protection Act (EPA) outlines the requirements for environmental emergency plans for unplanned or accidental releases of a substance into the environment, and
- › Any Provincial legislations or acts aim to protect and manage the quality and quantity of surface water and groundwater

The plan will identify control measures that will be implemented during construction of the to minimize erosion and prevent sediment release into storm sewers or nearby waterways (if applicable). Erosion and sediment control measures will be applied at any site or associated area (such as transportation routes) where causative activities or conditions may occur. The hierarchy for erosion and sediment control is to

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	 SOMERVILLE
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

first control erosion at its source and then provide controls against potential off- site migration of sediment. These measures will be in place before starting work to prevent erosion, rather than manage erosion after it has begun.

3.2.6 Vegetation Removal Plans

The vegetation removal plan will outline the project specific requirements that will be carried out in the event tree clearing is required. The plan will adhere to the Migratory Birds Convention Act, the Endangered Species Act, and any other relevant legislation. Somerville will obtain any necessary tree removal permits and will engage a qualified Biologist to conduct any nesting surveys if required. Somerville will only remove vegetation that is only necessary for project works. The vegetation removal plan represents the minimum requirements for projects. SOPs can provide additional information for vegetation removal during various construction scenarios.

3.2.7 Site Re-Vegetation

3.2.7.1 Planning

Use in-house and/or consultant expertise in soils and vegetation to assess problem area(s) and develop a plan to achieve successful revegetation of problem area(s); Ensure that site-specific environmental concerns (e.g., sensitive agricultural soils, native grasslands, endangered wildlife, watercourses, and wetlands) are identified, including potential damage that could be caused in accessing the site requiring revegetation; Prepare a list of vegetation types appropriate for the problem area. Identify areas where access restrictions are required.

3.2.7.2 Seed and Plant Sourcing

Seed and stock for grasses, shrubs, trees, or other plants should be obtained from local sources whenever practical; Use only certified seed for re-establishing vegetation and carry out seeding when the potential for seed germination is high. Use seed mixtures recommended by regulatory agency or requested by landowner.

3.2.7.3 Weed Management

Efforts should be made to ensure that non-native species are not introduced to the site through equipment transfer or seed/planting banks.

Noxious and restricted weed control should be incorporated into the plan and completed as required.

3.2.8 Waste Management Plans

Somerville is committed to incorporating sound environmental and waste management practices into its construction activities. A Waste Management Plan's may be developed based on Somerville's SOP so that waste will be disposed of in an environmentally sound manner and in accordance with all federal, provincial and owner requirements. Potential waste streams are categories; Air, Liquid, Solid and Hazardous. In order to ensure efficient waste management on sites, Somerville will:

- › Estimate the waste that will be generated prior to work being performed so that the need for containers and waste removal, if necessary, can be determined. If the same wastes or scrap materials are generated for every project, please state so in your plan
- › Coordinate with the project site or owner to ensure proper disposal of wastes or scrap materials, e.g., ensure the owner is aware of whether wastes and scrap materials will be taken off site by Somerville or will be disposed of on the owner's site

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

- › Assign person(s) accountable for disposition of wastes generated at the work site
- › Address safe practices related to the immediate storage and handling of waste, scrap, or leftover materials. If PPE or other precautions are necessary to handle waste, these should be identified in the plan
- › Ensure project related wastes are stored and maintained in an organized fashion to encourage proper disposal and minimize risks to Employee. For example, proper waste receptacles must be provided for trash and materials that may be reused or recycled during a project
- › Encourage proper segregation of waste materials to ensure opportunities for reuse or recycling

Project staff must be instructed on the proper handling, storage, and disposal of wastes. This may include general instruction on disposal of non-hazardous wastes, trash, or scrap materials. If wastes generated are classified as hazardous, Employees must be trained to ensure proper disposal.

The federal, provincial, and municipal acts and regulations in Canada are many and varied. Somerville will conduct all its construction activities to meet the minimum standards of all identified legislation concerning the handling and disposal of waste. In order to simplify all the applicable regulations, the most relevant have been listed in the following tables. Adherence to these regulations will be mandatory and form the Somerville Waste Management Plan.

The waste management plan for the projects will outline the waste management requirements for the project. Somerville will ensure the proper disposal of conventional wastes such as garbage and recycling from the site. Specifics of the plan may include:

- › A plan for testing, handling, storage, transportation, and disposal of waste (including solid or liquid hazardous waste) in accordance with all Federal, Provincial, and municipal legislation, as applicable
- › Provide the waste generator registration and manifesting requirements for transportation of hazardous wastes to the disposal sites
- › Coordinating the disposal of surplus contaminated soil or water
- › Use a qualified person (P. Eng.) to manage all testing and evaluation of results for disposal of contaminated soil or groundwater, and
- › Maintain records of the weigh bills/bill of landing/manifests and provide copies to the Owner upon request

3.2.9 Soil, Slurry, and Water Management Plans

Soil, slurry, and water management plans will outline the requirements for disposal or reuse throughout a project. The following measures will be in place for all soil testing to be completed as part of a project and for disposal of surplus soil:

- › Adequate testing and analysis will be completed prior to re-use and/or disposal
- › Adherence to Provincial Legislation and Best Management Practices for soil management will be implemented onsite (i.e., use of an impermeable liner and cover, sediment and erosion control measures, topsoil separation, etc.)
- › Records of soil management will be maintained and will be provided in monthly reporting, and
- › Where contaminated soil is expected or discovered, Somerville will engage a qualified person to ensure the proper disposal

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

Prior to onsite construction Somerville will review site specific methods for slurry management (storage/drying onsite or shipment offsite) and will complete the required manifests and maintain records. If water is to be discharged into or near any form of natural or man-made water body or drainage (e.g., storm sewers, creeks, ponds, etc.), Somerville will confirm the water quality to ensure regulatory compliance on discharge quality and quantity, permitting and approval with municipal, provincial, or federal authorities.

3.2.10 Imported Soil and Backfill Management Plans

Prior to import of soil and backfill material Somerville will confirm the quality of the source material. Somerville will be responsible to source, verify quality (including testing, if required), transport and import the material to the sites according to all relevant Federal and Provincial legislation. The imported soil and backfill management plans will identify the testing requirements and provide guidance for the maintenance of records of imported material.

3.2.11 Environmental Monitoring Plans

When environmental monitoring plans are not provided by the Owner, Somerville will implement site specific environmental monitoring plans to protect the natural environment during construction activities in accordance with all Federal, Provincial, and regional requirements. In accordance with industry standards Somerville will monitor activities or occurrences which pose higher environmental risk or concern with some being monitored more often, i.e., before and after storm events or environmental emergencies.

When applicable, Somerville’s environmental inspector will complete environmental Inspections as required in Check Section of the EMS. Inspections will be signed and dated. Records will be kept and made available to the project team upon request. Environmental observations and deficiencies will be identified and communicated to the project team. Somerville will take action to mitigate the deficiencies and perform a follow up inspection once complete.

3.2.12 Spills and Emergency Preparedness and Response Plan

EPPs are intended to address normal operations at project sites. Regardless of planning and precautions implemented to avoid upset conditions, unexpected events may still occur. Contingency plans for spill control and emergency response for unexpected situations provide the means to mitigate or otherwise manage environmental consequences that may otherwise result.

When plans are not provided as part of the Contract documents a Spill and Emergency Preparedness and Response Plan (SPERP) will be developed to provide on-site personnel with information relating to the prevention of and response to spill events involving liquid chemicals and fuels, fires, and other environmental incidents, including an internal and external reporting protocol. This plan will also highlight procedures for on-site vehicle and equipment refueling and maintenance, as well as the handling, usage and on-site storage of fuel and temporary chemical storage containers. The SPERP will also include a communication protocol of specific personnel that is to be contacted in an emergency event (e.g., spill event). Appropriately trained personnel can react to the emergency in a proactive manner so that adverse impacts from such incidents are reduced.

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	 SOMERVILLE
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

3.2.13 Designated Substances Plan

Somerville will review the list of Designated Substances and follow any requirements listed for any Designated Substances identified on the worksite. If required, a Designated Substances Plan will be prepared for the project. Designated and hazardous substances normally found on project sites may include but are not limited to:

- › PCB-containing cables
- › Asbestos-containing ebony circuit boards
- › Asbestos-containing piping & insulation
- › PCB-containing oil
- › Lead cable jacketing, lead plates, lead batteries, and lead-based paints
- › Silica
- › Mercury
- › Benzene
- › Isocyanates
- › Ethylene oxide
- › Vinyl chloride monomer (not polyvinyl chloride)
- › Arsenic, and
- › Coke oven emissions

In the event suspected designated substances are encountered during the project the work is to stop immediately until testing of the suspected material is carried out. In the event a designated substance is identified proper abatement, handling, storage, transport, and disposal will be required.

3.2.14 Clean-up and Restoration Plan

Once a construction area or pipeline has been backfilled, site clean-up and restoration will be undertaken. If a Site-specific clean-up and restoration plan does not exist, at minimum, clean-up and restoration should consist of:

- › Removing any debris and boulders resulting from trenching
- › Grading soils to original levels and the application of clean-fill and/or topsoil where required (subsoiling as necessary if work being completed in agricultural lands)
- › Hydroseed and/or sod application

Any prescribed erosion control devices such as straw bales, silt fencing and/or rock check dams should be left in place until revegetation of the right-of-way is complete.

Post-construction monitoring will be undertaken to ensure that the right-of-way returns to its original condition. Somerville will rectify any environmental damages related to pipeline construction that are identified during these monitoring studies.

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

4.0 Do

4.1 Roles, Responsibilities, Accountability, Authority

Please refer to the Somerville HSE Standards Manual (Current edition) for the definitions of roles, responsibilities, accountability, and authority.

4.2 Environmental Training

Somerville shall:

- + Determine the necessary competence of person(s) doing work under its control that affects its environmental performance and its ability to fulfill its compliance obligations
- + Ensure that these persons are competent on the basis of appropriate education, training, or experience
- + Determine training needs associated with its environmental aspects and its EMS
- + Where applicable, take action to acquire the necessary competence, and evaluate the effectiveness of the actions taken

Applicable actions can include, for example, the provision of training to, the mentoring of, or the reassignment of currently employed persons; or the hiring or contracting of competent persons. Somerville shall retain appropriate documented information as evidence of competence.

4.3 Working Near Environmentally Sensitive Areas

One of the most effective ways of minimizing environmental impact is to avoid working within identified sensitive areas and their setbacks altogether. Where the construction site, laydown areas, or right-of-way has been pre-selected due to identified features, minor adjustments can make a significant difference. This is particularly true in roadside pipeline construction, where impacts to features have likely been minimized in design. Some potential risks or hazards that may be encountered on right of way that may not be accounted for during minor route changes include:

- › Endangered plant or wildlife species and/or associated habitat destroyed or degraded
- › Fish or Fish habitat harm or destruction
- › Archeological resources destroyed
- › Excessive surface erosion as a result of uncontrolled vehicle traffic along the right-of-way

Always check the Site-specific Environmental Protection Plan to determine where sensitive areas exist within the right of way and/or areas adjacent to the Site. If encroachment into these areas is necessary for completion of the work, check with the appropriate regulatory authorities to ensure appropriate mitigation and approvals are in place before completing work.

4.3.1 Wetlands

Wetlands provide several important biological and hydrogeological functions. They provide habitat for a diverse variety of plant and animal species. They also help to control runoff and maintain the level of the water table. As possible, construction activities wetland features and their associated buffer areas will be avoided. If it is necessary to complete construction activities within a wetland Somerville will:

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
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- › Ensure relevant regulatory authorities have been consulted and appropriate permits have been received before work begins
- › Consider winter construction if it is documented by the regulators and client that this will cause the least environmental damage
- › Minimize the width of the right-of-way used
- › Limit construction during breeding periods of significant wildlife species that have been known to inhabit the wetland area
- › Minimize tree cutting - if trees have to be cut, they will be cut flush with the ground surface and stumps left in place, except over the trenchline
- › Place spoil from the trench in such a manner that it will not interfere with natural drainage
- › Incorporate drainage provisions into any access roads required, and
- › Use log corduroy for access roads if practical and evaluate whether it is better to leave the corduroy in place after completion (whether more damage would be caused by removal)

In rare situations, large pipelines or other construction activities through wetlands have acted as a conduit for draining water from the wetland. In order to prevent this from occurring, impermeable plugs are installed in the trench to control water and prevent erosion of backfill material.

4.3.2 Wildlife, Plants, and Habitats

Rare or endangered species of plants and animals may be present on or adjacent to the project area, access points, or laydown areas. Several Federal regulations apply to plants, wildlife, and their habitat, including the Migratory Birds Convention Act, the Species at Risk Act, and the Fisheries Act. Violations could lead to significant harm to the individual species and their habitat, resulting in the potential for fines and/or imprisonment for the responsible individuals. It is important to ensure all required consultation with the relevant Federal and Provincial regulatory authorities has been completed, and that requirements for mitigation are outlined within the site-specific EPP and understood by construction staff on site.

All reasonable attempts will be made to reduce the impact on wildlife and vegetation in the area during construction. Personnel who intentionally harm or disturb rare plant or animal species are subject to disciplinary action up to and including dismissal from the work. If a rare or endangered plant or animal or their known habitat is encountered on site, or if a collision with wildlife occurs, report the incident to your supervisor and ensure appropriate regulatory bodies are informed.

If the EPP outlines exclusion areas to protect rare or endangered species and/or their habitat, do not enter fenced off exclusion areas. These sites have been isolated to protect natural features, such as nest sites or rare plants from construction activities.

4.3.3 Watercourses

The critical need to protect downstream water users, fish, and their related habitat from sedimentation, as well as the hydraulic characteristics of each stream requires planning and constant vigilance during construction operations. Contact with regulatory authorities and review of Federal, Provincial, and regional water crossing standards as well as site-specific EPPs is key to ensure that adequate approvals and protection measures are in place for river and creek crossings.

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

In general, to minimize impacts instream timing constraints outlined within the EPP will be followed and special measures have been identified including:

- › At minimum, leave 10 m wide buffer strip vegetation adjacent to the watercourse until immediately before constructing the crossing to avoid sedimentation
- › Do not wash equipment in or within 100m of waterbodies or seasonal drainage ditches
- › As required, temporary siltation fencing should be deployed between the areas of the proposed works and surrounding areas to reduce or eliminate the transport of sediment, nutrients, contaminants, and increased turbidity on the watercourse. Fencing should be properly installed before work on the Site begins and should be inspected at regular intervals and after significant rain events to confirm it is functioning properly. If any section is found to be damaged or non-functional it should be replaced immediately. Fencing should be regularly cleared of silt/sand accumulation to ensure the integrity of erosion prevention/sediment containment measures
- › The following activities are prohibited beyond the siltation fencing: storage or stockpiling of materials; disposal of liquids; and operation of heavy machinery
- › Ensure a Spills Management Plan (including materials, instructions regarding their use, education of contract personnel, emergency contact numbers) is onsite at all times for implementation in the event of accidental spill during the remedial activities. Adequate measures to prevent or capture and contain debris and spills resulting from remedial activities should be kept onsite in sufficient quantities. Staff should be orientated as to the location of materials and their proper use and disposal. Measures and procedures should conform to pertinent provincial requirements
- › Temporarily store, handle, and dispose of materials used or generated (e.g., organics, soils, woody debris, temporary stockpiles, and landfill waste) during site preparation; refuse removal and restoration in a manner that prevents their entry into naturalized areas in the vicinity of the grading site, including surrounding watercourse features
- › Operating, refueling and maintenance of equipment and the handling and storage of toxic materials (e.g., fuel, lubricants, and other chemicals) must be carried out in such a way as to avoid contamination of soils, groundwater and surface waters. Fueling must not take place within 100m of a water source. Storage of large quantities of fuel should not be permitted on the Site. Emergency spill kits also should be maintained at the Site
- › All parts of equipment shall be free of fluid leaks and externally cleaned/degreased offsite, in a contained environment
- › Any areas devoid of vegetation post-remediation should be re-vegetated through plantings to minimize potential for overland siltation. Siltation fencing should remain in place until a minimum of 75% vegetation coverage has been established

The taking of water from a waterbody (either for hydrostatic testing or for dewatering) has the potential of harming fish through sucking them through pump intakes. When water taking is proposed Somerville will ensure that the screen size on the intake pumps meet Department of Fisheries and Oceans specifications.

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

4.3.4 Vegetation

Areas containing significant vegetation are also generally avoided during site selection or project routing. If significant natural vegetation such as rare plants are discovered on the right-of-way, Somerville will:

- › Inform the environmental inspector or other client staff of their existence
- › Liaise with appropriate regulatory authorities for advice, guidance, and approvals
- › Evaluate the use of directional drilling or boring
- › Have a qualified person attempt to remove the plants, trees or shrubs from the right-of-way, and
- › If directed to proceed by the client, minimize the area of clearing so as to reduce the impact

In areas of orchards and specialty crops, an attempt will be made to schedule construction once the farmer has harvested the crops. The area of impact will be kept as minimal as possible to minimize interference with, and damage to, crops.

4.3.5 Heritage resources

Heritage resources include sites and artifacts of historic and prehistoric cultures. Such things as stone flakes, pottery-dwelling remnants and human remains are included in a description of Heritage Resources. Prior to construction, areas of high potential for encountering these resources have been identified and evaluated by a licensed archaeologist. If such areas should be encountered during construction activities, Somerville will:

- › Stop work and notify the environmental inspector or other client staff on-site until notified that it is all right to proceed
- › Attempt to avoid the identified sites
- › If re-location is not an option, Somerville will proceed after the client has arranged for a licensed archaeologist to conduct a salvage operation to document the artifacts and have them removed from the site

Always check the Site-specific Environmental Protection Plan to determine where heritage resources may exist within the right of way and/or areas adjacent to the Site. If encroachment into these areas is necessary for completion of the work, check with the appropriate regulatory authorities to ensure appropriate mitigation and approvals are in place before completing work.

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

5.0 Check

5.1 Environmental Inspection

Environmental inspection is generally one of the conditions of approval for new construction projects. Some companies that are clients of Somerville generally have either in house environmental inspectors, employ third-party independent environmental inspectors or require their contractors to take a “self-directed” approach to construction.

The role of an environmental inspector is to provide day-to-day advice with respect to environmental issues and ensure that the client’s environmental policies are being followed. Somerville staff have a great deal of experience working with environmental inspectors and have benefited from their knowledge.

Somerville staff will work closely with externally appointed environmental inspectors to ensure maximum protection of the environment. Where a project is being constructed and there is only part-time external environmental inspector or no environmental inspector, Somerville will take the lead.

5.1.1 Part – Time Environmental Inspector

- › Review the site-specific EPP to determine if environmentally sensitive areas are present on or adjacent to the site and try to schedule construction in these areas during a block of time to ensure that the environmental inspector can be present
- › Ensure that all mitigative measures outlined within the EPP have been implemented and are functioning as designed
- › Indicate to the client in advance when construction is contemplated for environmentally sensitive areas so that the environmental inspector and any relevant regulatory agencies can be given adequate notice

5.1.2 No Environmental Inspector

- › Review the site-specific EPP to determine if environmentally sensitive areas are present on or adjacent to the site and try to schedule construction in these areas during a block of time to ensure that the environmental inspector can be present
- › Ensure that all mitigative measures outlined within the EPP have been implemented and are functioning as designed
- › Take appropriate action to avoid adverse environmental impacts

Onsite training of Somerville staff (supervisor, equipment operators, and labourers) occurs throughout the construction project. Proper installation of erosion control devices, vegetation management techniques and slope stability techniques, for example, are demonstrated as conditions requiring these measures that are found during pipeline construction.

5.1.3 Documentation and Communication

Somerville will determine if a pre-construction photographic survey of the Project has been conducted. This can either consist of still photographs identifying areas of natural and human sensitivity or a video of the pipeline route.

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

If it is not the responsibility of the client to compile such a survey, Somerville will undertake it to ensure that their interests are protected. Any issues that cannot be resolved by the Superintendent or supervisors will be documented and relayed to the Director HSEQ for action.

The responsibility for obtaining environmental permits and approvals rests with the client. Somerville will determine that these approvals have been received by the client before proceeding with construction. Construction supervisors and/or the Superintendent will maintain a list of outstanding environmental deficiencies and will ensure that these are rectified as soon as conditions permit.

Contact with the general public will be maintained by the construction superintendent or construction supervisor. Serious issues will be communicated to the client. An issue list will be recorded, and the method of resolution will be documented in order to satisfy regulatory requirements.

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

6.0 Act

6.1 Management Review

Periodic management reviews of the EMS shall be conducted to ensure the continued adequacy, and effectiveness of the EMS and to adjust accordingly.

Management review shall include consideration of:

- › Status of actions from previous management reviews
- › Changes in internal and external issues relevant to the EMS such as needs and expectations of interested parties, compliance obligations, significant environmental aspects, risks, and opportunities
- › Extent to which the EMS is being followed
- › Review information on environmental performance including any environmental incidents, non-conformances, continual improvement, monitoring and measurement results, results of compliance obligations, audit results, consultation and participation of workers, risks, and opportunities
- › Adequacy of resources for maintaining an effective EMS
- › Relevant communications with interested parties
- › Opportunities for continual improvement

Management will communicate the relevant outcomes of the management reviews to the employees. Somerville will retain documentation of the results of management reviews.

Types of management reviews include the following:

- › Executive meetings
- › Annual document review of the EMS and associated SOPs

Should deficiencies be noted during the review process Somerville is committed to remedial action of the deficiencies as soon as reasonably possible.

6.2 Learning Organization

Somerville’s environmental objective is to foster a ‘learning organization’ culture, where continual improvement and protection of the natural environment is foremost in the operations of the business.

6.3 Environmental Alert

When a serious environmental issue has occurred, an Environmental Alert will be prepared by Somerville. This communication will be distributed internally and to other parties that may be affected. The goal of these alerts is to outline the occurrence, identify the remedial action, and implement controls and process to avoid future occurrences.

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

7.0 Appendix I - Federal, Provincial, and Territorial Ministries and Department Contacts

<p>Newfoundland and Labrador Department of Environment and Climate Change Confederation Building, West Block P.O. Box 8700 St. John's NF A1B 4J6 Phone# (709) 729-1210 E-mail : climatechange@gov.nl.ca</p>	<p>Quebec Ministry of the Environment and Climate Change 675, Boulevard Rene-Levesque Est, Edifice Marie Guyart, 29e étage Quebec QC G1R 5V7 Phone (418) 521-3830 Toll-free: 1-800-561-1616</p>
<p>Nova Scotia Department of Environment 1894 Barrington Street, Suite 1800 P.O. Box 442 Halifax NS B3J 2P8 Phone (902) 424-3600 Fax (902) 424-0501</p>	<p>Quebec Environment and Climate Change Canada 1550 Av. D'Estimauville, Québec, G1J 0C3 Phone (819) 997-4203 Fax (819) 953-6897</p>
<p>Prince Edward Island Department of Environment, Energy and Climate Action 11 Kent Street, 4th floor Charlottetown PE C1A1M7 Phone (902) 368-5044 E-mail: DeptEWCC@gov.pe.ca</p>	<p>Ontario Ministry of the Environment, Conservation and Parks 2nd Floor, Macdonald Block, 900 Bay Street Toronto ON M7A 1N3 Phone (416) 325-4000 Fax (416) 314-6713</p>
<p>New Brunswick Department of Environment and Local Government 20 McGloin Street P.O. Box 6000 Fredericton NB E3A 5T8 Phone (506) 453-2690</p>	<p>Manitoba Department of Conservation and Climate 1007 Century Street Winnipeg MB R3H 0W4 Phone (204) 945-8321 E-mail : EABDirector@gov.mb.ca</p>
<p>Saskatchewan Ministry of Environment 3211 Albert Street, Room 524 Regina SK S4S 5W6 Phone (306) 787-0393 Fax (306) 787-1669</p>	<p>Northwest Territories Department of Environment and Natural Resources North Slave Regional Office: 3803 Bretzlaff Drive Yellowknife NT X1A 2P9 Phone (867) 767-9238 E-mail: ENR_NorthSlave@gov.nt.ca</p>
<p>Alberta Ministry of Environment and Parks Great West Life, 7th Floor, 9920 108 Street NW Edmonton AB T5K 2M4 Phone (780) 944-0313 E-mail: aep.outreach-services@gov.ab.ca</p>	<p>Yukon Department Of Environment 10 Burns Road P.O. Box 2703 Whitehorse YT Y1A 2C6 Phone (867) 667-5652</p>
<p>British Columbia Ministry of Environment & Climate Change Strategy PO Box 9339 Stn Prov Govt 525 Superior Street Victoria BC V8V 1T7 Phone (236) 478-0896</p>	<p>Nunavut Department of Environment P.O. Box 1000, Stn. 1320 Iqaluit, Nunavut XOA OHO Phone (867) 975-7700 Fax (867) 975-7742 E-mail: environenment@gov.nu.ca</p>

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	 SOMERVILLE
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	

8.0 Appendix II – Federal Legislation

- + Atomic Energy Control Act
- + Canadian Marine Act
- + Canadian Environmental Protection Act
- + Canada Water Act
- + Environmental Contaminants Act
- + Canada Shipping Act
- + Dangerous Substance Regulation
- + Wildlife Act
- + Migratory Birds Convention Act
- + Species at Risk Act
- + Fisheries Act
- + Hazardous Materials Information Review Act
- + Hazardous Products Act
- + Navigable Waters Act
- + Pest Control Products Act
- + Transportation of Dangerous Goods Act (TDGA)
- + Environmental Protection and Management Acts
- + Industrial/Occupational Health and Safety Acts and Regulations
- + Spill Reporting Regulations
- + Waste Management Acts and Regulations
- + Workplace Hazardous Materials Information System (WHMIS)

2023 Somerville Environmental Management Standards			
	Director HSEQ: <input checked="" type="checkbox"/>	Date Issued: March 2022	
	Executive Review: <input checked="" type="checkbox"/>	Date Revised: January 2023	
	Technical Review: <input checked="" type="checkbox"/>	Revision #: 1	