

SECTION 810

USE OF HERBICIDES FOR BRUSH CONTROL OPERATIONS

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810.01 SCOPE

This specification covers the supply and application of herbicide to broadleaf brush and trees.

Specific locations to be sprayed, and areas to be omitted, shall be designated by the Owner's representative.

810.01.01 General

The Contractor and Subcontractor(s) are required to comply with environmental protection measures contained in this section and all applicable environmental protection regulations of Federal, Provincial, and Municipal Authorities.

No pesticides or other products shall be used without prior approval of the owner and the Department of Environment and Climate Change. Each pesticide to be used, its application rate, and area of use, shall be subject to regulations under the Environmental Protection Act, 2002 and the Pesticide Control Regulations, 2003. A copy of the Material Safety Data Sheet (MSDS) and Pesticide Label Information shall be supplied to the Owner's representative 5 days prior to any use by the Contractor. Two copies of any approval issued to the Contractor for chemical usage under these Regulations shall be provided to the Owner's representative. As part of the Contractor's Hazard Assessment prior to the start of contract work an emergency/contingency plan shall be developed in case of a spill and provide a copy of this plan to the Owner's representative.

810.02 MATERIALS

The herbicide to be used to execute the work of this contract shall be as specified in the contract documents and shall be accepted on the Pesticide Operator Licence issued to the pesticide operator by the Department of Environment and Climate Change.

All herbicide brought onto site for the execution of the contract shall be contained in sealed containers and will be inspected by the owner to ensure that such herbicides are properly registered under the Pesticides Control Act RSN 1990, and accepted by the Newfoundland Department of Environment and Climate Change and are of the type, strength and quality specified therein. Any herbicide not meeting these requirements shall be rejected. "BLAZON" dye shall be used as colouring agent at the manufacturer's recommended concentration.

810.03 HERBICIDE STORAGE & HANDLING PROCEDURES

Contractor shall ensure that herbicides are handled only by personnel who are licensed, trained and qualified in handling these materials in accordance with manufacturers' instructions and government regulations (Section 13 of the Pesticides Control Regulations). The Contractor will be required to verify personnel qualifications as they pertain to this item and provide written confirmation of same to the Owner's representative. The Contractor shall supply a copy of the product safety data sheet to the Owner's representative of all herbicides or hazardous substances which will be used during the course of the contract. Tank refilling operations shall be supervised at all times.

Under no circumstances shall any tank refilling procedure be left unattended by the operator.

Handling and tank filling/transferring procedures shall be carried out to prevent the contamination of soil or water. Tank filling or servicing of mobile equipment shall not be allowed within 100 m of a watercourse, water body, or designated wetlands. Herbicides and other chemicals shall be stored at least 100m (horizontal distance) from any water course, water body, or designated wetland unless otherwise accepted by the Owner's representative and/or the Department of Environment and Climate Change.

Any pesticide storage sites must meet the requirements of the Pesticides Control Regulations, 2012 as follows:

- a) A source of water must be kept in an area in or adjacent to the storage area;
- b) Accepted safety equipment as required which is properly maintained, functional and available at all times for personnel handling and working with pesticides;
- c) Flooring in a storage area shall not contain a floor drain or catch basin which is directly or indirectly connected to a private or municipal sewage system or public water course;
- d) Flooring shall be capable of being cleaned and decontaminated of pesticides stored within;
- e) Adequate ventilation by either natural or mechanical means so as to prevent the accumulation of toxic and/or flammable vapours;
- f) "Danger Stored Pesticide" sign posted on all entrances which is printed in block letters 5 centimeters or more in height;
- g) Cleanup procedures, materials, and equipment available to cleanup spills or leakage;
- h) Security procedures consistent with the instructions of the Minister or persons designated by the Minister.

In addition to these storage requirements each pesticide storage site shall have prominently displayed on all entrances contact telephone numbers for the operator and the Department of Environment and Climate Change, Pesticides Control Section, and indicated accordingly.

All entrances to the storage sites must be locked when the owner or an employee of the owner is not present.

Pesticides shall be stored in their original container or a substitute container accepted by the manufacturer. Substitute containers shall be labelled appropriately with labels provided by the manufacturer.

Concentrated pesticides transported in a vehicle during spray operations shall be contained in a locked box, secure area or compartment which must be locked while unattended. Pesticides shall not be transported in the passenger compartment of any vehicle.

810.04 EQUIPMENT

Prior to acceptance of the tender, the Contractor shall provide proof that the spray equipment, auxiliary mixing and storage equipment, and associated equipment that is intended to be used meets the requirements of the manufacturer of the herbicide. Equipment shall be in good working condition with tanks secured properly, have hoses of good integrity (not cracked) and all pumps seals and joins tight with no leaks.

All equipment applying liquid herbicide solution shall be capable of ensuring that all active ingredients are contained in the target area.

The Contractor shall provide all material, construction plant and personnel necessary for the continued operation of application equipment. All vehicles used in the application of pesticides shall have a copy of the contingency plan located within the vehicle.

810.05 GENERAL APPLICATION REQUIREMENTS

Herbicides shall be applied by low volume broadcast spray ground application in all areas to be treated utilizing a spray delivery system (such as the Radiarc sprayer or accepted equivalent) which offers effective drift control. Aerial spraying from planes and helicopters will not be permitted. The spray system utilized must be acceptable to both the herbicide manufacturer the Owner's representative assigned to monitoring the herbicide application and Pesticides Control Section of the Department of Environment and Climate Change.

The Contractor is required to obtain a Pesticide Operator's License from the Pesticide Control Section, Department of Environment and Climate Change.

Prior to the commencement of specific work elements, the Contractor shall immediately provide the Owner's representative with two copies of all permits.

Any contravention of environmental requirements, including employee actions accidental or otherwise, resulting in environmental damage shall be reported to the Owner's representative without delay.

Contractor shall be responsible for clean-up, reclamation and/or restorative measures as may be directed by the Owner's representative, or by provincial or federal agencies through the Owner's representative.

810.05.01 Spray Conditions and Restrictions

The Contractor shall provide proof satisfactory to the Owner's representative that the strength of spray solution and the method of application meet the requirements of the manufacturer supplying the herbicide as specified on the product label. A supervisor from the Department will be appointed to monitor the Contractor at all times when they are working with the herbicide and shall be supervised by Department personnel trained in the application of pesticides.

Contractors are advised that, notwithstanding the stipulations included with the Contractor's Pesticide Operators License issued by the Pesticide Control Section of the Department of Environment and Climate Change the Contractor will ensure that:

- a) The herbicide shall be applied only to the highway right-of-way which has been previously cut, and subsequently designated for treatment.
- b) The Contractor shall be aware that some watercourses may be in close proximity to the designated spray area. Due care and caution shall be taken to ensure that herbicide spraying operations do not impact on any watercourses or water bodies and meet accepted buffer zone requirements of the Department of Environment and Climate Change and the manufacturer. The contractor shall be responsible for laying out the buffer zones and ensuring the buffers are respected.
- c) Ground based spraying is permitted only when: wind speeds are between 2 and 15km/h, air temperatures are below 25°C, the relative humidity is above 50%, it is not raining, and rain is not anticipated over the next two hour period.
- d) The Owner's representative in consultation with the Contractor and officials of the nearest weather office shall determine daily the suitability of weather conditions to undertake the application of herbicide. The Owner's representative has the authority to stop the spraying of herbicide at any time based on local conditions and weather measurements. The site supervisor for the Department of Transportation & Infrastructure shall be given access to an anemometer on site to determine the wind speed, temperature and humidity at the site.

- e) There shall be no herbicide application within densely populated areas. Spray areas within commercial or residential developments, house or cottage areas are to be determined in the field by the Owner's representative. A 50 m buffer shall be maintained.
- f) Areas designated by the Owner's representative, in consultation with the Department of Environment and Climate Change as areas to be omitted from spraying, shall not be sprayed.
- g) The Contractor shall take due care and caution when applying herbicide in close proximity to land used for agricultural purposes. Drifting of spray onto land utilized for agricultural purposes shall not be permitted.
- h) Equipment is not permitted to operate in any watercourse or ditch containing or which may contain water which enters a watercourse.

810.05.02 Daily Logs and Written Report

Contractors are advised that reports and records are required by the provincial Department of Environment and Climate Change. Their use is of the utmost importance to any right-of-way management program and they shall form an important part of this contract. The Contractor shall ensure that all logs, records and reports are completed fully, are legible, and are signed by authorized personnel. The submission of appropriate documentation as may be required shall be a requirement to the satisfactory completion of this contract.

810.05.03 Safety

The Contractor shall be responsible for the proper handling and safe use of all herbicides.

The Contractor shall be responsible for the safety of its employees in the application of herbicides and for the supply and use of all recognized safety equipment.

The Contractor shall have with each crew, a minimum of one person who is qualified in First Aid. This person(s) shall also be in possession of a valid Standard First Aid Certificate.

In addition to standard First Aid Kits, Contractor shall, at its own expense, have on site with each of its crews adequate first aid supplies that are unique to accidental herbicide exposure.

The Contractor shall rinse empty herbicide containers three times and use the rinse in the spray mixture. If the rinsed containers are not to be returned for refilling with herbicide then the rinsed containers shall be punctured several times to ensure they will not be used for filling with other substances and then disposed of in a manner accepted by the Department of Environment and Climate Change.

The Contractor shall ensure the safety of all individuals including pedestrians, residents, vehicular passengers and operators or others as may be encountered during spray operations.

810.05.04 Clean Up

Upon completion of herbicide application, the Contractor shall remove all of their rubbish, debris, surplus materials and equipment from the site.

The Contractor shall place rubbish and refuse in proper containers and shall dispose of same at an accepted waste disposal site with permission of the waste disposal site owner/operator.

The Contractor shall not wash equipment or containers, nor dump herbicides in or near any fresh or salt water bodies, or at any location where the herbicide may enter a body of water.

810.05.05 Spills

The Contractor shall maintain on site with each crew engaged in the mixing and application of the herbicide mixture, an accepted supply of absorbent materials as part of the overall spill cleanup kit.

Absorbent materials shall consist of activated charcoal, sawdust, peat moss or other materials in quantities as may be required by appropriate authority and the Owner's representative.

In the occurrence of spillage or leakage, the Contractor shall undertake prompt action to minimize the extent of damage through the application of absorbent materials or other procedures as may be required.

Any soils or other materials contaminated as a result of spillage, leakage or inappropriate actions taken by applicators shall be removed and the affected areas subsequently rehabilitated at the Contractor's expense.

Disposal of contaminated soils and other materials shall be the responsibility of the Contractor subject to approval by the appropriate authority, the Owner's representative and the Pesticide Control Section.

All spills involving greater than 10 litres of mixed formulation or the equivalent of unmixed formulation shall be reported immediately to the Pesticides Control Section as described below. All spills involving mixed or unmixed pesticide in or within 500m of water bodies, wells or areas frequented by people, shall be reported immediately to the Pesticides Control Section, St. John's (Ph: 729-2556) and Environment Canada (EPS) St. John's (Ph: 772-2083).

The Contractor shall submit a corresponding written report within two (2) days of occurrence to the project supervisor who will in turn forward the report to the Director of Highway Design and Construction. The report shall identify cause, actions taken to clean up area, actions taken to prevent a recurrence, actions taken to dispose of contaminated material and any environmental damage.

810.05.06 Newspaper Notice

The Contractor shall advise the public of the purpose and scope of the project by means of newspaper notices. The Contractor shall place the notices in at least one newspaper with circulation in the municipalities whose boundaries encompass treatment areas. The newspaper ad will appear in any issue at least one week prior to commencing the program. The ad will state the area that is proposed for treatment over the next 21 calendar days at the end of which another ad is to be placed until the program is completed. The ad will contain a phone number at which the Contractor may be contacted for information regarding the spraying operation and the Department of Environment Pesticides Control Section 729-2556.

810.05.07 Signs

The Contractor shall provide and erect signs indicating that the right-of-way has been treated with herbicide. These signs shall be posted at the time of treatment and indicate the type of herbicide (name of formulation) used, PCP Act Registration Number, Date of Application, Company Name carrying out the application of herbicide and phone number for additional information, Department of Environment and Climate Change phone number 1-709-729-2556 and the locations treated as stipulated in the Pesticide Operator's Licence Terms and Conditions issued by the Department of Environment and Climate Change.

810.05.08 Notices to Adjacent Property Owners

The Contractor shall make every reasonable attempt to verbally notify adjacent property owners, prior to the spray program. In the event this cannot be done, the Contractor shall use written notification to all dwellings to the satisfaction of the Owner's representative and the Pesticides Control Section of the Department of Environment and Climate Change.

810.05.09 Guarantee

The Contractor shall achieve a 95% brush kill in the target area. The brush kill is to be inspected near the end of the warranty period in the growing season following the treatment application. If spot checks, after the herbicide treatment is completed, reveals that the 95% brush kill was not achieved at the end of the warranty period, then the Contractor will be required, at his own expense, to retreat these areas to obtain the 95% brush kill in the target area.

810.06 MEASUREMENT FOR PAYMENT

Measurement will be made of the horizontal area actually sprayed with herbicide within the area indicated to be sprayed or as staked out by the Owner's representative. These measurements shall be computed to obtain the area in hectares, measured to three decimal places.

Spraying of areas beyond the limits as designated by Owner's representative will not be measured for payment.

810.07 BASIS OF PAYMENT

Payment at the contract price for supply and application of herbicide shall be compensation in full for all labour, materials and equipment use to carry out the work indicated in these specifications, and shall include all costs involved in: placing newspaper notices, providing signs, and obtaining and conforming to the conditions of required permits, together with the removal of any debris (containers, absorbent, etc.) including obtaining an accepted waste disposal area and hauling away and disposing of the debris in the waste disposal area, if required.

Full payment shall not be made until the final acceptance of the work on satisfactory completion at the end of the warranty period. A holdback in the amount of 15% of the total payment for herbicide treatment shall be retained for the warranty period and until checking the achievement of the 95% brush kill the following growing season as per Section 810.05.09 of this specification.