

PERMIT TO CONSTRUCT

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 37, 39

Date: **MAY 29, 2020**

File No: **842.056.1**
Permit No: **WS11054-2020**

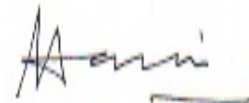
Permit Holder: **Town of Roddickton-Bide Arm**
P.O. Box 10
Roddickton-Bide Arm, NL
A0K 4P0
roddickton@nf.aibn.com

Attention: **Ms. Paula Snook**

Re: **Roddickton-Bide Arm - Pumphouse and Chlorination System Upgrades**

Permission is hereby given for : **upgrades to the existing gas chlorination system, the installation of new vertical turbine pumps and VFD control system, pressure transmitters, submersible level transmitters, check valves, isolation valves and related works and appurtenances as described in a technical specification and revised set of drawings numbered 1091-19 (DMAE no. 17-G1-20-00032), sheets LP1, EX1, C1, C2 and P1 as received from DMG Consulting Limited on May 20, 2020.**

- This Permit does not release the Permit Holder from the obligation to obtain appropriate approvals from other concerned municipal, provincial and federal agencies.
- The Permit Holder must obtain the approval of the Crown Lands Administration Division if the project is being carried out on Crown Land.
- This Permit is subject to the terms and conditions indicated in Appendices A and B (attached).
- It should be noted that prior to any significant changes in the design or installation of the proposed works, or in event of changes in ownership or management of the project, an amendment to this Permit must be obtained from the Department of Municipal Affairs and Environment under Section 49 of the *Water Resources Act*.



(for) MINISTER

APPENDIX A
Terms and Conditions for Permit

Water & Sewer General

1. Water pumped from excavations or work areas, or any runoff or effluent directed out of work sites, must have silt and turbidity removed by settling ponds, filtration, or other suitable treatment before discharging to a body of water. Effluent discharged into receiving waters must comply with the *Environmental Control Water and Sewage Regulations, 2003*.
2. All operations must be carried out in a manner that prevents damage to land, vegetation, and watercourses, and which prevents pollution of bodies of water.
3. Any areas adversely affected by this project must be restored to a state that resembles local natural conditions. Further remedial measures to mitigate environmental impacts on water resources can and will be specified, if considered necessary in the opinion of this Department.
4. The works proposed must satisfy the requirements of the latest applicable codes and standards, and be consistent with or otherwise address the design criteria set out in the Department of Municipal Affairs and Environment publication *Guidelines for The Design, Construction, and Operation of Water and Sewerage Systems, 2005*, and as amended from time to time.
5. The work must be undertaken in strict compliance with the submitted documents and the latest version of the *Municipal Water, Sewer and Roads Master Construction Specifications*. A copy of all documents, including the *Municipal Water, Sewer and Roads Master Construction Specifications* must be available for viewing at the construction site office at all times.
6. Liaison is to be maintained with the Environmental Scientist representing the Drinking Water and Wastewater Section of this Department, during the construction and operation of the project. They shall be notified of the pre-construction and post-construction meetings so that they may attend, if deemed necessary. They can be reached at telephone (709) 637-2034.
7. Officials of this Department may visit the project from time to time to ensure that work is carried out within the provisions of this Permit, and is not creating any environmental hazard.
8. Any changes in the approved works, or works other than those specified in the application, must be submitted, in writing, to this Department, and approved, in the form of an Amendment to this Permit, prior to any work.
9. Copies of this Permit, as well as any subsequent Amendments, must be provided to the contractor(s) who will be carrying out these works, and to the engineer's site representative.
10. The attached Completion Report (Appendix C) for Permit No. 11054 must be completed and returned to this Department upon completion of the approved works. Pictures must be submitted along with the completion report, showing the project site prior to and after development.
11. This Permit is valid for two years from the date of issue. Work must be completed by that date or the application and approval procedure must be repeated.
12. The drinking water system shall be operated and maintained in accordance with the Permit to Operate issued by this Department.

13. The Owner must update any drawings maintained of the drinking system to reflect the modification or replacement of the works, where applicable.

Water Systems

14. All new waterlines and appurtenances shall be hydrostatically tested in accordance with the *Municipal Water, Sewer and Roads Specifications*.
15. All components, lubricants and chemicals provided shall be compatible for use with drinking water and shall meet the requirements of ANSI/NSF 60 Drinking Water Treatment Chemical Standard and ANSI/NSF 61 Drinking Water and System Component Standard and any other standard applicable to potable water.
16. All new lines and appurtenances must be disinfected by an approved method described in the latest edition of the AWWA C651 Standard for Disinfecting Watermains and using only chlorine products that meet the NSF 60 standard.

PPWSA General

17. All persons working on this project must be informed that they are within a Protected Public Water Supply Area, and must be made aware of all conditions of this Permit. A copy of this Permit must be on site during operations.
18. An undisturbed (no cutting or ground disturbance) buffer zone of at least **150 metres** shall be maintained around East Brook Pond, at least **50 metres** along both sides of all streams and main tributaries running into East Brook Pond, and at least **30 metres** around all ponds and along both sides of all other water bodies. Activity or development within these buffer zones is prohibited. All buffer zones must be marked with signs or flagging tape to avoid encroachment into the buffer zones.
19. All waste material is to be collected in refuse containers, and disposed of at an approved waste disposal site outside the Protected Public Water Supply Area in accordance with the *Environmental Protection Act, SNL 2002 cE-14.2*.
20. Equipment storage, maintenance facilities associated with this project, and all maintenance other than emergency repairs must not be located/carried out within the Protected Public Water Supply Area.
21. The Department reserves the right to require that the Permit Holder follow, and cover all costs incurred by the Permit Holder or this department, associated with any water quality monitoring program that may be ordered by the Minister for the purpose of ensuring that the water quality is maintained within acceptable guidelines.
22. Officials of the Department and the appropriate Municipal Authority, Operator, or Watershed Management Committee may visit the site to ensure compliance with this Permit.
23. Liaison is to be maintained with the appropriate Municipal Authority and Environmental Scientist. If there are any specific problems (ie sedimentation, fuel spill, other potential water quality impairment), the appropriate Town Manager/Clerk, Mayor, Chair of the Local Service District Committee, or Chair of the Water Supply Committee must be notified immediately at (709)457-2413. The Environmental Scientist must also be notified immediately at **(709)637-2542**.
24. Motorized vehicles, including snowmobiles and ATVs, shall not be used to cross the frozen surface of **East Brook Pond** the intake pond within the Protected Public Water Supply Area.
25. Treated wood shall not be used in a water body or within buffer zones established in Condition 33 of any water body measured from the high water mark. The use of creosote treated wood anywhere within the Protected Public Water Supply Area is strictly prohibited.
26. The location of the work is highlighted on the Location Map for this Permit attached as Appendix D.

27. Any changes in water quality resulting directly from this project, rendering the water unsuitable as a public water supply, are the responsibility of the Permit Holder. The Minister may order the Permit Holder to provide an alternate source of potable water to the affected community until water quality returns to an accepted level.
28. All vehicles and equipment must be in good working order with no leaking fuel, oil, or other harmful substances that could impair water quality.
29. All stationary motorized equipment and associated fuel tanks shall have metal trays, absorbent pads or impervious liners under them to catch and contain in excess of 110 % of the aggregate volume of any fuel, lubricant and oil.

Fuel Storage

30. There shall be no bulk fuel storage associated with this project within the protected water supply area. Fuel shall be brought to the operating area in no more than two (2), 205 litre barrels or one (1) 500 litre slip tank. Refueling sites shall be located at least 150 metres from any water body or wetland. The Permit Holder is hereby informed that fuel storage and handling requires a separate approval under the *Storage and Handling of Gasoline and Associated Products Regulations*, CNR 775/96.
31. Contaminated snow and soil must be removed from the site and disposed of at an approved location outside the protected public water supply area, in accordance with the *Environmental Protection Act, SNL 2002 cE-14.2*.
32. Any spills of gasoline, fuel or oil, regardless of volume, shall be reported immediately to the Environmental Scientist and the appropriate Municipal Authority or Watershed Management Committee by calling 637-2034 and (709) 457-2413 respectively. Furthermore, all spills in excess of 70 litres shall be reported immediately to the 24 hour spill report line at 1-800-563-9089.
33. A complete oil spill clean-up kit must be on site at all times when gasoline or fuel powered equipment is being used or refuelled. The kit must contain the following:
 - One hand operated fuel pump
 - One recovery container such an empty 205 litre drum
 - One shovel
 - One pick axe
 - Five metres of containment boom
 - Five absorbent pads
 - Twenty-five litres of loose absorbent material
34. Fuel storage shall be limited to a maximum of three (3) self-contained dyked units (i.e., JEEP Tanks) as detailed below. Every precaution must be made to keep these tanks secure, and protected as far as possible from vandalism. Furthermore, every precaution shall be made to prevent spills, leaks, or other discharges from these tanks during refueling by fuel suppliers and refueling of equipment. Storage sites shall be located only within operating areas, on landings and along road right-of-ways only, and at least 500 metres from any water body or wetland. Tank 1, GA-GAP01-09005, ID 11C, 2,315 litres - S&S Ltd. Tank 2, GA-GAP01-09005, ID 14C, 2,315 litres - S&S Ltd. Tank 3, GA-GAP02-11008, ID 58C, 4,624 litres - Future Forest Management.
35. Refueling sites shall be located at least 150 metres from any water body or wetland.

Protected Miscellaneous

36. The Permit Holder must inspect the site daily, and any water quality impairment related problems are to be reported immediately to the Environmental Scientist at 637-2034 and the appropriate Municipal Authority or Watershed Monitoring Committee at (709)457-2413.
37. The Permit Holder is required to provide this Department with all documentation, information and data which may be requested or required in order to carry out the inspection or investigation.
38. A separate approval under Section 48 of the *Water Resources Act SNL 2002 cW-4.01*. is required for the construction of a floating dock or any other activity or development within 15 metres of the high water mark of .

39. Sawdust, bark, and logs must not be stored within undisturbed buffer zones of any body of water, and must be removed at regular intervals to prevent excessive accumulation at the site.

Special Conditions

40. New and existing floor drains are for the overflow of raw water and potable water that contains disinfection chemicals only.
41. Every effort must be made to avoid soil or sediment from eroding into the pond, with special care taken within a 150m buffer around the pond as this area may be sensitive to erosion and sedimentation issues.
42. Cleaning of any equipment, including but not limited to, equipment that comes into contact with concrete or paint, is not permitted within the East Brook Pond Protected Public Water Supply Area.

Chlorination

43. A backflow prevention device, in this case a hose connection vacuum breaker, non removable, meeting or exceeding CSA 64.2, shall be attached to any hose bibb connection, to prevent the possibility of contaminants entering the potable water distribution system due to back-siphonage.
44. The upgrading of the existing chlorination facility must be carried out in such a way as there will be minimal interruption of the water supply and chlorination system. In this regard, water consumers and the Regional Office of Service NL shall be kept informed and appropriate action taken to address any potential or encountered problems.
45. The door of the chlorination room must open outward, and must be equipped with approved panic hardware. This door shall have mounted on its exterior, a sign **warning** of the presence of chlorine gas.
46. The chlorination room/building/storage area must be equipped with a chlorine leak detection device. The device shall control an audible alarm, and an alarm light located above the entrance door to the chlorine room.
47. The exhaust fan in the chlorine room must be capable of providing one complete air exchange per minute, and the air intake duct shall extend to within 150 mm of the floor. A manual control switch for the fan shall be provided at the entrance and in an adjoining room.
48. The chlorination room and the adjoining room(s) shall be separated by an air tight wall in order to protect personnel and equipment in the adjoining room in the event of a chlorine gas leak. A clear air tight viewing window shall be installed in this wall to allow for visual inspection of the chlorine room and chlorine storage room.
49. A Chlorine Institute 'Kit A' should be provided in order that emergency leak repairs may be made to the chlorine cylinders when necessary. The Kit should be stored near the emergency breathing apparatus, and not in the same room as the chlorine cylinders.
50. The vacuum regulator vents must be vented to a safe location where personnel will not be endangered from the escaping gas. They shall not under any circumstance be vented in the vicinity of an exit door or through an unheated space (ie. attic).
51. The injector for the chlorination system shall be located as close as possible to the diffuser (preferably attached) in order to minimize the pressurized chlorine solution line.
52. A sample tap shall be provided so that water samples can be obtained from the raw water source and from an appropriate location after chlorination. Taps used shall be of the smooth-nosed type without interior or exterior threads and shall not have a screen, aerator or other such appurtenance.
53. An emergency shower and eye wash station that is in compliance with ANSI Z358.1-2014 and meets the requirements of the appropriate Materials Safety Data Sheet (MSDS) shall be installed in a convenient location(s) within each facility.

54. Self-contained breathing apparatus or respiratory air-pac protection equipment shall be provided. The equipment shall be stored in convenient locations, but not inside any room where chlorine is used or stored. The unit shall use compressed air, have at least 30 minute capacity, and be compatible with the units used by the regional fire department.
55. The chlorinator and chlorine vacuum lines shall not be located on an outside wall to prevent exposure to low temperatures.

APPENDIX B

Special Terms and Conditions for Permit

1. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall keep all systems and works in good condition and repair and in accordance with all laws, by-laws, directions, rules and regulations of any governmental authority. The Permit Holder or its agent(s), subcontractor(s), or consultant(s) shall immediately notify the Minister if any problem arises which may threaten the structural stability of the systems and works, endanger public safety and/or the environment or adversely affect others and/or any body of water either in or outside the said Project areas. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall be responsible for all damages suffered by the Minister and Government resulting from any defect in the systems and works, operational deficiencies/inadequacies, or structural failure.
2. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall operate the said Project and its systems and works in a manner which does not cause any water related and/or environmental problems, including but not limited to problems of erosion, deposition, flooding, and deterioration of water quality and groundwater depletion, in or outside the said Project areas. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall be responsible for any and all damages associated with these problems caused as a result of changes, deficiencies, and inadequacies in the operational procedures by the Permit Holder or its agent(s), subcontractor(s), or consultant(s).
3. If the Permit Holder or its agent(s), subcontractor(s), or consultant(s) fails to perform, fulfil, or observe any of the terms and conditions, or provisions of this Permit, as determined by this Department, the Minister may, without notice, amend, modify, suspend or cancel this Permit in accordance with the *Water Resources Act*.
4. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) indemnify and hold the Minister and Government harmless against any and all liabilities, losses, claims, demands, damages or expenses including legal expenses of any nature whatsoever whether arising in tort, contract, statute, trust or otherwise resulting directly or indirectly from granting this Permit, systems and works in or outside the said Project areas, or any act or omission of the Permit Holder or its agent(s), subcontractor(s), or consultant(s) in or outside the said Project areas, or arising out of a breach or non-performance of any of the terms and conditions, or provisions of this Permit by the Permit Holder or its agent(s), subcontractor(s), or consultant(s).
5. This Permit is subject to all provisions of the *Water Resources Act* and any regulations in effect either at the date of this Permit or hereafter made pursuant thereto or any other relevant legislation enacted by the Province of Newfoundland and Labrador in the future.
6. This Permit shall be construed and interpreted in accordance with the laws of the Province of Newfoundland and Labrador.

- cc: Mr. Don Dicesare, P. Eng.
DMG Consulting Ltd.
34 Main Street
Corner Brook NL A2H 1C3
don.dicesare@dmg.nf.ca
- cc: Ms. Deneen Spracklin, P.Eng.
Environmental Engineer, Drinking Water and Wastewater Section
Water Resources Management Division
Department of Municipal Affairs and Environment
P.O. Box 8700
4th Floor, West Block, Confederation Building
St. John's, NL A1B 4J6
dspracklin@gov.nl.ca
- cc: Mr. Chris Power, P. Eng.
Regional Engineer, Western Regional Office
Department of Municipal Affairs and Environment
6th Floor, Sir Richard Squires Building
P.O. Box 2006
Corner Brook, NL A2H 6J8
ChrisPower@gov.nl.ca
- cc: Ms. Susan Hoddinott (Western/Labrador)
Regional Director
Service NL
PO Box 2006
Corner Brook NL A2H 6J8
SusanHoddinott@gov.nl.ca
- cc: Mr. Chris Blanchard, B.Tech.(Env), ASCT
Environmental Scientist
Water Resources Management Division
Department of Municipal Affairs and Environment
P.O. Box 2006
Corner Brook, NL A2H 6J8
cblancha@gov.nl.ca
- cc: Ms. Carla Hayes, P.Tech
Environmental Scientist , Drinking Water and Wastewater Section
Water Resources Managment Division
Department of Municipal Affairs and Environment
P.O. Box 2006
Corner Brook, NL A2H 6J8
CarlaHayes@gov.nl.ca

Appendix C - Completion Report

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 37, 39

Date: **MAY 29, 2020**

File No: **842.056.1**
Permit No: **WS11054-2020**

Permit Holder: **Town of Roddickton-Bide Arm
P.O. Box 10
Roddickton-Bide Arm, NL
A0K 4P0
roddickton@nf.aibn.com**

Attention: **Ms. Paula Snook**

Re: **Roddickton-Bide Arm - Pumphouse and Chlorination System Upgrades**

Permission was given for : **upgrades to the existing gas chlorination system, the installation of new vertical turbine pumps and VFD control system, pressure transmitters, submersible level transmitters, check valves, isolation valves and related works and appurtenances as described in a technical specification and revised set of drawings numbered 1091-19 (DMAE no. 17-G1-20-00032), sheets LP1, EX1, C1, C2 and P1 as received from DMG Consulting Limited on May 20, 2020.**

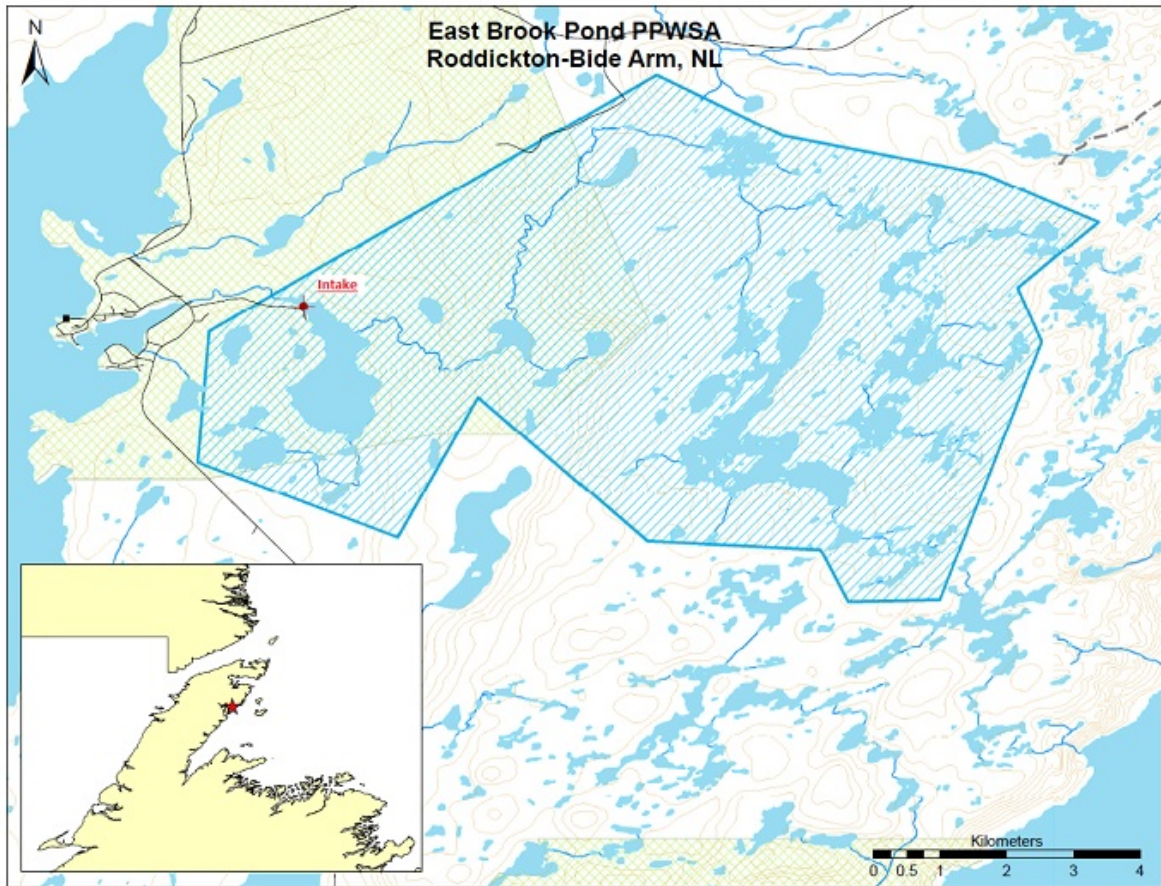
I (the Permit Holder named above or agent authorized to represent the Permit Holder) do hereby certify that the project described above was completed in accordance with the plans and specifications submitted to the Department of Municipal Affairs and Environment and that the work was carried out in strict compliance with the terms and conditions of the Permit issued for this project.

Date: _____ Signature: _____

This completion report must be completed and forwarded to the following address upon completion of the approved work.

Department of Municipal Affairs and Environment
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6

APPENDIX D
Location Map for Permit



Second Attached Image File

