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

Date: **APRIL 19, 2018**

File No: **NDOM18-004**
Permit No: **GW9620-2018**


Permit Holder: **Newco Metal & Auto Recycling**
50 Robin Hood Bay Rd.
St. John's, NL
A1A 5V3

Attention: **Nick Henderson**

Re: **NEWCO Metal & Auto Recycling - Shredder Well - St. John's**

Permission is hereby given for : **Permit Existing Well**

- This Permit does not release the Permit Holder from the obligation to obtain appropriate approvals from other concerned municipal, provincial and federal agencies.
- 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*.
- Failure to comply with the terms and conditions will render this Permit null and void, place the Permit Holder and their agent(s) in violation of the *Water Resources Act* and make the Permit Holder responsible for taking any remedial measures as may be prescribed by this Department.



MINISTER

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Municipal Affairs and Environment

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APPENDIX A
Terms and Conditions for Permit

Non-Domestic (General)

1. The well owner is responsible for compliance with this permit.
2. Water well construction data including Drilled Water Well Record(s) and pumping test results for the well must be attached to the Completion Report.
3. All hazardous materials must not be stored or used within a 50 metre radius of the wellhead.

Non-Domestic (Industrial)

4. Due to the type of materials used/stored and the use of heavy equipment at the site, the construction of the well must include carbon steel casing into the bedrock.
5. Because the site is/may be/may become a relatively high risk area for contamination, the well driller must take what ever added measures necessary to ensure that contaminated surface water, and/or shallow groundwater will not enter the well.

Non-Domestic (Pumping Test)

6. A 24 hour aquifer pumping test is required for the well in accordance with the Water Resources Management Division document Guidelines for Aquifer Pumping Tests. A final report, written by a hydrogeologist or qualified person and providing the information as stated in the guidelines, including chemical analyses of the water, must be forwarded to this department. This report must be submitted with the completion report.
7. Prior to commencing a long-term aquifer test, a step drawdown test must be conducted to estimate the rate that can be maintained by the well for extended periods of time. The step drawdown test should consist of at least 4 steps and each step should be of at least 30 minutes duration. The pumping rates that are used for this test are determined from the driller's estimate of the well yield. If four steps are used, the first should be conducted at a rate of about one-quarter of the well yield estimate provided by the driller. This rate is maintained for 30 to 60 minutes and then the next step is begun without stopping for recovery. Each successive step should be run at a rate that is approximately double the rate of the step prior. The step drawdown test must be evaluated by a qualified professional prior to the constant rate pumping test to evaluate a sustainable pumping rate.
8. Any existing wells in the vicinity of the new wellhead must be monitored during the pumping test. Any changes in water level must be recorded, analyzed, and reported with the completion report.
9. An air lift test is required for a minimum of 60 minutes which will include a water sample at the end for inorganic analysis as per attached parameter list.

Non-Domestic (Water Quality)

10. A minimum of two water samples must be collected from the well at the wellhead during the aquifer pumping test utilizing proper sampling protocol. The first water sample must be collected not less than 30 minutes or more than two hours into the pumping period, and the second or last water sample must be collected during the last hour of the pumping period. Water samples must be submitted to an accredited water analysis laboratory for testing as per the attached parameter list. As a part of the completion report, a copy of the analytical results must be sent to this department.
11. Within 7 days after the well has been completed as a source water supply, a water sample must be collected from the well, before chlorination and/or treatment is applied, utilizing proper sampling protocol, and the sample submitted to an accredited water analysis laboratory for testing as per the attached parameter list. As a part of the completion report, a copy of the water quality analytical results must be submitted to this department.

12. A permanent sampling port is also recommended.
13. Water samples must be collected quarterly from the well utilizing proper sampling protocol, and the samples submitted to an accredited water analysis laboratory for testing as per the attached parameter list. A copy of the water quality analysis must be submitted to this department for approval.
14. Two Total Petroleum Hydrocarbons (TPH) screening samples are required during the aquifer pumping test. The first TPH sample set must be taken just after the first inorganic sample is taken during the first two hours of the pumping test and the second TPH sample must be taken just after the second inorganic sample during the last two hours of the aquifer pumping test. The results of both TPH samples must accompany the inorganic sample results as a part of the well completion report.

Non-Domestic-Finished Wellhead

15. The area immediately surrounding the well must be sloped away from the well to a distance of 5 metres (or less depending on site limitations) in all directions.
16. The wellhead must be completed to a minimum height of 0.6 metres above finished grade.
17. The wellhead must be completed with a double vented (screened) metal vermin-proof well cap with electrical access through the well cap.
18. Water supply from the well must utilize a pitless adaptor installed below the frost line.
19. There must be no holes, slots, or other openings made in the well casing except for the installation of a properly sealed pitless adaptor.
20. If an electrical ground wire or other such attachment to the well casing is necessary, it must be attached to a steel anchor that has been welded to the outside of the well casing.
21. If a well pump is to be suspended, it must be done utilizing a stainless steel cable attached to an industry approved well hanger inside the wellhead.
22. The well casing and finished wellhead must be sealed (water tight) except for the screened vent.
23. If finished outside, the wellhead must not be enclosed in a protective enclosure, finished below ground level, in a concrete pit, or any other such enclosure unless the method of enclosure is approved by this department.

Special Conditions

24. The addition of concrete or steel bollards is required to protect the wellhead. A minimum distance of 1 metre from the wellhead, and no bollard more than a metre apart.

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Municipal Affairs and Environment

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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 and/or Ministerial orders and guidelines, as determined by this Department, the Minister may, after providing ten (10) day notice to the Permit Holder, 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.

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- cc: Amir Ali Khan, Ph.D., P.Eng.
Manager, Water Rights, Investigations and Modelling Section
Water Resources Management Division
Department of Municipal Affairs and Environment
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- cc: Groundwater Section File Copy
- cc: Mohamed Mostafa, Ph.D., P.Eng., CEng MIEI., CPEng MIEAust.
Environmental Engineer, Water Rights, Investigations and Modelling Section
Water Resources Management Division
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MohamedMostafa@gov.nl.ca
- cc: City of St. John's
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Government of Newfoundland and Labrador
Department of Municipal Affairs and Environment
Water Resources Management Division

Appendix C - Completion Report

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

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Attention: **Nick Henderson**

Re: **NEWCO Metal & Auto Recycling - Shredder Well - St. John's**

Permission was given for : **Permit Existing Well**

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