



Ontario

Ministry of
Natural
Resources

Ministère des
Richesses
naturelles

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Aylmer, Ont.
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Tel. 519-773-4747
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Hand Delivered

March 31, 2003

Nichols Gravel Limited
Box 172, Delhi,
Ontario, N4B 2W9

Attention: Mr. Gary Nichols

Dear Mr. Nichols,

**SUBJECT: Licence Reference No. 103717 – Aggregate Resources Act
Pt. Lots 10, 11, & 12, Concession 12, Haldimand County (Walpole)**

Please find attached a new Class "A" Category 2 Licence to operate a quarry under the Aggregates Resources Act.

The Licence Reference Number is 103717 and the effective date of the Licence is March 25, 2003. The Licence has been issued with a condition that states "the maximum number of tonnes of aggregate to be removed from the site in any calendar year is 750,000 tonnes".

Please find attached two copies of the approved site plans dated February 14, 2003, which are now in force for your company's licenced property. Please note that "the acceptance of these site plans by the Ministry of Natural Resources for the purposes of the Aggregate Resources Act does not relieve the licensee from complying with the requirements of other applicable Federal or Provincial Acts, Regulations, orders and operative by-laws.

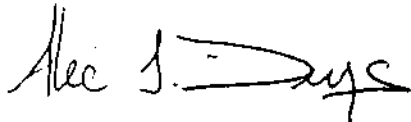
The Licence has been issued subject to a total of fifty-six (56) conditions on the attached Schedules "A" and "B". We have also attached a separate list of ~~conditions~~ ^{AGGREGATE RESOURCES ACT (23)} of the original fifty-six conditions entitled as "Specific Pre-Operational Conditions", which must be satisfied prior to the operation of the quarry or removal of material from the licenced property. Please contact our office regarding the assistance of completing the involved conditions. *P.L.G.*

The subject licenced property was inspected on March 10, 2003, in preparation of issuing the licence. Also attached is a short list of infraction items entitled "Licenced

(2)

Property Infraction Items, that according to your site plans must be satisfied prior to the removal of material from the property.

If you have any further questions regarding these matters, please do not hesitate to contact Paul Cutmore, Aggregate Resources Officer.

A handwritten signature in black ink that reads "Alec S. Denys". The signature is written in a cursive style with a horizontal line through the middle of the last name.

Alec Denys
District Manager

PGCutmore/Encl.

c.c Haldimand County – F. Bauthus
Ministry of Transportation – G. Brunskill
Ministry of Labour
TOARC, Burlington - L. Peterson



Ministry of **Ministère des**
 Natural **Richesses**
 Resources **naturelles**
 Ontario

LICENCE
 Aggregate Resources Act
 PERMIS

Licence No. _____
 No du permis _____ **103717**

Loi sur les ressources en agrégats

New Licence

pursuant to the Aggregate Resources Act and Regulations thereunder, and subject to the limitations thereof and to the conditions of the licence and the
 requirements of the site plan,

conformément à la Loi de 1997 sur les ressources en agrégats et à ses règlements, et sujet aux restrictions qu'ils comportent, aux conditions d'octroi
 des permis et aux exigences du plan du site,

Class _____ licence is issued to:
 nous délivrons ce permis de classe: **A** à:

NICHOLS GRAVEL LIMITED
BOX 172
DELHI, ON
CANADA
N4B 2W9

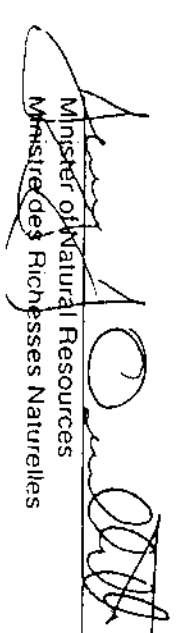
operate a **Quarry** on a **93.97** hectare site located in:
 exploiter un/une **Quarry** sur le terrain de **93.97** hectares situé à l'endroit suivant:

10, 11, & 12 **12** **WALPOLE** **HALDIMAND COUNTY** **HALDIMAND-NORFOLK R**

Concession	Section	Geographic Township	Local Municipality	County / Regional Municipality / District

licence is subject to the following conditions:
 permis est assujéti aux conditions suivantes: As shown on attached Schedules "A" & "B"

give the **25th** day of **MARCH**
 que le **25th** jour de **MARCH** **2003**


 Minister of Natural Resources
 Ministre des Richesses Naturelles

Specific Pre-Operational Conditions
Nichols Gravel Limited – Licence No. 103717

March 31, 2003

The following licence conditions must be satisfactorily completed prior to the commencement of quarry operations or the removal of quarried material from the licenced property. The condition numbers relate exactly to the list attached to the licence:

5. A Spills Contingency Program will be developed prior to site preparation.
7. If required, a Certificate of Approval will be obtained for the discharge system should water be discharged off site.
8. If required, a Certificate of Approval will be obtained for processing equipment to be used on site.
9. If required, a Permit to Take Water will be obtained for utilizing ground and/or surface water.
10. The licensee will monitor all blasts for ground vibrations and blast overpressure and will operate to ensure compliance with current provincial guidelines.
12. All blast monitoring reports must be retained by the licensee and made available upon request by the Ministry of Natural Resources for audit purposes.
14. All residences within 300 metres of the edge of the extraction area shall be thoroughly inspected by the licensee's consultant prior to the start of quarry blasting operations (with the owners permission)- It is recommended that as extraction proceeds north in Area IA, that the closest homes (identified as R1, R2 and R3 on the site plans) be checked within the first five years of operation and that additional checks be phased in for other homes on the perimeter of the site.
15. The first six quarry blasts shall be monitored for both vibration and over pressure (noise) at a minimum of four locations for each blast in order to accumulate site-specific data quickly. This data will be used to plan subsequent blasting operations. This will also allow- subsequent blasts to be designed specifically for this location air well within MOE Guidelines.. All subsequent blasts shall be monitored at the closest buildings to the blast size with at least two seismographs.
17. Careful blast records shall be maintained. The body of the blast, report should contain the information as recommended by MOE.
20. The monitoring results of the first six quarry blasts monitored at a minimum of 4 locations in accordance with the recommendations of the Licensee's consultant, along with the consultant's analysis and recommendations, shall be submitted to the local offices of MNR and MOE.

(2)

25. Residents within 300 metres of the quarry site, which will have been thoroughly inspected in accordance with the recommendations of the Licensee's consultant, shall be re-examined following the initial six blasting operations. Copies of the original examination records and of the re-examination results shall be submitted to the property owner concerned.
27. The licensee will provide for the installation of monitoring well nests with upgradient, downgradient, and cross-gradient wells at the top of the Bois Blanc Formation, to the base of the Bois Blanc Formation and into the Bertie Formation at the property boundaries. It is expected that BH-1, BH-2, and the Barn well could be incorporated as part of the three well nests. These wells and new well locations would have to be accessed and instrumented so that they monitor discreet zones within the underlying bedrock
29. Upon issuance of the quarry license, the licensee's consultant will commence, with the permission of the property owner, monitoring of all water wells within 120 m of the quarry property boundary, and the wells presently owned by D. Wilson, D. Greenfield and M. Roulston. This radius is based on the projected water level drawdown of 3.0 m in the vicinity of the quarry after 25 years of quarry operation - base case scenario. Water level monitoring will be conducted three times a year. As the life of the quarry proceeds, and the data is collected and evaluated over time, the adequacy and requirement for this extent of monitoring shall be reviewed in the annual report.
37. All crushing and screening shall be done in the central processing area with the processing plant at the pit floor, elevation not more than 206m a.s.l. acoustical screening should be in place as specified whenever a crushing/screening plant is operating. The screening shall be in the form of stockpiles, berms, a quarry face, other barrier.
38. If processing is required during the start-up phase before the C.P.A on the pit floor has been prepared, an interim crushing/screening plant may be installed at an intermediate elevation, as low as practical, with a face and berm or other form of barrier not less than 7m above the crusher floor level and not more than 15m from the crusher in an arc from the southwest to southeast.
45. The licensee shall conduct surface water monitoring of quarry discharges to the Harrop Drain. The Licensee's consultant will conduct quarterly flow monitoring of the Harrop Drain upstream of the site, at the site, and downstream of the site. At a minimum one quarterly monitoring event will coincide with the wet season (early spring). Water quality monitoring of the Harrop Drain will be undertaken by the licensee's consultant, upstream of the site, at the site, and downstream of the site

(3)

45. (Cont.) once per year. The following parameters will be monitored pH, conductivity, alkalinity, calcium, magnesium, sodium, potassium, chloride, sulphate, nitrate, nitrite, un-ionized ammonia, iron, manganese, copper, zinc, orthophosphate, silica, turbidity, total suspended solids, dissolved organic carbon, hardness, and oil and grease.
49. The licensee will ensure that the internal water collection system within the quarry will incorporate component storage for groundwater and surface runoff. The surface runoff internal to the quarry will be designed such that internal quarrying, buildings/roads, and actively used areas be set above and outside of the limits of flooding.
50. External berming will be constructed around the quarry to prevent any surface water spillage into the quarry, any surface water collected external to the quarry be directed to its existing outlet.
51. The licensee will ensure that water polishing measures will be incorporated into the internal collection system, in order that sediment and fines from the quarrying operation are settled out prior to discharge to the Harrop Drain.
52. The licensee will ensure that the stormwater holding system be designed such that sufficient capacity is provided to hold a 100 year storm with zero discharge. The dewatering rate (due to any combination of groundwater and stormwater inflows) is not to exceed the peak flow rate which would naturally emanate from the subject property during a 25mm depth 24 hour rainfall event under existing land use.
53. The Licensee will obtain any required approvals, pursuant to the provisions of the Drainage Act, for discharge of water to the Harrop Drain.
55. All berms shall be graded smooth to a stable (2:1) slope and seeded to prevent erosion and to reduce dust. Wherever possible suitable plants be established such as Crown Vetch (*Coronilla varia*) or other suitable seed mixtures to promote a deep root system and enhance soil structure. Seed mixture may be modified due to availability and soil structure. Any seed mixture shall be designed to limit the propagation of weed species onto adjacent agricultural lands. All vegetation shall be maintained in a healthy, vigorous growing condition for the lifetime of the license.

ADDITIONAL CONDITIONS FOR LICENCE NO. 103717 - SCHEDULE "B"

33. Should an independent investigation of a water quantity and quality concern be verified by the mechanism described above, the radius of monitoring will be extended a further 120 metres, or to the next water well to a maximum distance of 240 metres, in the direction of the affected water well. Should subsequent extraction and monitoring at some time confirm a persistent impact to a water well at the expanded 240 m radius, the radius of monitoring may then be extended to 500 metres from the quarry property boundary, in the direction of the affected well.

The requirements and obligations set out in paragraph 31 herein, shall apply to the property owners in the expanded monitoring radius.

Water well owners within the 120 metre radius, or expanded radius, from the property boundary must allow their wells to be part of the monitoring program in order to be eligible for consideration regarding potential disruption of water supplies. If, over time, the extent of the area of monitoring changes, the number of wells to be monitored will be expanded accordingly.

34. A trigger mechanism will be established based on the expected behavior of the groundwater regime as predicted by the dewatering impact assessment. There are two aspects to the assessment that will be used as trigger mechanisms: The flow rate from dewatering operations; and The water level impacts in the vicinity of the quarry.

In addition, the condition (13) concerning quarry pond impacts as agreed to by Nichols and the New Credit first Nation may be considered a trigger mechanism.

Should either of the above be found to deviate appreciably from the impacts as predicted from the dewatering impact assessment, the groundwater flow regime shall be re-evaluated, and adjustment and a new simulation of the groundwater flow model should be undertaken. If the reviewing body (e.g. MOE) concludes that significant impacts are identified in the re-assessment, the appropriate changes to the quarry operation, monitoring program, and/or contingency plans shall be undertaken.

35. An annual report will be prepared by the licensee's consultant that summarizes the results of monitoring, evaluates whether trigger mechanisms are being approached, and provides a prediction on whether there is the potential for the trigger mechanism to be enacted in the foreseeable future. This report will be filed as part of the annual compliance report pursuant to the provisions of the Aggregate Resources Act.

ADDITIONAL CONDITIONS FOR LICENCE NO. 103717 - SCHEDULE "B"

36. Any proposed changes to the Plans shall be subject to approval by an acoustical engineer qualified in aggregate noise technology, with respect to compliance with the applicable noise criteria.
37. All crushing and screening shall be done in the central processing area with the processing plant at the pit floor, elevation not more than 206m a.s.l. acoustical screening should be in place as specified whenever a crushing/screening plant is operating. The screening shall be in the form of stockpiles, berms, a quarry face, or other barrier.
38. If processing is required during the start-up phase before the C.P.A on the pit floor has been prepared, an interim crushing/screening plant may be installed at an intermediate elevation, as low as practical, with a face and berm or other form of barrier not less than 7m above the crusher floor level and not more than 15m from the crusher in an arc from the southwest to southeast.
39. It is recommended that the preparatory work that is close to residential premises, including berm construction, topsoil stripping, and rehabilitation work be done during cool weather when windows are normally closed and noise sensitivity is reduced.
40. Production machinery used on the site shall have noise emission levels no higher than Table 6.1 of the Aerocoustic report.
41. All equipment used on site shall be properly maintained to ensure that noise levels remain within the specified limits.
42. Alternative production equipment and/or methods may be substituted provided a professional engineer qualified in aggregate industry acoustics certifies that no increase in the noise impact predicted in the Aerocoustic report will result from the change.
43. Extension of excavation beyond the recommended interim limits may be considered acceptable if at some future time additional or alternative measures to further reduce noise impact are available and if a professional engineer qualified in aggregate industry acoustics certifies that the operation as proposed will comply with the noise criteria then in effect.
44. The licensee shall maintain a log of all complaints received regarding the quarry, which will include the nature of the complaint, weather conditions, the location, time, date, complainant's name and remedial action taken by the licensee in response to the complaint. A copy of this log will be available to the Ministry of Natural Resources, and the Municipality.

ADDITIONAL CONDITIONS FOR LICENCE NO. 103717 - SCHEDULE "B"

45. The licensee shall conduct surface water monitoring of quarry discharges to the Harrop Drain. The Licensee's consultant will conduct quarterly flow monitoring of the Harrop Drain upstream of the site, at the site, and downstream of the site. At a minimum one quarterly monitoring event will coincide with the wet season (early spring). Water quality monitoring of the Harrop Drain will be undertaken by the licensee's consultant, upstream of the site, at the site, and downstream of the site once per year. The following parameters will be monitored pH, conductivity, alkalinity, calcium, magnesium, sodium, potassium, chloride, sulphate, nitrate, nitrite, un-ionized ammonia, iron, manganese, copper, zinc, orthophosphate, silica, turbidity, total suspended solids, dissolved organic carbon, hardness, and oil and grease.
46. Sump water discharge quality will be monitored annually during the summer for the following parameters: temperature, total suspended solids, oil and grease, un-ionized ammonia and pH.
47. The results of surface water quality and quantity monitoring will be reported in the annual monitoring report. The Licensee shall record volumes of sump discharge on a monthly basis. The duration and frequency of pumping will be determined primarily by operational needs and climatic conditions. To prevent downstream flooding, following storm events, pumping will be regulated to occur after in-channel flow peaks.
48. The licensee shall monitor the quarry face on a monthly basis for areas exhibiting excess inflow into the quarry. The monthly assessment will be of a qualitative nature. The results of this monitoring will be reported in the annual report. In the event of any significant increase of inflow of water into the quarry that adversely affects surface water bodies, or groundwater, the licensee shall contact the Ministry of the Environment and take remedial action. The initial remedial action will involve rerouting seepage back to the affected water body and increased monitoring of the seep to a daily frequency.
49. The licensee will ensure that the internal water collection system within the quarry will incorporate component storage for groundwater and surface runoff. The surface runoff internal to the quarry will be designed such that internal quarrying, buildings/roads, and actively used areas be set above and outside of the limits of flooding.
50. External berming will be constructed around the quarry to prevent any surface water spillage into the quarry, any surface water collected external to the quarry be directed to its existing outlet.
51. The licensee will ensure that water polishing measures will be incorporated into the internal collection system, in order that sediment and fines from the quarrying operation are settled out prior to discharge to the Harrop Drain.

ADDITIONAL CONDITIONS FOR LICENCE NO. 103717 - SCHEDULE "B"

52. The licensee will ensure that the stormwater holding system be designed such that sufficient capacity is provided to hold a 100 year storm with zero discharge. The dewatering rate (due to any combination of groundwater and stormwater inflows) is not to exceed the peak flow rate which would naturally emanate from the subject property during a 25mm depth 24 hour rainfall event under existing land use.
53. The Licensee will obtain any required approvals, pursuant to the provisions of the Drainage Act, for discharge of water to the Harrop Drain.
54. That the Aggregate Resources Act Site Plans be amended to provide for an access, of sufficient width and clearance (12 feet) along the eastern property line, to ensure the ability of a vehicle to access and maintain the existing Gas well and infrastructure shown on the site plans.
55. All berms shall be graded smooth to a stable (2:1) slope and seeded to prevent erosion and to reduce dust. Wherever possible suitable plants be established such as Crown Vetch (*Coronilla varia*) or other suitable seed mixtures to promote a deep root system and enhance soil structure. Seed mixture may be modified due to availability and soil structure. Any seed mixture shall be designed to limit the propagation of weed species onto adjacent agricultural lands. All vegetation shall be maintained in a healthy, vigorous growing condition for the lifetime of the license.
56. The applicant shall obtain a long-term Permit to Take Water issued by the Ministry of the Environment.

An Inspection of your licenced property was conducted on March 10, 2003. According to the accompanying site plans the following items require improvement or correction prior to commencing quarrying operations or removal of material from the property:

- 1) Perimeter fencing is required around Phase 1a, 1b and 2, as detailed on the site plan.
- 2) The interim berms surrounding the quarry area required sloping and seeding, in order to reduce dust in the local area. Interim berm height should be higher as per site plan details (minimum 6m above bedrock floor).
- 3) The fuel tank existing in the quarry area should be relocated near the scale house as specified in the site plan.
- 4) The roadway entrance and weigh scales should be moved eastward of the existing location, as an acoustic berm is required along the boundary of the adjacent farm residence.