

MOHAWK COUNCIL OF KAHNAWAKE QUARRY

ENVIRONMENTAL CONTROL BY-LAW #1

A By-law to make provision for the regulation of the operation of quarries on the Kahnawake Indian Reserve at Kahnawake and for the implementation of adequate environmental controls by the operators of those quarries.

Whereas the Mohawk Council of Kahnawake is empowered under Section 81(a) of the Indian Act to provide for the health of residents on the reserve, and under Section 81(c) to provide for the prevention of nuisances.

And Whereas Council feels that the environmental pollution caused by the operation of quarries on the Reserve are hazardous to the health of residents and cause an unnecessary nuisance on the reserve due to their manner of operation and desire to bring that operation under clear, concise environmental controls.

Now therefore, the Council of Kahnawake in open meeting assembled enacts as follows:

1. For all intents and purposes this by-law may be cited as the Mohawk Council of Kahnawake Quarry Environmental Control By-law No. 1, 1980.
2. An operator of a pit or quarry on the reserve shall conform immediately with the following requirements:

(A) Water Pollution Control

(1) Concentration of contaminants: The water discharged into the environment through the operation of a pit or quarry or by a crushing or screening process must not contain a concentration of contaminants in excess of:

- (a) 15 mg/l of oil, grease, tar of a mineral origin;  
or
- (b) 25 mg/l of suspended matter.

(2) pH: The pH of water discharged into the environment through the operation of a pit or quarry or by a crushing or screening process must be between 5.5 and 9.5.

(3) Methods of analysis: The analysis required to ensure the application of sections 22 and 23 shall be performed in accordance with the following methods described in the 14th edition (1975) of the Standard Methods for the Examination of Water and Waste Water published jointly by the American Public Health Association, the American Water Works Association and the Water Pollution Control Federation:

- (a) oil and grease shall be determined according to the provisions of the method of section 502 A entitled Partition - Gravimetric Method or by the method in section 502 B entitled Partition - Infrared Method (Tentative);
- (b) suspended matter shall be determined according to the provisions of the method in section 208 D entitled Total Non-filtrable Residue Dried at 103-105 C (Total Suspended Matter);

(c) pH shall be determined according to the method in section 424 entitled pH Value.

(B) Air Pollution Control

(1) Emission standards: Crushers, dryers, elevators or screens used in a quarry must be individually or collectively confined in an enclosed space and equipped with exhaust ducts leading to one or several dust collectors in such a way that particulate matter is not emitted in concentrations exceeding  $50 \text{ mg/m}^3$  and in such a way that the total emission of particulate matter from all equipment complies with the standards prescribed in Schedule "A".

This section shall apply mutatis mutandis to the conveyors used in a quarry to transport the aggregate material the granulometry of which falls below number 4 according to the method of determination entitled: Test Sieves: Woven Metal Cloth, Perforated Plate - Nominal Sizes of Apertures, published by the Bureau de normalisation du Québec, publication number BNQ 1530-360-1976. This also applies to the feeding and dumping points of aggregate material from all the crushers, dryers, elevators, conveyors and screens independent of the granulometry of the aggregate material, except for the transfer or the fall of aggregate material from a conveyor to an open air stockpile. Aggregate material is defined as any matter of a mineral nature extracted from a pit or quarry.

(2) Transfer points: In a case where the transfer or the free fall of aggregate material from a conveyor to an open air stockpile or from a bin to a truck in a quarry entails the emission of dust visible more than 2 metres from the source of emission, the operator

must take the required measures to ensure that:

(a) these transfer points be confined in an enclosed space and equipped with exhaust ducts for dust in the manner indicated in (1) above;

(b) the height of the free fall of the aggregate material deposited by mobile loaders, trucks, or conveyors is less than 2 metres.

(3) Sampling method: The sampling method for particulate matter emission used for the purpose of applying sections (1), (3) and (7) is that published by Environment Canada, Standard Reference Methods for Source Testing: Measurement of Emissions of Particulates from Stationary Sources, numbered EPS-1AP-74-1.

(4) Pits: Sections (1), (2) and (3) shall not apply to crushing or screening equipment for the treatment of aggregate material from pits.

However, such equipment shall not emit into the air dust the degree of opacity of which exceeds 20%, as determined according to the measurement scale and method prescribed in Schedule "B" or according to the methods described in the work entitled: Standard of Performance for New Stationary Sources, Opacity Provision published in the Federal Register of the United States of America, part II volume 39, number 219 dated 12 November 1974 by the American Environmental Protection Agency (E.P.A.).

(5) Obligation: Any equipment used or installed in a pit or quarry for the purposes of reducing or preventing the emission of contaminants into the environment shall at all times be in working condition and shall operate at optimum efficiency during the production hours of the plant, even if this equipment causes a reduction in the emission of contaminants that is well within these standards.

(6) Secondary sources of contamination: Where the emissions of dust from access roads, parking areas, traffic zones or piles of aggregate material from a pit or quarry produce one or other of the effects enumerated in fine in the second paragraph of section 20 of the Environment Quality Act, S.Q. c. 49, the operator must take the required measures to prevent such emissions in order to cause such effects to disappear.

(7) Drilling: Dust emission from drilling operations carried out in a quarry must be controlled by the installation of a dust collecting apparatus linked to a dust collector system allowing not more than  $50 \text{ mg/m}^3$  of particulate matter to be emitted into the atmosphere.

(8) Recuperated dust: Dust recuperated by dust collector systems must be handled and transported in such a way that there will be no loss of dust into the atmosphere visible more than 2 metres from the sources of emission. Where such dust is not recycled, it must be stored, deposited or eliminated on the ground, provided the required measures are taken to prevent any issuance of dust into the atmosphere visible more than 2 metres from the source of emission.

3. Every person who offends against any of the provisions of this By-law, or who suffers or permits any act or thing to be done in contravention or violation of any provisions of this By-law, or does any act or thing which violates any of the provisions of this By-law, shall be deemed to have committed an offense under this By-law and shall be liable on conviction, to a fine or penalty of not more than \$100.00 or imprisonment for a term not exceeding thirty days, or both, pursuant to section 81(r) of the Indian Act.

Approved and passed at a duly convened meeting of the Mohawk Council of the Kahnawake at Caughnawaga, Quebec on the 29th day of August 1980.

Chief Andrew J. Delisle  
Grand Chief

Joseph Norton  
Assistant Grand Chief

Walter Goodleaf

June Delisle

Ida Goodleaf

Paul G. Dear

Allan R. Patton

Richard White

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Joe Stacey

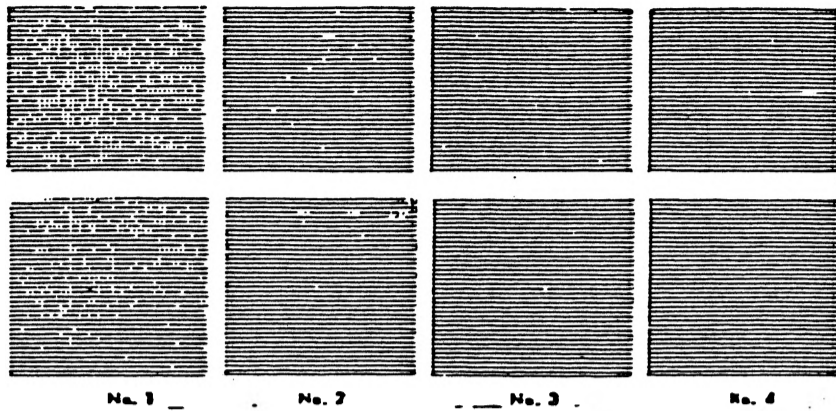
SCHEDULE "A"

EMISSION STANDARDS FOR EQUIPMENT USED IN A QUARRY  
(particulate matters)

Production rate (metric tons/hr)	Standards of emission (kg/hr)
30,0	13,7
32,5	13,9
35,0	14,0
37,5	14,2
40,0	14,3
42,5	14,5
45,0	14,6
47,5	14,8
50,0	14,9
52,5	15,0
55,0	15,1
57,5	15,2
60,0	15,3
62,5	15,4
65,0	15,5
67,5	15,6
70,0	15,7
72,5	15,8
75,0	15,9
77,5	16,0
80,0	16,0
82,5	16,1
85,0	16,2
87,5	16,3
90,0	16,3
92,5	16,4
95,0	16,5
97,5	16,6
100,0	16,6
125,0	17,2
150,0	17,7
175,0	18,2
200,0	18,6
225,0	18,9
250,0	19,3
275,0	19,6
300,0	19,8
325,0	20,1
350,0	20,3
375,0	20,5
400,0	20,8
425,0	21,0
450,0	21,2
475,0	21,3
500,0	21,5

SCHEDULE "B"

SCALE FOR THE MEASUREMENT  
OF THE OPACITY OF DUST EMISSION  
INTO THE ATMOSPHERE



MICRO-RINGELMANN SCALE  
Environment Protection Service  
GOVERNMENT OF QUEBEC

Instructions

1. Select an observation point situated at more than 30 metres and less than 400 metres from the source of emission.
2. Avoid looking towards bright sunlight and select an observation angle free of dark objects in the background.
3. Hold the chart at arm's length and look at the emission through the slit.
4. Record the scale number best corresponding to the opacity of the emissions, including a 0 number corresponding to white on white.
5. To calculate the opacity of an emission, record shades of opacity from the scale and use the following formula:

$$P = \frac{\text{NUE at opacity no. 1} \times 20\%}{\text{the number of observations}}$$

where P represents the percentage opacity of the emission and NUE the number of equivalent units.

The number on each numbered shade represents a comparable number of equivalent units.