

Ottawa, 1 August, 1951.

MEETING HELD IN ROOM 101 OF THE NORLITE BUILDING, JULY 30, 1951, TO DISCUSS THE ARSENIC PROBLEM AT YELLOWKNIFE AS THE RESULT OF THE PROPOSAL OF NEGUS MINES LIMITED TO COMMENCE ROASTING OPERATIONS.

The meeting opened at 2 p.m. with Mr. G.E.B. Sinclair, Director, Northern Administration and Lands Branch, as chairman. The following were present:

Dr. K. Kay, Department of National Health and Welfare  
 Mr. J.R. Menzies, Department of National Health and Welfare  
 Mr. R.J. Traill, Department of Mines and Technical Surveys  
 Dr. K.W. Downes, Department of Mines and Technical Surveys  
 Mr. C.S. Parsons, Department of Mines and Technical Surveys  
 Major D.M. MacKay, Department of Citizenship and Immigration  
 Mr. C.K. LeCapelain and Mr. J.W.K. Lock, Department of Resources and Development.

Col. F.J.G. Cunningham, Deputy Commissioner of the Northwest Territories was unable to attend.

2. The chairman referred to the minutes of the previous meeting held on June 1, 1951, and letters sent to all interested parties, including Mr. J.G. McNiven, Manager, Negus Mines Limited. The committee was supplied with the report prepared by Dr. K.W. Downes, Mines Branch, which was concurred in by Messrs. Kay, Christie, and Homulos. In preparing this report Dr. Downes also had the benefit of a discussion with Dr. C.L. Stanton, Medical Officer of Health, Yellowknife. The report covered the investigation at Yellowknife into the proposal of Negus Mines Limited to commence roasting arsenic bearing ore. Negus are considering the adoption of the impinger system used by Con Mine to collect arsenic from the roaster fumes with the intention of depositing the resulting slurry in a sealed-off rock basin on the Con property. The site would be further removed from Yellowknife than would be possible on Negus property. It remains for the Consolidated Mining and Smelting Company of Canada to agree. This proposal was put forward by Negus subsequent to discussion with Messrs. Christie, Homulos, Downes, and Kay as to the risks involved in underground storage and above ground basin storage.

3. It was agreed that:

(1) The Cottrell collection plant and disposal of dry arsenic tri-oxide in an underground permafrost area, as adopted by Giant, offered the least objection from the public health standpoint;

(2) The disposal of the arsenic bearing slurry by Consolidated Mining and Smelting Company of Canada Limited in a sealed-off surface rock depression had yet to be proved satisfactory; more extensive tests must be made by drilled holes around the circumference of the basin and by underground tests to determine whether ground water seepage contains arsenic;

(3) In view of the permission given to Con Mine, mentioned in (2) above, it would be difficult to refuse Negus the same right to experiment with Con's collection and disposal system, though it was unanimously agreed that Negus or any other mine should not



be permitted to commence roasting operations until an adequate collection plant had been installed and evidence produced by a reliable geologist that the disposal basin selected could be reasonably expected to take care of the slurry without seepage. This stand was taken in as much as the collection and disposal problem, as related to arsenic, would be largely under control by September 1951, when the Giant Cottrell plant is expected to be in operation; and, that under the circumstances any uncontrolled roasting operations would mean a renewal of the same arsenic hazard which prevailed prior to the anticipated date of collection at Giant.

(4) A survey be made in September 1951 by the Department of National Health and Welfare (Industrial Health and Public Health Engineering Divisions) with the co-operation of officers of the Department of Mines and Technical Surveys and the Department of Resources and Development, to co-ordinate the tests being made by the various mining companies, and to institute such additional tests to determine the amount of seepage, if any, from arsenic storage and its effect upon the water supply for Yellowknife, including lakes in the vicinity;

(5) A modified survey be made by the same agencies before run-off in 1952, say during the month of March. This investigation to give a comparison with conditions which prevailed in the spring of 1951 when the death of an Indian child was reported to be due to arsenical poisoning.

(6) In these investigations the mining companies are to understand that while all reasonable technical assistance is to be given by specialists in the government departments concerned, the responsibility is with the companies to provide a method of collection from stack fumes and the disposal of the resultant arsenic tri-oxide in a manner which will adequately protect public health.