

## FALCONBRIDGE NICKEL MINES LIMITED

INTER-OFFICE MEMORANDUM

DATE: June 22, 1978

TO: W.A. Moore

COPIES TO: P.J. Raleigh, D.J. Emery, K. Morton

FROM: K. Morton

SUBJECT: TOURED KOPPERS CORP. - CONLEY PLANT  
FOREST PRODUCTS DIVISION, ATLANTA, Ga.

Talked with:	Tom Beatty	Manager Operations
	Ken Cagan	Manager, Development Section
	Rick Wahlert	Manager, Conley Plant
	Frank Boge	Manager Engineering
		Special Wood Chem. Division
	Ace Marsden	Consultant, Project Manager
	Lynwood Harr	District Representative, Process
		Equipment Division (Sprout Waldron)

Their slurry mixing system is conventional with bags or drums of material being lifted to the top of the tanks (12 ft.) and hand dumped into the agitators. They intend to install a 4" flexible screw conveyor (Flexifeed, Automated Industrial Machines, Lodi, New Jersey) to handle these dry materials. They are required to wash out their drums just as we are with cyanide drums. For this purpose they have a automatic can washer (Air Void Can Washer, Vacuum Can Co., Chicago, Ill.). Materials being handled in this process are copper oxide and chromium oxide.

Their arsenic trioxide car unloading and storage facility employs long radius elbows, 6" steel pipe, negative pressure throughout and a number of rotary valves. They also use what is called a "Martin Boot Lift" which connects to the bottom of the hopper car and seals the system (poor fit, requires stuffing with foam rubber strips). If they purchase hopper cars of their own design, they will ensure a good fit. This system could presumably be used for unloading trucks as well. The hoppers in the system are provided with air shakedown pads (cone angle 70°) and the rotary valves have compressed air lines tied in at two points immediately above the valve and two points immediately below the valve to blow down packed material.

The vacuum pressure used for unloading the cars is drawn through a cyclone on top of their storage silo, the cyclone discharges into the silo and the air is recycled through the vacuum system. Relatively clean air is passed through a scrubber prior to being discharged up the stack at 5-6 mg std/m<sup>3</sup> As.

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The vacuum pressure used in the unloading system is 9" Hg. This system allows unloading a 126,000 lb load in 14 hours.

Their arsenic mixing room is continuously exhausted to atmosphere but occupants of the room must wear respirators. This room is adjacent to and connected with the car unloading room by an open walkway. There is no ventilation in the car unloading room and it is kept under negative pressure by the exhaust fans in the arsenic mixing room.

When unloading cars, their only operator must wear a dust suit similar to the heavy rubber suits we originally checked out. Their suits are not quite that heavy but they are cumbersome with built in boots and dust tight wristlets. These suits are provided by MSA and they may be slightly more dust proof than our own suits. They have an external air supply (no filter) which passes through a small heat exchanger. Hot air is exhausted outside the suit while cool air is admitted to the head and extremities. They have not monitored the dust exposure inside the suit but they are presently initialing a more or less continuous monitoring program. They do not use a cyclone on their sampler as 100% of the dust handled is respirable.

Dust suit MSA TOMAC PVC  
garment # CO2-930

- Negotiations -

1. They want a 5 year guaranteed supply, they anticipate expansion in consumption of 10%/year.
2. Will take 100% of our production and possibly more as they are considering marketing the arsenic constituent of wood preservatives to other users. We should sample our storage vaults for grade, physical characteristics and handling and tonnage available.
3. Koppers will supply all capital equipment (cost 1/2 to 3/4 million). We are to provide labour for transfer of material to their storage silo and routine maintenance of their facility.
4. They will prepare a letter of intent and a draft contract to be sent to P.J. Raleigh in 2-3 weeks. Their G.M. wishes to visit the site early in July. (accompanied by T. Beatty)
5. They want material availability early in the first quarter of 1979. (Before Jan. 79 if possible) They want agreement in letter form within 6 weeks in order to conclude negotiations with French and Swedish suppliers and ASARCO.

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6. Our proposed price was 3¢/lb. of  $\text{As}_2\text{O}_3$  equivalent plus 1/2 net value of gold recovered if treatment is possible. (Gold in dust totals 1 - 1.5 oz./day.)
7. They want us to oversee negotiations with CPR, EPS, MOT, Alberta environmental agencies and whoever else gets involved in Canada. Their rail cars etc., are acceptable to US D.O.T.

Note - P.J. Raleigh contemplates setting up a Canadian Arsenic pooling facility administered by Giant. This As would be blended if necessary and shipped to Koppers as the marketing agent. This would provide an assured supply of As for at least the five years of our agreement. Sources of supply would include Campbell Red Lake, Giant and possibly Dickinson.

K. Morton

KM/ft

