FILE NAME: Mine Safety Appliances (MSA)

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Research & Engineering Center
April 12, 1972

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MEMORANDUM:

cc: C. L. Sheckler
S. Speil
G. D. Torrance

RESPIRATORS: WELSH 7165 DISPOSABLE VS DUSTFOE 77 PERMANENT TYPE

C. Sheckler, S. Speil and G. A. Wall discussed respirators on 4/7/72. The purpose of the meeting was to review existing data and explore possible approaches to prove that the Welsh 7165 is more efficient and comfortable than older, heavier respirators, as typified by the Dustfoe 77, so as to find justification to reduce point assignments made under Factor "Surroundings" in Job Evaluation, as well as 10% Respirator Allowance in Wage Incentive Standards, when respirators are required to be worn.

I. The respirator testing program, sponsored by J-M at McGill University, proves that the Welsh 7185 is both more efficient and less uncomfortable than the Dustfoe 77.

	Cond. I (1-25 Fibers)	
	Welsh 7165	Dustfoe 77
Efficiency - Gravametric	94.3	85.3
- Fiber count	90.2	81.5
Resistance to Breathing (Pressure drop across filter)	.84-.90*	.22-.40
Overall Evaluation		
Level of dust concentration	13.56	24.28
Efficiency	90.2%	81.5%
Ease of breathing	99.94	99.82
Tightness eff. (no leaks)	96.3	94.3

* Finding is inconsistent with other tests. McGill should run a verification test.

C. Sheckler and S. Speil stated that they could build a convincing story, using the McGill test data, as to the benefits of using the Welsh 7165.

II. There is need for a "people comfort" test to back up the McGill test results. All present agreed that a test, conducted by J-M engineers, using salaried employees, would be suspect, and that a similar program using hourly employees in J-M plants was undesirable.

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RESPIRATORS

C. Sheckler suggested that R. Stapleton might be asked to conduct a test, using non-union labor in contract units. A test program would be developed and a questionnaire set up, so that groups of craftsmen would wear each type of mask and respond as to their findings. Such a program would involve construction workers, rather than industrial workers.

J-M also might contract, with an outside institution, such as the Industrial Health Foundation, to conduct an impartial, outside study following critera established by J-M as to test program, time limits, number of people involved, questionnaire responses, etc. Such a program might cost $5,000 - $10,000.

III. It was agreed that J-M has many sales points which would be helpful in discussing allowances for respirator usage with J-M unions:

A. The Welsh mask is more expensive. It costs $1.75 for 1-day use vs $7.50 for a permanent mask plus $.35 for a replaceable filter.

B. Each man gets a new, personal mask each day. It is clean and sterile.

C. The Welsh respirator is more efficient in protecting the health of the wearer.

D. It is also lighter in weight, less uncomfortable to wear, easier to breathe through, and generates less condensation. The wearer's field of vision is increased, particularly when glasses are also worn.

IV. It was agreed that:

A. With new Bureau of Labor regulations expected on June 6, prompt decision as to program required and action on the program is needed.

B. Labor Relations advice should be secured as to salability of reduced allowances to unions (especially at Manville plant) if right information is made available.

C. If a "people comfort" study is undertaken, all concerned should cooperate in establishing the test criterion, program and questionnaire.

VI. C. D. Torrance expects to review this matter with J. E. Hesse and A. B. Marchant in Denver on April 11.

G. A. Wall
Corporate Industrial Engineering