

DETERMINATION OF DAILY EXPOSURE FACTOR

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All jobs performed by the Cottrell Operators have been assigned arsenic exposure ratings in the range 0-4. These ratings are accumulated in increments of 15 minutes, thus a job with an arsenic exposure rating of 3 (eg patching Cottrell hopper) lasting 1½ hours would accumulate a total arsenic exposure factor of 18

$$\begin{array}{rcccl} \text{Arsenic exposure} & & & & \\ \text{rating} & \times & \text{number of 15 min.} & \times & \text{exposure} \\ & & \text{periods} & & \text{factor} \\ 3 & \times & 6 & = & 18 \end{array}$$

Theoretically, a full eight hour workday could rate a total exposure factor of 128 but it is unlikely that the actual exposure factor would exceed 100 even under the worst conditions. (Eg Baghouse change-1 hour in preparation setting up monitors, preparing tools, filling out forms etc.

6 hours working in baghouse.

1 hour lunch, coffee, clean up tools, shower etc.)

This determination does not take into account the protective equipment being worn during the various jobs. This should give some correlation between arsenic exposure and dust monitoring as the dust samples are not taken inside the protective equipment.

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#1 Factor Jobs

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Lunch, coffee breaks,
Any work not included in #4, 3, or 2.

#2 Factor Jobs

Greasing Baghouse, filling grease pail.
Ordinary floor washing, clean up, vacuuming Baghouse and Cottrell.
Blowing arsenic, return, pressure chart lines.
Loading garbage truck.
O'hauling Baghouse machinery.
Blowing flues, dampers and cottrell fan.
Checking hoppers, blowing.
Pumping cottrell.
Working on mix pots.
Working on any Baghouse or Cottrell piping.
Any welding or mechanical work.
Working on Cottrell or Baghouse vibrators.

#3 Factor Jobs

Sand blasting Baghouse machinery.
Working on conveyors and bearings, Baghouse and Cottrell.
Sampling arsenic.
Re-insulating in Baghouse and Cottrell.
Washing Baghouse floor after arsenic spill.
Washing Cottrell floor after arsenic spill.
Cleaning Fuller-Kenyon pump.
Removing used bags and machinery from Baghouse.
Clearing jammed conveyors and removing lumps.
Handling old rods, spacer bars etc. from Cottrell.
Looking in Baghouse Compartments.
Working damper, shakers and cylinders, Baghouse.
Cleaning insulators, washing and adjusting rectifier.
Working on door handles and vibrators.
Fixing shorts.

#4 Factor Jobs

Inside Baghouse compartments.
Inside Cottrell sections and hoppers.
Inside any flues.