

AR226-1629

NEW HIRES - TEFLON[®]

<u>Reference No.</u>	<u>Date of 1st Sample</u>	<u>Date Hired</u>	<u>C-8 Blood Level (ppm)</u>	<u>Months on Plant Before 1st C-8 Blood Test</u>
① 0	7/28/81	7/27/81	<0.007	0
② 2	10/1/81	8/3/81	0.009	2
③ 2	10/7/81	4/20/81	0.007	5 1/2
④ 0	10/13/81	4/20/81	0.015	5 3/4

Only one individual of these four was hired into Teflon[®] from off the Plant. His address was Green Hill Street in Belpre, Ohio. However, he just moved into the area prior to working in Teflon[®].

② Grand Central Avenue, Vienna, West Virginia

③ 23rd Avenue, Parkersburg, W. Va.

④ 41st Street, Vienna, W. Va.

J.G. Loschiavo
10/17/83

AP001214

TRENDS IN C-8 IN AIR LEVELSC-8 IN AIR (mpb)

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
FEP Area (Composite Avg.)	1.87	0.32	Not Calculated	0.15
FEP Wet Finishing Operator	0.95	0.30	0.09	0.11
FEP - No. 1 Clean Room	6.80	3.11	3.54	0.26*
Fine Powder Dryer Operator	1.40	0.56	0.15	0.06
Fine Powder Dryer Room (Composite Avg.)	3.00	2.47	0.37	0.23

* In 1982, No. 1 Clean Room was no longer in regular use. It is now only used as a back up system. It has been replaced by the newly-installed No. 2 Clean Room. The low C-8 levels in '83 are due to the fact that the Clean Room (No. 1) was not in use during most, if not all, the air samples. C-8 levels found in the new Clean Room are averaging 0.19 mpb — very great improvement over the old system due to better room and equipment design. The Room is also ^{much} larger than the old Room which acts to dilute C-8 concentrations somewhat.

Chronology of Engineering & Administrative Controls for C-8 Program

10/79 to 3/80

Area & personal C-8 air samples collected
in FEP & Fine Powder/Dispersion Areas

3/80 to 9/80

C-8 in air levels reduced ~~from~~ in the
Fine Powder/Dispersion Area by the following:

- Sealing the recirculation fan shafts
on top of No. 3 Dryer
- Sealing holes in the floor above the
Dryers
- Exhausting C-8 rich air from the
ceiling cavity to the Dryer area
through the cooler and out the
cooler exhaust
- Sealing the thermocouple entrances
to the Dryers
- Replacing the gaskets that seal the
Dryer doors
- Caulking all possible leaks in the
Dryer structure.

EID080616

As a result of these controls, Dryer Operator
000240

exposure dropped from 1.4 mpb average to 0.25 mpb average. However, due to the development of new dryer leaks, the C-8 in air levels started to climb. So, in 1981 to 1983, additional steps have been taken to more permanently keep C-8 air levels as low as possible.

3/80

Began using Comfo II half-mask respirators with GMA-H filter cartridges.
~~Also, began using latex~~

5/80

Began using latex rubber gloves and Tyvek® disposable clothing for protection against C-8.

9/80

Installation of several breathing air stations completed in both FEP & Line Powder / Dispersion Areas. Now, airline respirators began to be used in these Areas.

1981

C-8 air sampling programs were set up in both FEP & Line Powder / Dispersion Areas where both area and personal air samples were collected and analyzed for C-8 on a daily basis

7/81 - 10/81

Ventilation study performed in the Dryer Room and adjoining areas.

EID080617

000241

AJP001217

7/81-10/81 Cont'd.

As a result, it was found that the Dryer Room was not being maintained under negative pressure relative to adjoining areas. That is, C-8 was being directed out of the Dryer Room and into the Warehouse and the Dispersion Packout Area. A concentrated effort was made to reduce the C-8 level in the Dryer area by containing and exhausting the room air at the Dryers. The overall air flow was changed to a net flow into the Dryer Room. The following steps were taken:

- Cleaning the screen on the central exhaust vent
 - Turning off the main heating & ventilation unit in the Dryer Room
 - Remaining gasket leaks were sealed with silicone caulk
 - Steam pipe and instrument penetration of No. 3 Dryer were sealed.
- Instituted a routine Dryer leak inspection program.
- New Dryer Room exhaust system started. This system increased the rate at which air was exhausted

12/81

2/82

EID080618

000242

AJP001218

2/82 cont'd.

out of the Dryer Room (rate of air an
air change every 2 minutes).

10/82

Installation of new gaskets made of
an improved material with better heat
resistance than the old material - more
capable of withstanding high Dryer
temperatures and thus maintain a
good seal

2/83

Installation of exhaust hoods directly
over the Dryer access doors of both
Dryers to more effectively capture and
exhaust C-8 escaping from the Dryers.

C-8 levels in the FEP Area were reduced by:

4/80 - 3/81

Installation of eductors in the
Clean Room

Cleaned all H & V₁^{air} supply ducts

Installed a better seal ("airtight")
between the Coagulators^{and} to Tuff Bins
trucks

Balanced^{the} ventilation exhaust system air
flows

4/80 to 3/81 cont'd.

Eliminated the dusty manual job called the Coagulator - Sluff Bin Buggy operation.

The hot decant column discharge was piped directly to the sumps

Major cleanup of FEP Area

4/81 to 11/81

Enclosed the Decanter in the Clean Room

~~Cleaned~~ Installed a new recycle tank

Installed a new Toms Disc Dryer in the Clean Room

Installed a new rotary valve on the screw conveyor.

12/81 to Present

Installed a new exhaust system at the tray conveyor area

Extended the height of existing exhaust stacks to prevent reentrainment of C-8 back into the building via the air intakes.

Improved wet finishing exhaust system

EID080620

000244

AF001220

C-8 PROGRAM AUDITS

- Annual audit of the Respiratory Protection Program by the Plant Respiratory Protection Subcommittee
- Annual audit of Personal Protective equipment by the Protective Clothing Subcommittee
- Annual audit of air sampling and ventilation programs by the Occupational Health Subcommittee
- Continual review of C-8 air sampling results by Plant Medical, John Doughty, Teflon® Management and Teflon® Industrial Hygienist
- Periodic review of C-8 blood sampling program by Teflon® Industrial Hygienist. Unusual C-8 in blood results are investigated. Foremen are first interviewed to determine possible causes. An industrial hygiene investigation of the area where employee works is conducted. Teflon® Management is informed of the high blood result as well as recommendations to prevent further C-8 in blood increases.

J. G. Loschiavo

10/17/83

EID080621

000245

AFPO01221