PLAINTIFF'S EXHIBIT
MON-3226

MONSANTO CHEMICAL COMPANY

Location: Texas City, Texas

Date : November 7, 1960

Subject : Agenda for the Plant Manager's Safety Board
November 14, 1960

To : Plant Manager's Safety Board

The following is the agenda for the Plant Manager's Safety Board Meeting to be held at 2:30 pm on November 14, 1960, in the Engineering Conference Rooms 5-6.

OLD BUSINESS

1. Policy on Eye and Head Protection for "Construction" Personnel- W. R. Nisbet
2. "Magic of Fire" Report - C. L. Gilmore
3. Procedure Bulletins - C. L. Gilmore
4. Sprinkler System Procedure Revision - C. L. Gilmore
5. Sparking Hazards on Aluminum Paint - N. F. Wood
6. Sample Container Transportation - C. L. Gilmore for Hourly Safety Committee
7. Drum Labeling Procedure for in-plant transportation - N. F. Wood

NEW BUSINESS

1. Industrial Supervisor Magazine Renewal - C. L. Gilmore
2. The Hourly Safety Committee Ballots - C. L. Gilmore
3. Miscellaneous
4. Discussion of Texas City Safety Program - J. M. Chamberlin

C. L. Gilmore

CLG:lt
Attachments - 2

11/14/60

1. Constr to Have By Dec 1 Eye Protection
2. Show 800 families well received $1,600 cost
3.4. Housekeeping
Co. Furnished Equip
Fire + Entry Permit
Blocking Relief Devices

→ Need comments to Gil on Fire Bulletin

5. Engr to Handle
→ 6. Review with Gil + agree that established practice is safe.
7 Drum-labeling procedure Wood + Fox
→ Comment to Wood by 11/21

→ Spill Dept 2

(New)

1. Indust Supv Same
2. Morris nominated in Operations
→→→→ 3. Dec-Jan accident history — inattention HMK, JR, Gil (Chairman) Fox.
Sift out ideas on program. Solicit Hourly Safety Committee.
Hourly people in the field. Hold down in critical period.
→ Lanser on bicycles
→→→→ Gil comment on Don Tenn Eastman
Review Op. Procedures from safety aspect
Check changes in area + if training adequate

SC 16533

LAM024441

Monsanto Chemical Company
Texas City, Texas

cc: W. E. Repschleger/
H. M. Keating
G. L. Stacy
H. H. Davis
H. T. Wheatley
T. R. Winkle

October 24, 1960

To: Distillation Personnel 4-5-7-8

Subject: Operating Bulletin Revised, October 24, 1960

Salvable Drums

These are drums that have been received containing combustible materials. They must be decontaminated with steam for one hour before being placed in the metal salvage dumpster. The labels of these drums must be defaced. Crayon may be used.

All TBC Drums must be flushed with hot condensate for 30 minutes before being placed in the metal salvage dumpster.

Return To Stores

Drums received labeled oil or kerosene are not to be decontaminated but returned to Stores. These labels are not defaced. Paste an "Empty, Return To Stores" sticker on each drum.

Waste Organics

Drums containing waste organics must be labeled with tags or crayon as to their content and disposal.

R. L. Stuart

mlk

SC 16534

LAM024442

STANDARDS

# Bulletin

MANUAL K
SECTION 1
PART 1
BULL. NO. 1
DATE 6/15/60

## SPARKING HAZARD OF ALUMINUM PAINT ON IRON AND STEEL

Previous attempts have been made to alert Monsanto people to the hazards of ignition from striking aluminum-painted steel surfaces. There is no way to tell how well this information has been distributed, or what actions have been taken to cope with the hazard. The recent compilation by Union Carbide Chemicals Company of a whole file of information on the problem is the occasion for again bringing up the matter.

The information made available to us includes reprints of several American and British articles, and company documents from both Carbide and Du Pont. It was put together by Carbide Safety and Fire Protection Department as a service to the Manufacturing Chemists Assn. Each of the documents contributes to the conclusion that:

Under a wide variety of conditions commonly encountered in the plant, aluminum particles in paint film react with rust in a Thermit-type reaction easily capable of igniting a combustible vapor mixture.

Both theoretical study and numerous experiments in the field show that three factors must be present at once: finely divided aluminum; iron oxide; and energy input as from a hammer blow.

Many other factors are also influential. For example, some paint films seem to coat or insulate the aluminum particles so they do not react. Prolonged heating above 150F almost always makes the paint insensitive to sparking. (Paradoxically, heat-resisting paints become considered as sparking more readily than other types.) Iron rust appears to be necessary. Oxygen from air, or from the oxidized paint resins, is unreactive. Lead oxide (red lead) is an extremely reactive agent, but only if combined with aluminum in the same paint film. Red lead primers are harmlessly reactive.

Energy input may be from different sources. Striking with a hammer or chisel will readily produce ignition, but the jar of a wrench slipping on a union nut has caused spectacular sparking. Sharp-edged tools are so effective in causing "Thermit" sparks as pearl powder. Rusty nails have caused sparks even in paint applied to a sandblasted metal surface. (Blunt pieces of rust-free metal appear to be safe, but they are obviously limited in their capacity.) Many fires and explosions have doubtlessly ignited in the presence of dusts, gases, or vapors which were not suspected of participation in burning. Other have not yet been fully explained, since they leave no evidence of the ignition source.

It is the task to eliminate [illegible] have aluminum-pigmented paint [illegible] of [illegible] quality. The latest test kit [illegible] failing to install adequately explosion-proof wiring and switchgear.

[illegible] light bulbs to extend this hazard. Such simple [illegible] for the plant [illegible] or maintenance. Determination as probable cost of additional paint in fire hazard [illegible] but [illegible] [illegible] and [illegible] [illegible] and [illegible] [illegible] [illegible]