



DOW CHEMICAL U.S.A.

LOUISIANA DIVISION
PLAQUEMINE, LOUISIANA 70764
504 389-8000

November 3, 1978

Greg Baldwin
Glycol I
5301 Building

cc: Jon Kiggans
Wally Bounds
Industrial Hygiene File

DUST SURVEY RESULTS FROM THE CATALYST CHANGE AT GLYCOL II IN OCTOBER

Area samples were taken during the unloading and the loading phases of the catalyst change to determine levels of airborne dust. Results are shown on the attached table. Protective equipment used by the contract employees during the survey included hardhats, safety glasses, Durafab coveralls, and disposable paper dust masks most of the time and face shields, vinyl-impregnated gloves and hearing protection occasionally. Dow employees wore the usual hardhats, safety glasses and hearing protection.

From observations of the jobs and from the sampling results, it is suggested that during future catalyst changes the same protective equipment be used with the addition of monogoggles. Also, better ventilation is needed to remove dust from inside the reactor areas. This should be possible by moving the dust collector closer to the source (such as utilizing larger vacuum hoses to pull more air from the funnel area where the pellets are dumped thus drawing fresh air from the second manway across the workers).

One practice which was observed must be eliminated. Compressed air must not be used to blow dust from clothing since this may drive particles into the skin or eyes.

Overall, the operation was planned and supervised well.

Sherryl
Sherryl Schultz
Industrial Hygiene

DO A 112460
CONFIDENTIAL

attachment

jmb



GLYCOL II - DUST SAMPLING DURING CATALYST CHANGE (R2)

October 17 & 19, 1978

SAMPLE	DATE	SAMPLE LENGTH (Min.)	AIR VOLUME	AMOUNT OF TOTAL DUST (mg)	DUST CONCENTRATION (mg/m ³)
<u>Unloading Old Catalyst</u>					
53-01 Outside bottom of reactor	10/17	38	53	4.5	85
53-02 Inside bottom of reactor	10/17	38	57	30.5	535
<u>Loading New Catalyst</u>					
53-03 Inside top area of reactor during break, no forced ventilation	10/19	41	56	n.d. (≤ 0.4)	n.d. (≤ 7)
53-04 Inside top area of reactor during actual loading, airmover over one manway, loading into second manway	10/19	60	88.5	>46	>520
53-05 Inside bottom of reactor during loading operation	10/19	52	70	n.d. (≤ 0.4)	n.d. (≤ 6)

Industrial Health Guide for
8 hour TWA Inert Dust $10\text{mg}/\text{m}^3$

NOTES:

n.d. - not detected at specified detection limit

Amounts refer to total dust - neither particle size nor composition was examined.

All samples were area samples.

DO A 112461
CONFIDENTIAL