



AND File 10/22/80

copy to J. Marin

H. Butler

E. R. Delgado

To: H. J. Mitchell

Date: October 23, 1980

Location: Azusa

Copy to J. Carnall
R. Pelletier

From: M. J. Gaertner

J. Marin
F. Timmons

Location: Industrial Hygiene

Subject: INDUSTRIAL HYGIENE REPORT

Reference:

PLAINTIFF'S EXHIBIT

ACC-12

1. Monitoring of AFI Unloading

On October 10, 1980, Industrial Hygiene performed noise and dust monitoring during the unloading of an AFI (Aeromyacin Fermentation Intermediate) truck. The following are monitoring results, observations, and recommendations.

A. Monitoring Results

Employee or Area	Sampling Time	Total Dust (mg/m ³)	Total Dust (mg/m ³) TWA ₈	dB(A) (TWA ₈)
Chief Operator	5 hr. 55 min.	3.0	2.3	92.7
Operator	4 hr. 50 min.	0.61	0.38	90.5
North Side of Truck	5 hr. 40 min.	5.0	3.8	94.5
South Side of Truck	5 hr. 20 min.	0.74	0.51	
Control Board Area	5 hr. 30 min.			70

The permissible exposure limits (PEL) are:

10 mg/m³ (TWA₈) for nuisance dust and 90 dB(A) (TWA₈).

B. Recommendations:

1. Operators should continue to wear the 3M Disposable 9910 respirator during the truck unloadings, even though monitoring data indicate results below the PEL.
2. A more effective gasket should be used at the unloading hose to truck interface. There was a significant amount of dust generated from this area during the unloading process.
3. Follow-up monitoring for dust should be performed after the gasket modifications have been made.
4. Hearing protection should continue to be worn during the unloading process.
5. Signs stating "Hearing protection required during truck unloading" should be placed in the unloading areas.
6. The noise is generated from the vibrator on the truck. Engineering controls to reduce the noise levels do not appear to be feasible. Because of the infrequency of the truck loadings, the use of hearing protection devices as part of the existing overall Hearing Conservation Program, which includes periodic audiometric testing, is an adequate program for noise control.

A. W. DELGADO

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II. Discussion of Hearing Conservation Program

Jesse Marin and M. J. Gaertner discussed the elements of the Hearing Conservation Program. Audiometric tests have been given to approximately 90 % of the employees and the remainder are awaiting their tests. Semiannual testing has been recommended for those employees working in areas with noise levels greater than 85 dBA.

Mr. Marin was given copies of educational and training materials for hearing conservation programs. He is putting together a presentation for the employees.

III. Noise Monitoring in the Catalyst Plant

A. Monitoring Results

The following is a summary of dosimetry data taken in the catalyst plant during visits in May and July 1980.

Operator	4-30-80	5-1-80	7-18-80	7-21-80	7-22-80
Extruder Operator	90.3		88.2	88.0	
Product Operator			88.3		
Muller Helper		90.8	87.3		
Muller Operator		81.4			
Impregnator Operator			85.5		
Lead Operator		90.0			
Material Handler	89.9				85.5
Kiln Operator		88.3		89.8	84.8
Cure Wash Operator	85.3				
Cure Wash Helper	77.5			80.3	
Mechanic					73.5
Supervisor				87.2	85.8

The OSHA permissible exposure limit is 90 dBA (TWAg). The above results indicate that employee exposures do not exceed the OSHA limit.

B. Recommendations:

1. Signs which state requirements for hearing protection should be placed in all areas with noise levels exceeding 85 dBA.
2. The exhaust blowers for the SON Mill and the Silo area generate noise levels exceeding 100 dBA when in operation. Signs which state "Hearing protection required when blower in operation" should be placed in the areas of the blowers.
3. Follow-up dosimetry data and noise level surveys should be performed on an annual basis.

IV. Dust Monitoring in the Catalyst Plant

A. Monitoring Results

During the visit in May 1980, accumulations of dust were seen in various places in the catalyst plant. Samples of the accumulated dust were analyzed for percent platinum, palladium, and rhodium. The results represent approximate values, and are as follows:

Area	Platinum	Palladium	Rhodium
Kiln Feed Level	0.1	0.002	0
Catwalk Between 311A and 311B			
Catwalk Top of B Hopper	0.16	0.05	0.0004
Catwalk Top of A Hopper	0.02	0.01	0
B-Dryer Exhaust Duct (Discharge End)	0.19	0.16	0.001
Bottom Level Near Air-Blower of B. Calciner	0.12	0.17	0.0004

The results indicate that the dust samples contain a significant amount of platinum. Therefore, area monitoring was conducted during the July 1980 visit while MS532 was being produced. The sampling periods were between 7 and 8 hour duration and the results are as follows:

Area	Date	Total Dust	Aluminum	Platinum	Palladium
Catwalk Between	(7-21)	0.67	0.003	0.0007	0.0003
A & B Hopper	(7-22)	0.23	0.001	0.001	< 0.0001
Catwalk Between	(7-21)	0.63	0.002	0.001	0.0001
311A & 311B	(7-22)	1.75	0.003	0.001	< 0.0001
(Bottom Level Between B-Dryer & B Calciner)	(7-21)	0.46	0.003	0.002*	< 0.0001
	(7-22)	0.36	0.001	0.001	0.0001
(Discharge End of B-Dryer)	(7-21)	0.66	0.003	0.002*	0.0003
	(7-22)	0.60	0.003	0.001	< 0.0001
Silo Area	(7-21)	Sample			
		Void			
	(7-22)	Sample			
		Void			
	(10-10)	0.41			
Threshold Limit Values		10	10	0.002	Not Established

These results indicate that significant levels of platinum were detected in the area samples denoted by the asterick (*).

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B. Recommendations:

1. Further personal monitoring for platinum dust exposure should be conducted for those operators working in the above mentioned areas(*) .
2. Concerted efforts should be made to practice good housekeeping in order to reduce the accumulation of dust.

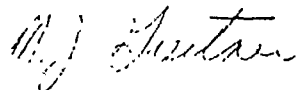
This is a must!

3. Employees who are required to work in the above mentioned areas (*) for prolonged periods of time (example, maintenance personnel) should be required to wear respiratory protective equipment (dust respirators).

V. Industrial Hygiene Training

It is recommended that Jesse Marin attend the Industrial Hygiene Training Session to be held at Stanford, Connecticut in July 20 - 24, sponsored by the Corporate Industrial Hygiene Department.

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M. J. Gaertner

MJG/kp