

2ND QUARTER 1982

PLAINTIFF'S
EXHIBIT
DUP-1875

GENERAL OCCUPATIONAL HEALTH - S. W. Ellis

OSHA INSPECTION

An inspection of the Alathon® Division was conducted by a compliance office from OSHA on May 17, 1982. There were no complaints and his comments were all favorable.

MONITORING SCHEDULE

A monitoring schedule which defines the sampling needs of the Division was issued.

TRAINING

An analyst has been trained to relieve and assist the analyst assigned to Industrial Hygiene. Also one analyst on each shift has been trained in the basic Industrial Hygiene procedures to provide shift coverage.

A junior student trainee has been trained to assist the Industrial Hygiene analyst this summer.

"J" DUST MONITORING

EAST ADSORBER

Area monitoring around the adsorbers and bag filter area was conducted using a GCA-RDM 101 Dust Instrument while probing adsorbers. On May 21, 1982, 28 samplings averaged 0.01 mg/m³ total dust. Maximum readings = 0.6 mg/m³ total dust.

All results were below the TLV® of 10 mg/m³, however, monitoring will continue until enough data is collected to indicate dust exposure is at a safe level on a statistically significant basis.

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DUP 0814463

DU 009821

HIGH DENSITY REPORT - SECOND QUARTER 1982

"J" DUST MONITORING

EAST ADSORBER - (cont'd)

Personal monitoring was conducted for dust and hydrocarbons during the absorber probing task. On May 11, 1982 three (3) samplings averaged 0.11 mg/m^3 total dust, and the average hexane concentration was 0.59 ppm . On June 2, 1982 three (3) samplings averaged 0.36 mg/m^3 and the average hexane concentration was 0.23 ppm . The dust concentration was well below the TLV® of 10 mg/m^3 and the hexane concentration was well below the TLV® of 100 ppm . Personal monitoring will again continue until data indicates exposure is at a safe level.

WEST ADSORBER

Area monitoring around the absorber and bag filter area was conducted using a GCA-RDM 101 Dust Instrument while probing adsorber. On June 2, 1982 24 samplings averaged 0.08 mg/m^3 total dust. Maximum readings = 0.6 mg/m^3 total dust.

All results were below the TLV® of 10 mg/m^3 , however, monitoring will continue until enough data is collected to indicate dust exposure is at a safe level on a statistically significant basis.

Personal monitoring was conducted for dust and hydrocarbons during the absorber probing task. On April 29, 1982 three (3) samplings averaged 0.44 mg/m^3 total dust, and the average hexane concentration was 0.17 ppm . On May 21, 1982 four (4) samplings averaged 0.25 mg/m^3 and the average hexane concentration was 0.85 ppm . The dust concentration was well below the TLV® of 10 mg/m^3 and the hexane concentration was well below the TLV® of 100 ppm . Personal monitoring will again continue until data indicates exposure is at a safe level.

Area monitoring was also conducted while filling the absorber. Ten measurements averaged 6.25 mg/m^3 and the maximum was 21.1 mg/m^3 . The area is normally unoccupied during this operation. A dust respirator will be required when entering the area during this operation since the TLV® of 10 mg/m^3 was exceeded. Monitoring will continue.

"J" LOW PRESSURE SEPARATOR STRIPPING

Four mechanics were task monitored for exposure to hexane, octene and toluene while stripping #1 and #2 low pressure separators on May 13 and 14, 1982. All exposures were very low. Data are summarized in Table I.

DUP 0814464

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HIGH DENSITY REPORT - SECOND QUARTER 1982

TABLE I

DATE	TIME	TIME-HR	TOTAL		RESULTS (ppm)
			Hex.	Oct.	Tol.
5/13/82	1240	1.15	.004	0	.03
5/13/82	1350	.43	.01	0	.06
5/13/82	1350	.22	.01	0	.05
5/13/82	1422	.92	.004	0	.03
5/13/82	1605	.33	.01	0	.05
5/13/82	1813	.40	.01	0	.03
5/13/82	1845	.33	.01	.03	.02
5/14/82	0855	.42	.01	.13	.10
5/14/82	0855	.92	.01	0	.04
5/14/82	0920	.50	.01	.05	.06
5/14/82	0920	.50	.01	.08	.04

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DU 009823

HIGH DENSITY REPORT - SECOND QUARTER 1982

"J" DUST MONITORING - (cont'd)

"J" # REACTOR GEAR BOX

The gears that were originally in the #1 reactor gear box were re-installed and aligned. Due to misalignment on the original installation, the gears were damaged and when re-installed a high noise level was created. Noise levels near the gear box were 105 dBA and as high as 96 dBA 30 feet away. A COD provided an acoustic insulation facility which reduced the noise level to 85 dBA at the gear box.

"J" NORTH SOLVENT PURIFIER

Personal monitoring was conducted for dust and hydrocarbons during the Solvent Purifier bed change task on May 3, 1982. Three (3) samplings averaged 33.89 mg/m³ total dust for the emptying phase of the task and two (2) samplings averaged 6.54 mg/m³ total dust for the filling operation. The average hexane concentration was 2.59 ppm. The hexane concentration was below the TLV of 100 ppm. However, dust concentrations above the TLV of 10 mg/m³ indicate a need for the continued use of dust respirators during the performance of this task.

SOUTH SOLVENT PURIFIER

Personal monitoring was conducted for hydrocarbons during the solvent purifier bed change task on April 6, 1982 three (3) samplings averaged .05 ppm hexane; well below the TLV of 100 ppm. Personal monitoring was conducted for dust and hydrocarbons during the solvent purifier bed change task on June 6, 1982 three (3) samplings averaged 43.61 mg/m³ total dust for the emptying phase of the task and two (2) samplings averaged 2.58 mg/m³ total dust for the filling operation. The average hexane concentration was 5.30 ppm. The hexane concentration was below the TLV of 100 ppm. However, dust concentrations above the TLV of 10 mg/m³ indicate a need for the continued use of dust respirators during the performance of this task.

"J" UNIT NORTH COMONOMER PURIFIER

Personal monitoring was conducted for dust and hydrocarbons during the comonomer purifier bed change task on May 5, 1982 three (3) samplings averaged 71.40 mg/m³ total dust for the emptying phase of the task and two (2) samplings averaged 6.03 mg/m³ total dust for the filling operation. The average octene concentration was 1.04 ppm. On June 9, 1982 three (3) samplings averaged 54.13 mg/m³ total dust for the emptying phase of the task and two (2) samplings averaged 6.90 mg/m³ total dust for the filling operation. The average octene concentration was 1.51 ppm. The octene concentration was below the P.E.L. of 100 ppm. However dust concentrations above the TLV of 10 mg/m³ indicate a need for the continued use of dust respirators during the performance of this task.

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DU 009824

"J" DUST MONITORING (cont'd)

SOUTH COMONOMER PURIFIER

Personal monitoring was conducted for dust and hydrocarbons during the comonomer purifier bed change task on April 20, 1982 two (2) samplings averaged 7.76 mg/m³ total dust for the filling operation the average octene concentration was .05 ppm. On June 8, 1982 three (3) samplings averaged 41.93 mg/m³ total dust for the emptying phase of the task and two (2) samplings averaged 5.66 mg/m³ total dust for the filling operation. The average octene concentration was .59 ppm. The octene concentration was below the P.E.L. of 100 ppm.³ However, dust concentrations above the TLV of 10 mg/m³ indicate a need for the continued use of dust respirators during the performance of this task.

"J" UNIT ADDITIVE MIXING BUILDING

Area monitoring around the agitator seals of the additive mix tanks, was conducted using both Drager meters with toluene tubes and the Bacharach TLV sniffer. The results indicated levels above the TLV of 100 ppm for toluene. Recommendations were made for additional ventilation to be provided. Consequently local exhaust facilities were installed around the additive mix tank agitator seals. The area was monitored again on 6-22-82 and 6-24-82 on both dates all readings were well below the TLV.

"F" UNIT

TASKING MONITORING-VINYL ACETATE

Eleven samples were taken while monitoring five different mechanical task. All exposure to vinyl acetate were 2 ppm or less, well below the short term exposure limit of 20 ppm and 8 hr. TWA of 10 ppm.

"F" DUST MONITORING - LOADING BLDG.

The program to monitoring the hopper car loading operator for Alathon® dust while loading hopper cars was completed. Thirty-five samplings were done on products ranging from 0.35 to 8.0 melt index and 0 to 25.0% vinyl acetate. The average dust concentration was 0.33 mg/m³ - 8 hr. TWA and the maximum was 2.99 mg/m³ - 8 hr. TWA. These results are well below the 8 hr. TWA of 10 mg/m³ for total dust and 5 mg/m³ for respirable dust.

Data are summarized in Table II.

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HIGH DENSITY REPORT - SECOND QUARTER 1982

TABLE II

<u>PRODUCT</u>	<u>MI</u>	<u>VA</u>	<u>DUST CONCENTRATION</u> <u>mg/m3 - 8 Hr. TWA</u>
A-3445	.5	3.5	0.45
VAX3220	.35	12.0	0.02
A-2650	3.0	2.5	0.57
VAX660	2.5	12.0	2.47
VAX3120	1.2	7.5	0.62
VAX3120	1.2	7.5	0.28
PE-3302-10	2.0	9.3	0.13
VAX3190 LG	2.0	25.0	0.10
PE3273	1.2	7.5	0.41
VAX3128	2.0	8.9	0.00
VAX3128	2.0	8.9	0.11
VAX3135X	.35	12.0	0.00
VAX560	2.5	15.0	0.00
VAX4886	.70	18.0	0.00
PE-3254-1	.35	12.0	0.01

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DUP 0814468

HIGH DENSITY REPORT - SECOND QUARTER 1982

"F" UNIT

TABLE II (cont'd)

VAX3128	2.0	8.9	0.00
VAX560	2.5	15.0	0.00
VAX565	1.5	15.0	0.00
A-1645	4.5	0	0.00
A-1540R	6.5	0	0.29
A-2020	1.05	0	0.00
A-2020T	1.05	0	0.00
VAX750	7.0	9.0	0.00
A-1645	4.5	0	0.00
A-2650	3.0	2.5	0.06
A-2650	3.0	2.5	0.00
VAX660	2.5	12.0	0.58
VAX3134	8.0	12.0	0.01
VAX3152	8.0	15.3	0.34
VAX3170SB	2.5	18.0	0.19

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DU 009827

HIGH DENSITY REPORT - SECOND QUARTER 1982

"F" UNIT

TABLE II (cont'd)

VAX470	.70	18.0	0.48
VAX660	2.5	12.0	0.06
VAX3159	.50	15.0	0.61
VAX4886	.70	18.0	2.13
VAX565	1.5	15.0	1.62

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DU 009828

HIGH DENSITY REPORT - SECOND QUARTER 1982

"F" EXTRUDER SEALS

The rear seals on #1 and #2 extruders allow ethylene and vinyl acetate to leak to the atmosphere. Monitoring during three periods of high V.A. copolymer production indicated levels as high as 211 ppm were present at a position 10 feet to rear of the seals. The short term exposure limit is 20 ppm.

Due to these results the barricaded area which required a respirator to enter was enlarged to include the entire area between the extruders from 17 feet in front of the seals to 14 feet to the rear of the seals and 10 feet to east of #1 extruder seal and 10 feet to the west of #2 extruder.

While producing 18% vinyl acetate copolymer on May 8, 9 and 10, four sets of area monitoring were done at eight locations around the barricaded area. Two monitoring locations produced vinyl acetate results above the short term exposure limit of 20 ppm. Data are summarized in Table III.

Due to vendors inability to supply carbon tubes, the semiannual 12 hr. TWA monitoring of operators exposure to vinyl acetate was postponed from June to July.

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HIGH DENSITY REPORT - SECOND QUARTER 1982

TABLE III

	VINYL ACETATE, PPM			
	5/18/82	5/9/82	5/10/82	5/10/82
	1104---	0740---	1000---	1600---
	1410	1030	1300	1900
#1 Extruder, 10 feet East of rear seal	4.2	5.0	6.1	6.1
#1 Extruder, 14 feet North & 5 feet west of rear seal	26.3	27.0	25.4	25.6
#1 Extruder, 17 feet South & 7 feet west of rear seal	5.1	5.8	15.2	9.3
#1 Extruder, on Platform by Additive Extruder	10.4	9.3	19.4	15.3
#2 Extruder, 10 feet West of rear seal	2.9	2.5	3.2	2.4
#2 Extruder, 14 feet North & 5 feet east of rear seal	25.6	23.8	15.4	16.0
#2 Extruder, 17 feet South & 7 feet east of rear seal	4.5	3.3	9.2	7.4
#2 Extruder, on Platform by additive extruder	5.9	6.5	7.0	5.0

DUP 0814472

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DU 009830

CENTRAL SHOPS - BLDG. 4 - C. M. Beck, S. W. Ellis

Design of the enclosure for the relief valve testing facility has been completed. Almost all materials for its construction are on site. Originally, completion was scheduled before F-Unit shutdown, however vendor delays postponed construction. Completion should be in third quarter. Measurements will be taken during the shutdown activity to study the effectiveness of the enclosure.

Installation of the spot fume removal system for welding fumes will be completed by the end of the fourth quarter (or before the shop is closed for winter). Exposure to welding fumes and gases will be monitored in the third quarter in the shop. Results will indicate the amount of fumes generated and how well the existing fume exhaust system operates. Also, velocity measurements are being made on the newer Ruemelin exhaust system to determine if it meets the DuPont standard of 100 fpm at the point of weld (H1U) as it is currently used.

Exposure to welding fumes in confined spaces is also being studied. Current plant practices consist only of mechanical general ventilation, however fume levels may still be above the TLV®. Monitoring data is needed to evaluate the need for respirators and/or portable local exhaust ventilation.

Monitoring of metal fumes during brazing operations is still in progress.

An octave band analysis was made on noise from a grinder house in a three-sided wooden enclosure. The high frequency noise is such that the job requires hearing protection and, at 15 feet from the enclosure, the noise is more than 20 dB higher than background levels. Absorptive foam lining of the interior of the enclosure is recommended. For further attenuation, plastic strips across the open face of the enclosure facing the shop could be used.

A heat stress study is being made in the shop to determine the effectiveness of removal of an upper wall to increase air flow. Measurements have been taken throughout the project with a Revter Stokes RSS-211D heat stress monitor. The study should be completed early in the third quarter.

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DU 009831

HIGH DENSITY REPORT - SECOND QUARTER 1982

"F" UNIT

CARPENTER SHOP

An initial octave band analysis was made on each piece of major carpentry equipment. A more controlled study will be made in the third quarter to determine the best arrangement of equipment in the new carpentry shop for noise control. Also, an enclosure for the joiner made of plastic strips is being tested.

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DU 009832

DUP 0814474