

February 23, 1982

POLY 'A' PERSONNEL

cc: Medical Department
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ENVIRONMENTAL HEALTH SURVEY REPORT - 1981

This survey will include the results of data obtained on Isopar C, Isopar-M, noise and SiO₂ (Superfloss) within the Poly "A" block. Appendices will be used to show the TWA (time weighted averages) exposure, according to job classification, in each of these areas.

Due to the consistently very low concentrations of all other chemicals and polyethylene dust in the Poly "A" plant, they have been deleted from our survey.

I. Noise Level Exposure

Two methods were used to analyze for noise exposure:

- A. B&K noise level meter. This instrument is used to pinpoint the source of noise.
- B. Audio dosimeter. This instrument gathers a composite sample of noise to which an individual is exposed.

- 1. B&K noise level meter (see attached survey of "Evaluation of Noise Exposure", Appendix A.). The following are the areas above 85 dB(A):

- a. Building 804 (Extrusion Building) outside areas along the west, north and east walls are above 85 dB(A). Outside the west and north walls, this noise is caused by transfer and recycling of pellets and transfer blowers. Outside the east wall, the noise is produced by primary extruders and transfer blowers. Noise inside of Building 804 is due to primary and secondary extruders, transferring of pellets and spin dryers.
- b. Building 803 (Secondary Compressor Building). The main source of noise in this building is C-101 thru C-109 - secondary compressor. Another noise source is the train 5 pellet transfer line outside Building 803 on the northeast side.

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1. Noise Level Exposure (Continued)

- c. Building 802 (Primary Compressor Building). Each primary compressor contributes to the high noise level in this building.
- d. Building 809 (Train 5) inside Building 809, the noise is caused by secondary compressors (C-501 and C-502), primary extruder, transfer blowers, transfer of pellets and spin dryer. Outside, the only high noise area is around AC-5 (Air Compressor).

- (2. Audio Dosimeter - There were three classifications with individual (TWA) dosimeter readings above 85 dB(A). When questioned after sampling, none of these employees could remember anything that would have caused the high readings (See attached survey of "Noise Survey by Dosimeter", Appendix-B).

- Exposure to SiO₂*
Exposure to
- II. Exposure to SiO₂ (Superfloss). Operators involved in mixing SiO₂ wear dust masks, and are only exposed to the SiO₂ for approximately 15 - 20 minutes per mix or 30 minutes per day. The exposure to SiO₂ was less than 0.01 mg/m³ on respirable and non respirable dust.

- III. Chemical Exposure. There were only two chemicals surveyed in the Poly "A" block in 1981. They were Isopar-C and Isopar-M. These are listed in Appendix-C.

The remainder of the chemicals present in the Poly "A" block were not considered to be in concentrations high enough to require monitoring.

Donnie Lee

Donnie Lee
Poly "A" Plant
Building 807
Plaquemine

Attachments (5)

ltb

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APPENDIX B

Noise Survey By Dosimeter - 85 dB(A) 1981

JOB CLASSIFICATION	SURVEY DATE	EXPOSURE PERIOD (HRS)	% TWA	TWA
Shift Supervisor	8-07-81	8	6	6
	8-28-81	6.5	39	48
#2 Boardman (Control Room)	8-06-81	7	2	2
	8-25-81	6.5	2	3
#5 Sr. Compressor Operator (O.S.)	8-13-81	6	38	51
	9-08-81	7	86	98
	9-14-81	7	49	56
#3 Compressor Operator (S.O.T.)	8-13-81	6	18	23
	9-02-81	6.5	57	71
	9-21-81	7	37	43
#1 Compressor Operator (S.O.T.)	8-14-81	7	43	49
	9-01-81	7	60	68
	9-04-81	7	76	87
#4 Extrusion Operator (S.O.T.)	8-11-81	7	23	26
	9-04-81	7	47	53
	9-08-81	7	88	101
#2 Lab Transfer Operator (S.O.T.)	8-11-81	7	10	12
	8-31-81	7	13	14
#3 Extrusion Operator (O.T.)	8-07-81	8	34	34
	8-31-81	7	63	72
	9-15-81	7.5	25	27
Day Operations Supervisor	8-25-81	6.5	16	20
Day Operations	8-19-81	7.5	19	20
	8-26-81	7	29	33
	9-01-81	7	17	20
Catalyst Mixers	8-14-81	7	28	31
	8-26-81	7	44	51
O.C. Supervisor	8-05-81	7	1	1
Sr. Asst. Chemist	9-04-81	8	13	13
Training Supervisor	8-21-81	7	19	22
Engineer	8-12-81	7	3	3
	8-24-81	7	1	1

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Noise Survey By Dosimeter - 85 dB(A) 1981 (continued...)

<u>JOB CLASSIFICATION</u>	<u>SURVEY DATE</u>	<u>EXPOSURE PERIOD (HRS)</u>	<u>% TWA</u>	<u>TWA</u>
Plant Superintendent	8-27-81	7	0	0
Material Controller	8-12-81	7.5	15	16
Secretary	8-19-81	8	0	0
Electrician	8-20-81	8	9	9
Instrument	8-17-81	7	33	37
	8-17-81	7	107	123
	9-02-81	7	6	7
Equip. Supervisor (Mech)	8-21-81	7	84	96
	9-03-81	7	24	27
Equip. Supervisor (Ext)	8-27-81	7	54	62
Production Supervisor	8-24-81	7	3	3
Millwright	8-18-81	7.5	77	82
	8-28-81	6.5	25	31
Pipefitter	8-18-81	7.5	20	21
	8-20-81	8	26	26
Laborer	8-06-81	7	3	4

*Typically
higher*

EVALUATION OF NOISE EXPOSURES
POLYETHYLENE 'A'
APPENDIX - A

CHART #	LOCATION	dB(A)		CHART #	LOCATION	dB(A)	
		1980	1981			1980	1981
1	POLY 'O' FAB LAB	73	70	31	XD 120	(DOWN)	86
2	PARTS WAREHOUSE (N.END)	68	71	32	XD 121	86	91
3	PARTS WAREHOUSE (S.END)	70	72	33	D 212	80	80
4	MAINT. SHOP (N.END)	72	71	34	ADDITIVE MIX DRUM AREA	83	80
5	MAINT. SHOP (S.END)	71	73	35	BAC 1A & B	93	90
	EXTRUSION BLDG. (804)			36	BETWEEN S-111 & S-112	90	90
6	BAC 8A & B	84	87	37	BETWEEN S-113 & S-114	91	92
7	BAC 2A & B	78(DOWN)	95	38	C-202 (E.END)	88	90
8	MAKE HOPPERS 101A -106B	87	95	39	BAC 1C, D & E	90	91
9	BAC 3A & B	92(DOWN)	100	40	ROADWAY BETWEEN B803 & 804	81	78
10	BAC 7A & B	91	94		SECONDARY COMPRESSOR BLDG.		
11	HMB 107-114	89	92	41	C 109	91	92
12	BAC 7C & D	89	99	42	C 108	92	92
13	X104	92	90	43	C 107	91	92
14	X103	92	90	44	C 106	90	91
15	X102	93	89	45	C 105	91	90(DOWN)
16	X101	91	90	46	C 104	91	90(DOWN)
17	PRIMARY TRANSFER LINES (S.END)	100	98	47	C 103	90	90(DOWN)
18	PRIMARY TRANSFER LINES (N.END)	95	95	48	C 102	91	90
19	X121 (N.END) RUNNING	(DOWN)	88	49	C 101	91	90
20	X120 (N.END) DOWN	86	84	50	TRAIN I	92	92
21	X120 (S.END) DOWN	86	83	51	TRAIN II CAT PUMPS	92	91
22	X121 (S.END) RUNNING	(DOWN)	91	52	TRAIN III CAT PUMPS	92	94
23	LAB TRANSFER ROOM	67	67	53	TRAIN IV CAT PUMPS	93	95
24	aisleway-B804 (N.END)	84	83	54	TELOMER PUMPS TRAIN IV	83	85
25	aisleway-B804 (MIDDLE)	89	87	55	D-146C (WALKWAY)	87	86
26	aisleway-B804 (S.END)	90	89	56	OLD E-199B AREA (WALKWAY)	85	86
27	XD 101	92	90	57	TRAIN IV CATLAYST MIX AREA	82	81
28	XD 102	93	86	58	D-146A (WALKWAY)	85	85
29	XD 103	92	90	59	TELOMER PUMPS TRAINS I,II,III	81	84
30	XD 104	92	94	60	CATALYST MIX AREA (S.END)	80	80
				61	CONTROL ROOM	62	63
				62	CHANGE ROOM	65	52

*To ck. for
any change
in noise
analysis
to new
compressor*

EVALUATION OF NOISE EXPOSURES
POLYETHYLENE 'A'
APPENDIX - A (PAGE 2)

CHART #	LOCATION	dB(A)	
		1980	1981
	PRIMARY COMPRESSOR BLDG (B802)		
63	WALKWAY (NW END)	88	84
64	WALKWAY (SW END)	86	84
65	C-441	93	90
66	C-241	93	90(DOWN)
67	C-231	95	90(DOWN)
68	C-331	96	94
69	C-341	95	92
70	C-201	95	92
71	C-200	95	94
72	C-342	93	93
73	C-141	93	91
74	C-142	94	90
75	C-131	96	89
76	AC-1 THR 4	87	83
77	COALESCER TRAIN 5	88	82
78	AC-5	89	95
79	CATALYST MIX AREA	TRAIN V DOWN	78
80	WALKWAY BY D-215	INVENTORY	82
81	WALKWAY BY ER-501	CONTROL	82
82	B-809 (NE END)		91
83	B-809 (SE END)		90
84	C-501		95
85	C-502		92
86	TRAIN V CATALYST PUMPS		91
87	X-505		94
88	BAC 51 A & B		101
89	C-541/531		87

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CHEMICALS SURVEYED

APPENDIX - C

1. ISOPAR - C

DATE	JOB CLASSIFICATION	EXPOSURE PERIOD (MINIMUM)	PPM (TWA)
10-14-81	O.S. COMPRESSOR	360	0.1
10-22-81	O.S. COMPRESSOR	360	0.4
11-03-81	O.S. COMPRESSOR	360	1.1
10-21-81	O.S. COMPRESSOR (TR. V)	360	0.8
10-27-81	S.O.T. COMPRESSOR (TR. V)	420	0.3
11-09-81	S.O.T. COMPRESSOR (TR. V)	420	0.4
10-19-81	CATALYST MIXER	360	1.0
10-22-81	CATALYST MIXER	360	0.8
11-04-81	CATALYST MIXER	420	1.1
10-15-81	MILLWRIGHT	360	2.1
10-26-81	MILLWRIGHT	450	2.4
11-10-81	MILLWRIGHT	300	0.7

2. ISOPAR - M

10-15-81	MILLWRIGHT	360	20.2
10-26-81	MILLWRIGHT	450	7.4
11-10-81	MILLWRIGHT	300	0.6

DGA/ltb
2-23-82

*Excursion
sampling
Hood ck.
lab Room
Edwards
Millwright
to use hood*

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