



DOW CHEMICAL U.S.A.

LOUISIANA DIVISION
PLAQUEMINE, LOUISIANA 70764
504 389-8000

INDUSTRIAL HYGIENE REPORT

POLYETHYLENE "A" NOISE ABATEMENT

FILE NO. 101-11-3

DATE August 22, 1975

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CHECKED

Charles H. Hylton

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SUMMARY

The Poly "A" Block has completed six noise abatement projects since April, 1974 and more projects are either in progress or in planning. Some very satisfactory results have been achieved thus far.

The projects, results and cost are listed in the report.

DISTRIBUTION

R. Langner 1803 Bldg., Midland
M. Swank 1803 Bldg., Midland

AN OPERATING UNIT OF THE DOW CHEMICAL COMPANY



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August 22, 1975

LOUISIANA DIVISION
PLAQUEMINE, LOUISIANA 70764
804 687-4321

C. Halphen

cc: B. G. Shamburger
L. L. Devillier

NOISE ABATEMENT

A. Sources normally producing sound levels of 90 dB(A) or above in Polyethylene block.

- *1. BAC 301 and 501 .
- *2. BAC 801 and 802
- 3. BAC 4A, B, C, and D
- 4. BAC 4E and F
- 5. BAC 2A and B
- 6. BAC 3A and B
- 7. BAC 7A and 7B (HMB 107 - 110)
- 8. BAC 7C and 7D (HMB 111 - 114)
- 9. S-111 thru S-114 (source - primary extruder motors X-101 - X-104)
- 10. BAC 1C and 1D
- 11. C-202 and C-201, C-141 and C-241, C-144 and C-133 (Bldg. 802)
- 12. P-154E
- 13. C-101 thru C-109 (Bldg. 803)
- 14. AC-5
- 15. C-501, 502, 541 and 531 (Bldg. 809)
- 16. BAC 51A and B

(*) Poly "B" Equipment

B. Noise abatement projects completed since April, 1974.

- 1. Project: Sound wall around BAC 4C and D
 - dB(A) before = 100 average
 - dB(A) after = 91.8 average
 - Cost = \$1,010
- 2. Project: Sound wall around BAC 801
 - dB(A) before = No change
 - dB(A) after =
 - Cost = \$1,157

Side walk on west side of office area (Bldg. 807) 35 feet from BAC4C & D area

dB(A) before = 90
dB(A) after = 84

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3. Project: Sound wall around BAC 4E and F
dB(A) before = 96.2 average
dB(A) after = 91.0 average
Cost = 1500 estimate

4. Project: Forklifts - reduced the RPM's by reducing the tension on the governor spring.

	dB(A) before	dba after
#143	95	91-92
#163	90	86-87
#164	91-92	88-89
#165	92	87-88

Cost = no charge by vendor

5. Project: Replaced sweeper with an 85 dB(A) sweeper. No data available on noise levels.

Costs: The cost difference of a sweeper without 85 dB(A) requirement and a sweeper with the 85 dB(A) requirement was \$1,400.

6. Project: Removed extruders X-117, X-118 and X-119 and replaced with X-120 and X-121. This helped to drop the dB(A) level to below 90 dB(A) in bldg. 804.
Cost - cannot be determined.

C. Noise Abatement Projects Planned

1. Project: Replace steam drives with electric drives on all secondary compressors C-101 - 109 and C-501 -C-502. This project is still in planning stage, no cost available.

2. Projects: a) Place intake and discharge silencers on blowers BAC 4C and D.
b) Eliminate 4A and 4B
c) Install one new blower
d) All blowers to have silencers.

Cost: Estimated = \$15,000

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Polyethylene "A"

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