PLAINTIFF'S EXHIBIT
UC-1147

1 H F

R. Hughes Visit Info
Prepared 1-17-77

Industrial Hygiene - D. E. DEESE

I. Noise -

AFR 160-3, 31 Aug 49 was initially used as the criteria in the Texas City Plant. This was superceded 29 Oct 56 by revision.

The Current OSHA Std dated 27 JUN 74 is 29 CFR 1910.95. It provides curves to convert octave band readings to the "A" weighted scale. The 8 hour allowable is 90 dBA with a 5 dBA equal energy doubling factor up to 115 dBA. Impact Noise less than 1 second is limited to 140 dB "C".

The Proposed OSHA Permanent standard dated 24 Oct 74 is similar to the current with required Medical audiometry and I.H. Monitoring either by sound pressure meter or audiodosimetry at 85 dBA. Overtime level extend to 16 hours at 85 dBA. While hearing protectors are considered interim or temporary control measures, they are required at 0.5 daily dose when there is any threshold shift, Feasible Engineering controls are require

The EPA Regulation dated 18 DEC 74 challenges OSHA and requires 85 dBA for 8 hours and an equal energy doubling of 3 dB within 3 years — later to be lowered to 80 dBA.

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OSHA countered 18 Mar 75 stating their proposa to be adequate. Documentation offered.

Status
The Texas City Plant has 70 plus buildings and areas above 90 dBA. The initial time study priority list of 32 was reduced to 16 based on actua

exposure as measured by Audiodosimetry. Noise signs are posted to warn transients. The Hearing Conservation NOISE Control, Inc. consultant has recommended required hearing protectors ~~for~~ based on a dose of 1.0 at 90dBA.

II. Chemicals

A. Current OSHA

UCTC 19125

PART 1910

CURRENT

OCCUPATIONAL SAFETY AND HEALTH STANDARDS

SUBPART Z—TOXIC AND HAZARDOUS SUBSTANCES

400 plus

1910.1000 Air Contaminants. 1968 TLV's plus ANSI standards #37

✱ 1910.1001 Asbestos. 2 fibers/cc; 10 f/cc ceiling Proposed 0.5 f/cc and 5 ceiling

✱ 1910.1002 Coal tar pitch volatiles; interpretation of term. 0.2 mg/M³ Benzene Sol.

14 Carcinogens Zero exposure

1910.1003 4-Nitrobiphenyl.

1910.1004 alpha-Naphthylamine.

1910.1005 4,4'-Methylene bis (2-chloroaniline).

1910.1006 Methyl chloromethyl ether.

1910.1007 3,3'-Dichlorobenzidine (and its salts).

1910.1008 bis-Chloromethyl ether.

1910.1009 beta-Naphthylamine.

1910.1010 Benzidine.

1910.1011 4-Aminodiphenyl.

1910.1012 Ethyleneimine.

1910.1013 beta-Propiolactone.

1910.1014 2-Acetylaminofluorene.

1910.1015 4-Dimethylaminoazobenzene.

1910.1016 N-Nitrosodimethylamine.

✱ 1910.1017 Vinyl Chloride. 10 ppm 8-hr TWA 5 ppm ceiling

1910.1029 Coke Oven Emissions 150 µg/M³ 8hr TWA

[40 F.R. 23072, May 28, 1975.]

Note: All but the Air Contaminant List are human carcinogens.

✱ = Critical to Texas City Business

Approximately 1200 Chemicals are on the NIOSH Suspect Carcinogen List

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Avoid Oral Instruction

Date 10-25-76

C&P Mutagen/Teratogen List — To: [illegible] — From: DHC

1. Acrylic Acid - TER/TER
* (2) Benzo Pyrene - TER
* 3. 1,3 Butadiene, 2-Chloro, Chloroprene - MUT
4. Carbamic Acid, Salts - TER
5. Chloroform - TER
* 6. Ethylene Oxide - MUT
* (7) Nitrogen Oxide - TER
8. Phthalic Acid Dibutyl Ester (Dibutyl Phthalic Ester) - TER
9. Phtalic Acid Dioctyl Ester - TER
10. Sodium Chloride - TER
11. Methyl Styrene - TER
* (12) Sulfuric Acid Di Ethyl Ester (Diethyl Sulfate) - TER

AM-686-A

Signed _____

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OSHA Interim Guidelines Published based on Criteria Documents:
① Lead Exposure
② Mercury Exposure
③ Silica Exposure

STATUS REPORT ON PROPOSED STANDARDS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

Topic	Standard	Date Proposed	Last Action
Ammonia	1910.1031 50 ppm (5 min. Sample)	November 25, 1975 (Current Report, November 27, 1975, p. 895).	Firm recommends exclusion of closed refrigeration from proposed rule (Current Report, June 17, 1976, p. 70).
~~Ammonia (anhydrous);~~ revisions in handling and storage procedures	1910.111, 267	September 21, 1973 (Current Report, September 27, 1973, p. 550).	Comment period extended by OSHA (Current Report, June 24, 1976, p. 131).
Arsenic (inorganic)	1910.93 0.004mg/M³ TWA 0.01 mg/M³ Ceiling	January 21, 1975 (Current Report, January 16, 1975, p. 955).	OSHA to hold public hearings on inflation impact statement (Current Report, June 24, 1976, p. 130).
✡ Asbestos	1910.1001 0.5 f/cc TWA 5.0 f/cc Ceiling	October 9, 1975 (Current Report, October 16,1975; p. 638)	Firms file critical comments on OSHA proposal (Current Report, April 22, 1976, p. 1517).
Beryllium	1910.1026 1.0µg/M³ TWA 5.0µg/M³ ceiling	October 17, 1975 (Current Report, October 16, 1975, p. 635).	Current levels may be lowest feasible limits, engineer states (Current Report, April 22, 1976, p. 1515).
Coke oven emissions	1910.1029 Final Ruling 22 Oct 76	July 31, 1975 (Current Report, July 31, 1975, p. 283).	Council on Wage and Price Stability criticizes OSHA's inflation impact statement at hearing (Current Report, May 13, 1976, p. 1772).
~~Cotton dust~~	1910.186	June 3, 1974 (Current Report, June 6, p. 7).	Adequacy of proposed standard challenged (Current Report, October 17, 1974, p. 560).
~~Electrical~~ ground-fault circuit protection	1910.309, 1926.400, 1915 through 1918	March 16, 1972. Reproposed June 11, 1974 (Current Report, June 13, p. 154).	Firms comment on proposed revocation of current rules (Current Report, June 10, 1976, p. 47).
~~Field sanitation~~ facilities for farm workers	1928.110	April 27, 1976 (Current Report, April 29, 1976, p. 1542).	Senate Agriculture Committee adopts resolution opposing proposed rules (Current Report, June 24, 1976, p. 131).

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Topic	Standard	Date Proposed	Last Action
[illegible] temporary structures for farm workers	1910.142	September 23, 1974 (Current Report, September 26, 1974, p. 460).	OSHA issues advance notice of intent to withdraw proposal (Current Report, May 6, 1976, p. 1753).
Lead (inorganic)	1910.1025 100 µg/m³ TWA Biological Blood 60 µg/100g Urine 100 µg/L @ 1.024 S.G.	October 3, 1975 (Current Report, October 9, 1975, p. 571).	Effects of lead exposure on women reviewed at conference (Current Report, June 24, 1976, p. 124).
[illegible] guarding [illegible]	1910.211, 212, 213, 215, 218, and 219	May 11, 1973 (Current Report, May 15, 1973, p. 1468).	Comments received by June 11, 1973 (Current Report, August 15, 1973, p. 318).
[illegible] keeping procedures	1915, 1916, 1917, and 1918	June 13, 1973 (Current Report, June 21, 1973, p. 78).	Comments received by August 19, 1973. Advisory committee hearings held (Current Report, January 9, 1975, p. 932).
MOCA (4,4-Methylene bis (2-chloroaniline))	1910.1005 Clean Room Zero Exposure.	February 3, 1975 (Current Report, February 6, 1975, p. 1176).	OSHA extends comment period until May 30 (Current Report, May 1, 1975, p. 1572).
Noise	1910.95 See Discussion	October 24, 1974 (Current Report, October 24, 1974, p. 587).	OSHA continues to prefer engineering controls for noise, Corn says (Current Report, June 24, 1976, p. 132).
[illegible] [illegible]	1910.176, 178	April 23, 1974 (Current Report, April 25, p. 1500)	Comments received by June 24 (Current Report, July 4, p. 126).
Sulfur dioxide	1910.1030 2ppm TWA 10ppm ceiling	November 24, 1975 (Current Report, November 27, 1975, p. 894).	Firms express objections to proposed rule (Current Report, April 22, 1976, p. 1516).
[illegible] credentials [illegible] proposed [illegible]	1907	June 3, 1974 (Current Report, June 6, p. 4).	Hearing held (Current Report, November 21, 1974, p. 740). Comment period again extended (Current Report, July 10, 1975, p. 189).
Toluene	1910.1029 100ppm TWA 200ppm ceiling	October 6, 1975 (Current Report, October 9, 1975, p. 571).	Firms offer comments on OSHA proposal (Current Report, June 10, 1976, p. 46).
Trichloroethylene	1910.1027 100ppm TWA 150ppm ceiling	October 20, 1975 (Current Report, October 23, 1975, p. 733).	National Cancer Institute study shows liver cancer in test animals (Current Report, June 17, 1976, p. 64).
[illegible] [illegible]	1926.800	March 18, 1974 (Current Report, March 21, 1974, p. 1329)	Comments received by May 17, 1974 (Current Report, July 4, 1974, p. 123) Rules to be issued soon (Current Report, February 6, 1975, p. 1185).

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Topic	Standard	Date Proposed	Last Action
[illegible] — working surface proposal to make [illegible]	1910.21 through 32	September 6, 1973 (Current Report, September 13, 1973, p. 467).	Comment period extended by OSHA (Current Report, June 24, 1976, p. 131).

Mini Standards

Standards Completion Project 1910.1000, Tables Z-1-3

Topic		Last Action
Camphor, Chloroacetaldehyde, Alpha-Chloroacetophenone (Phenacyl Chloride), Ethyl Butyl Ketone (3-Heptanone), Mesityl Oxide, 5-Methyl-3-Heptanone (Ethyl Sec-Amyl Ketone), Methyl (N-Amyl) [illegible]-2-Heptanone, P-Nitroaniline, [illegible] Pival (Pivalylindandione)		Draft technical standards issued by OSHA on January 27, 1975 (Current Report, January 30, 1975, p. 1035).
Alpha-Methyl Styrene, [illegible] Terphenyls, Vinyl Toluene, Acrolein, P-Tert-Butyltoluene, Cumene (Isopropyl Benzene), Cyclohexane, Diphenyl, Ethyl Benzene, Furfural, 2-Pentanone, Hexone		Draft technical standards issued by OSHA on February 3, 1975 (Current Report, February 6, 1975, p. 1176).
Sec-Amyl Acetate, Tert-Butyl Acetate, Sec-Butyl Acetate, Butyl Acetate, 2-Ethoxyethylacetate, Ethyl Acetate, Ethyl [illegible], Sec-Hexyl Acetate, Isoamyl Acetate, Isobutyl [illegible], Methyl [illegible], Methyl [illegible], Methyl [illegible] Acetate, Methoxy [illegible], N-Propyl Acetate		Draft technical standards issued by OSHA on March 14, 1975 (Current Report, March 20, 1975, p. 1377).

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Topic		Last Action
2-Butanone, 2-Pentaone, Cyclohexanone, Hexone, Methyl n-Amyl Ketone, Ethyl Butyl Ketone		Standards for six ketones proposed by OSHA on May 8, 1975 (Current Report, May 15, 1975, p. 1639).
2-Butoxy Ethanol, N-Butyl Glycidyl Ether, Cyclohexene, Dipropylene Glycol Methyl Ether, Ethyl Ether, Glycidol, Isopropyl Glycidyl Ether, Methyl Cellosolve, Methylal, Phenyl Glycidyl Ether, Tetrahydrofuran		Draft technical standards issued by OSHA on July 10, 1975 (Current Report, July 10, 1975, p. 188).
Butadiene, Dioxane, Heptane, Methyl-cyclohexane, Naptha (Coal Tar), Octane, Pentane, Petroleum Distillates (Naptha), Propylene Dichloride, Turpentine, Benzyl Chloride, Bromoform, Chlorobromomethane, 1,2-Dichloroethylene, Methyl Iodide, Ethyl Bromide, Difluorodibromomethane, Hexachloronaphthalene		Draft technical standards issued by OSHA on November 6, 1975 (Current Report, November 6, 1975, p. 799).
Acetylene Tetrabromide, Allyl Chloride, Chlorobenzene, Chlorodiphenyl (54 percent chlorine), 1,1-Dichloroethane, Epichlorohydrine, 1,1,2,2-Tetrachloro-1,2,-Difluoroethane, 1,1,1,2-Tetrachloro-2,2-Difluoroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloro-1,2,2-Trifluoroethane, Trifluoromono-bromomethane, Arsine, Carbon Tetrachloride, Diazomethane, O-Dichlorobenzene, Diethylamine, Dimethylamine, Ethylene Dichloride, Methyl Chloroform, Tetrachloroethylene, 1,1,2-Trichlorsethane		Draft technical standards issued by OSHA on November 27, 1975 (Current Report, November 27, 1975, p. 895).

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Topic		Last Action
Acrylonitrile, Ethylamine, Morpholine, Aniline, Ethylenediamine		Draft technical standards issued by OSHA on April 27, 1976 (Current Report, April 29, 1976, p. 1540).
Acetic Anhydride, Acetonitrile, Cresol (all isomers), Dimethylaniline, Hydrogen Bromide, Hydrogen Fluoride, Phenol, Phenylhydrazine, Pyridine, Sulfuric Acid, O-Toluidine, Xylidine		Draft technical standards issued by OSHA on April 27, 1976 (Current Report, April 29, 1976, p. 1540).

STATUS REPORT ON CRITERIA DOCUMENTS

Criteria Document	Proposal	Last Action
Ammonia (GPO No. 1733-00036/$1.55)	NIOSH recommended limit of 50 ppm (Current Report, August 1, 1974, p. 222).	See "Status Report on Proposed Standards."
Arsenic (Inorganic) (GPO No. and price unavailable	NIOSH recommended limit of .0002 mg per cubic meter of air (Current Report, May 22, 1975, p. 1687).	See "Status Report on Propsoed Standards."
Asbestos (GPO No. 1733-00009/$2.10)	NIOSH recommended limit of 2 fibers per cubic centimeter of air (Current Report, February 10, 1972, p. 839).	See "Status Report on Proposed Standards."
Benzene (GPO No. 1733-00038/$2.10) Revised 19 Aug 76	NIOSH recommended limit of 10 ppm (Current Report, August 1, 1974, p. 222). Carcinogen 1 ppm TWA 2 hr	See "Status Report on Proposed Standards."
Beryllium (GPO No. 1733-00011/$2.10)	NIOSH recommended retention of the present limit of two micrograms per cubic meter of air (Current Report, July 6, 1972, p. 115).	See "Status Report on Proposed Standards."
Carbon Monoxide (GPO No. 1733-00006/$2)	NIOSH recommended limits of 35 ppm (Current Report, July 13, 1973, p. 140).	Standard to be proposed soon by OSHA (Current Report, June 13, 1974, p. 35).
Carbon Tetrachloride (GPO No. and price unavailable	NIOSH recommended exposure limit of two ppm for up to a 10-hour workday (Current Report, February 12, 1976, p. 1227).	None
Chlorine (GPO No. and price unavailable	NIOSH recommended limit of 0.5 ppm measured over 15-minute period (Current Report, June 3, 1976, p. 3).	None
Chloroform (GPO No. 1733-00045/$1.95)	NIOSH recommended limit of 10 ppm (Current Report, September 19, 1974, p. 427).	National Cancer Institute study shows that chloroform causes liver, kidney cancer (Current Report, June 17, 1976, p. 63).

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Criteria Document	Proposal	Last Action
Chromic acid (GPO No. [illegible] $3.10)	NIOSH recommended 0.05 mg as chromium trioxide per cubic meter of air (Current Report, July 26, 1973, p. 219)	Comments received by January 7, 1974 (Current Report, March 7, 1974, p. 1255).
★ [illegible] (GPO No. [illegible] price unavailable	NIOSH recommended limit of one microgram per cubic meter of air (Current Report, January 8, 1976, p. 1060).	Union's petition for emergency temporary standard rejected by OSHA (Current Report, May 20, 1976, p. 1812).
Coke oven emissions (GPO No. [illegible] $95)	NIOSH recommended work practices standard (Current Report, March 8, 1973, p. 1147).	See "Status Report on Proposed Standards."
Cotton dust (GPO No. [illegible] $2.35)	NIOSH recommends no fixed exposure level (Current Report, October 3, 1974, p. 492).	Draft OSHA rule calls for level of 0.15 mg per cubic meter of air (Current Report, June 10, 1976, p. 41).
★ [illegible] (GPO No. [illegible] price unavailable)	NIOSH recommended limit of five ppm and peak limit of 15 ppm (Current Report, April 29, 1976, p. 1542).	None
Fluorides (inorganic) (GPO No. [illegible] price unavailable	NIOSH recommended limit of 2.5 mg per cubic meter of air (Current Report, September 4, 1975, p. 427).	None
Hazardous materials labeling (GPO No. [illegible] $1.35)	NIOSH recommended placards, labels, other devices (Current Report, January 2, 1975, p. 901).	Advisory committee hearings (Current Report, January 30, 1975, p. 1045).
Heat stress (GPO No. [illegible] $1.25)	NIOSH recommended standards to insure that body heat does not exceed 100.4 degrees F (Current Report, July 13, 1974).	Criteria document returned by OSHA to NIOSH (Current Report, May 30, 1974, p. 1669).
Hydrogen fluoride (GPO No. [illegible] price unavailable	NIOSH recommended limit of 2.5 mg of fluoride ion per cubic meter of air (Current Report, April 8, 1976, p. 1445).	None
★ Isopropyl alcohol (GPO No. [illegible] price unavailable)	NIOSH recommended limit of 400 ppm of air by volume (Current Report, April 8, 1976, p. 1445).	None
Kepone (GPO No. [illegible] price unavailable	NIOSH recommended limit of one microgram per cubic meter of air (Current Report, February 5, 1976, p. 1195).	Kepone problem said to point out OSHA deficiencies (Current Report, February 19, 1976, p. 1260).
★ Lead (inorganic) (GPO No. [illegible] $1.25)	NIOSH recommended 0.15 mg per cubic meter (Current Report, January 18, 1973, p. 924).	See "Status Report on Proposed Standards."
Mercury (inorganic) (GPO No. [illegible] $1.50)	NIOSH recommended 0.05 mg per cubic meter (Current Report, August 23, 1973, p. 351).	Comments received by March 25, 1974 (Current Report, March 28, 1974, p. 1368).
Methyl [illegible] (GPO No. [illegible] price unavailable	NIOSH recommended limit of 200 ppm (Current Report, June 17, 1976, p. 64).	None
Methyl chloride (GPO No. [illegible] price unavailable	NIOSH recommended peak concentration of 500 ppm (Current Report, June 24, 1976, p. 125)	None
Nitrogen [illegible] (GPO No. [illegible] price unavailable	NIOSH recommended limit of two ppm (Current Report, June 24, 1976, p. 125).	None

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Criteria Document	Proposal	Last Action
Nitrogen oxides (GPO No. and price unavailable)	NIOSH recommended ceiling limit of one ppm for nitrogen dioxide and limit of 25 ppm for nitric oxide (Current Report, April 1, 1976, p. 1427)	None
Phosgene (GPO No. and price unavailable)	NIOSH recommended adherence to current standard of 0.1 ppm for up to a 40-hour workweek (Current Report, February 26, 1976, p. 1276).	None
Radiation (ultraviolet) (GPO No. 1733-00012/$1.25)	NIOSH recommended adoption of ACGIH TLV (Current Report, January 18, 1973, p 924).	Report on monitor iss 1 by NIOSH (Current Report, November , 1973, p. 724).
Silica (crystalline) (GPO No. 1733-00050/$1.95)	NIOSH recommended limit of 50 micrograms per cubic meter of air (Current Report, November 14, 1974, p. 684).	Comments received (Current Report, January 30, 175, p. 1043). Firms request comment extension to August 1 (Current Report, March 13, 1975, p. 1347).
Sodium hydroxide (GPO No. and price unavailable)	NIOSH recommended limit of two mg per cubic meter of air (Current Report, October 9, 1975, p. 573).	None
Sulfur dioxide (GPO No. 1733-00029/$1.55)	NIOSH recommended two ppm of air (Current Report, February 21, 1974, p. 1193).	See "Status Report on Proposed Standards."
Sulfuric acid (GPO No. 1733-00034/$1.40)	NIOSH recommended 1 mg per cubic meter (Current Report, June 20, 1974, p. 59).	Comments received (Current Report, October 24, 1974, p. 595).
Toluene (GPO No. 1733-00019/$1.25)	NIOSH recommended limit of 100 ppm (Current Report, July 26, 1973, p. 220).	See "Status Report on Proposed Standards."
Toluene diisocyanate (GPO No. 1733-00021/$1.25)	NIOSH recommended exposure of 0.005 ppm (Current Report, July 19, 1973, p. 189).	Two rules for worker exposure under consideration by OSHA (Current Report, November 28, 1975, p. 861).
Trichloroethylene (GPO No. 1733-00023/$1.30)	NIOSH recommended exposure of 100 ppm (Current Report, August 2, 1973, p. 254).	See "Status Report on Proposed Standards."
Xylene (GPO No. and price unavailable)	NIOSH recommended 100 ppm limit (Current Report, June 12, 1975, p. 28).	None
Zinc oxide (GPO No. and price unavailable)	NIOSH recommended limit of five milligrams per cubic meter of air (Current Report, October 30, 1975, p. 763).	None

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