X

Monsanto

C.M. Hancock - Env. Affairs - Texas City, TX 0-21 - Ext. 3852

August 29, 1983

Outline of September 1, 1983
Texas City Plant Groundwater
Assessment

E.N. Brasfield	(SL)	G5WA
C.F. Callis	(SL)	G5WA
W.D. Carpenter	(SL)	G3WG
B.E. Huntsman		1250
C.D. Malloch	(SL)	G3WG
P.S. Park	(SL)	G3WB
M.A. Pierle	(SL)	G3WG
G. Roush	(SL)	G2WG
M.C. Throdahl	(SL)	D1D
W.W. Varnado	(SL)	G4WB

cc:

G.A. Daues		0-10A
R.S. Jackson		0-13
S.G. Pappas		0-10
Raeann Reid		0-21
G.M. Rinaldi		0-21
G.T. Ryan		0-11
G.E. Sprock		513D
G.L. Tromblee		0-10
M.F. Weishaar	(SL)	G5WA

AUG 31 1983

The outline of the Texas City Plant Groundwater Assessment presentation scheduled for September 1, 1983 are attached for your review.

C.M. Hancock

C.M. Hancock

CMH:js
Enclosure

PROTECTED MATERIAL: MONSANTO
INSURANCE COVERAGE LITIGATION

MCO 7588317

DEPOSITION EXHIBIT
Roush 13
3-15-93

IF THE FILM IMAGE IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT

MST 43

WATER_PCB-SD0000025392

TEXAS CITY PLANT

- SITE HISTORY
- WASTE DISPOSAL HISTORY
- PLANT SITE
  - POTENTIAL PROBLEM EVALUATION
- SOUTH 20 SITE
  - REMEDIAL ACTION MONITORING
- NORTH 80 SITE
  - REMEDIAL ACTION DEVELOPMENT
- SUMMARY/CONCLUSIONS

PROTECTED MATERIAL: MONSANTO
INSURANCE COVERAGE LITIGATION

MCO 7588318

IF THE FILM IMAGE IS LESS CLEAR
THAN THIS NOTICE, IT IS DUE
TO THE QUALITY OF THE DOCUMENT

MST 43

WATER_PCB-SD0000025393

SUBJECTS NOT ADDRESSED

- MOTCO
- ANDERS LANE
- HURRICANE ALICIA

PROTECTED MATERIAL: MONSANTO
INSURANCE COVERAGE LITIGATION

IF THE FILM IMAGE IS LESS CLEAR
THAN THIS NOTICE, IT IS DUE
TO THE QUALITY OF THE DOCUMENT

MST 43

WATER_PCB-SD0000025394

5

AREA FEATURES AFFECTING SITE & GROUNDWATER

- GALVESTON BAY & TEXAS CITY SHIP CHANNEL
- TEXAS CITY SEAWALL
- SUBSIDENCE
- TEXAS CITY FLOOD PROTECTION SYSTEM

IF THE FILM IMAGE IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT

MST 43

MCO 7588320

PROTECTED MATERIAL: MONSANTO INSURANCE COVERAGE LITIGATION

WATER_PCB-SD0000025395

9

IF THE FILM IMAGE IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT

MST 43

TEXAS CITY SITE PROCESS HISTORY

TEXAS SUGAR REFINERY	1923 → 1941
ETHYLBENZENE/STYRENE	1943 → PRESENT
ACETYLENE COMPLEX	1952 → 1970
CYANIDE COMPLEX	
HCN	1952 → 1976
AN	1977 → PRESENT
SYNTHESIS GAS COMPLEX	1970 → PRESENT
POLYETHYLENE	1955 → 1982

PROTECTED MATERIAL: MONSANTO
I[illegible]CE [illegible]AGE LITIGATION

MCO 7588321

WATER_PCB-SD0000025396

CURRENT WASTE DISPOSAL SYSTEMS

WASTEWATER

PRIMARY TREATMENT 1972	
SECONDARY TREATMENT	GCWDA – 1975
INJECTION WELLS	#1 WELL 1977
	#2 WELL
	MALONE 1970

LIQUIDS

INCINERATION	PROCESS UNIT
	ROLLINS
UTILITY BOILERS	

SOLIDS

LANDFILL	GCWDA
	ROLLINS

BY-PRODUCT SALES

PROTECTED MATERIAL: MONSANTO
INSURANCE COVERAGE LITIGATION

MCO 7588322

IF THE FILM IMAGE IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT

MST 43

5

IF THE FILM IMAGE IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT

MST 43

FACILITIES WITH POTENTIAL FOR GROUNDWATER IMPACT

- PRIMARY TREATMENT SURFACE IMPOUNDMENTS AND DRYING BEDS NO LONGER ACTIVE
- INJECTION WELLS
- SEWERS AND UNDERGROUND PIPELINES
- NORTH DITCH AND HOLDING POND

PROTECTED MATERIAL: MONSANTO
INSURANCE COVERAGE LITIGATION

MCO 7588323

WATER_PCB-SD0000025398

IF THE FILM IMAGE IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT

MST 43

2049

NORTH DITCH

- POTENTIAL GROUNDWATER PROBLEM ON SITE
- HISTORY — 1952 PROCESS/STORM/SANITARY WASTEWATERS
- GEOLOGY — PCT ON FILL 0 TO 20' DEEP
- CHANGES IMPROVING DITCH WATER QUALITY
- FUTURE PLANS

ORGANIC CONC. DOWN 90% OVER LAST 5 YRS.

HOLDING POND ANCHORED.

12 wells — one nearest holding pond does show mists in pond

PROTECTED MATERIAL: MONSANTO INSURANCE COVERAGE LITIGATION

MCO 7588324

LL

J

SOUTH 20 REMEDIAL ACTION/CLOSURE

- CONTAMINATED GROUNDWATER REMOVED BY PURGE WELLS
- HYDRAULIC GRADIENT REVERSED BY PUMPING POND
- WATER TREATING SLUDGE USED TO FILL POND

MCO 7588325

PROTECTIVE MATERIAL: MONSANTO
INSURANCE COVERAGE LITIGATION

IF THE FILM IMAGE IS LESS CLEAR
THAN THIS NOTICE, IT IS DUE
TO THE QUALITY OF THE DOCUMENT

MST 43

WATER_PCB-SD0000025400

NORTH 80 HISTORY

- DISPOSAL SITE -- 1954 - 1975
- GALVESTON COUNTY EASEMENT GRANTED 1963
  - SEAWALL CONSTRUCTED
- ACCESS FOR GENERAL PUBLIC
  - RECREATIONAL AREA
- TEXAS CITY FLOOD CONTROL PROJECT -- 1982
- EVIDENCE OF WASTE MOVEMENT

IF THE FILM IMAGE IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT

MST 43

MCO 7588326

PROTECTED MATERIAL: MONSANTO INSURANCE COVERAGE LITIGATION

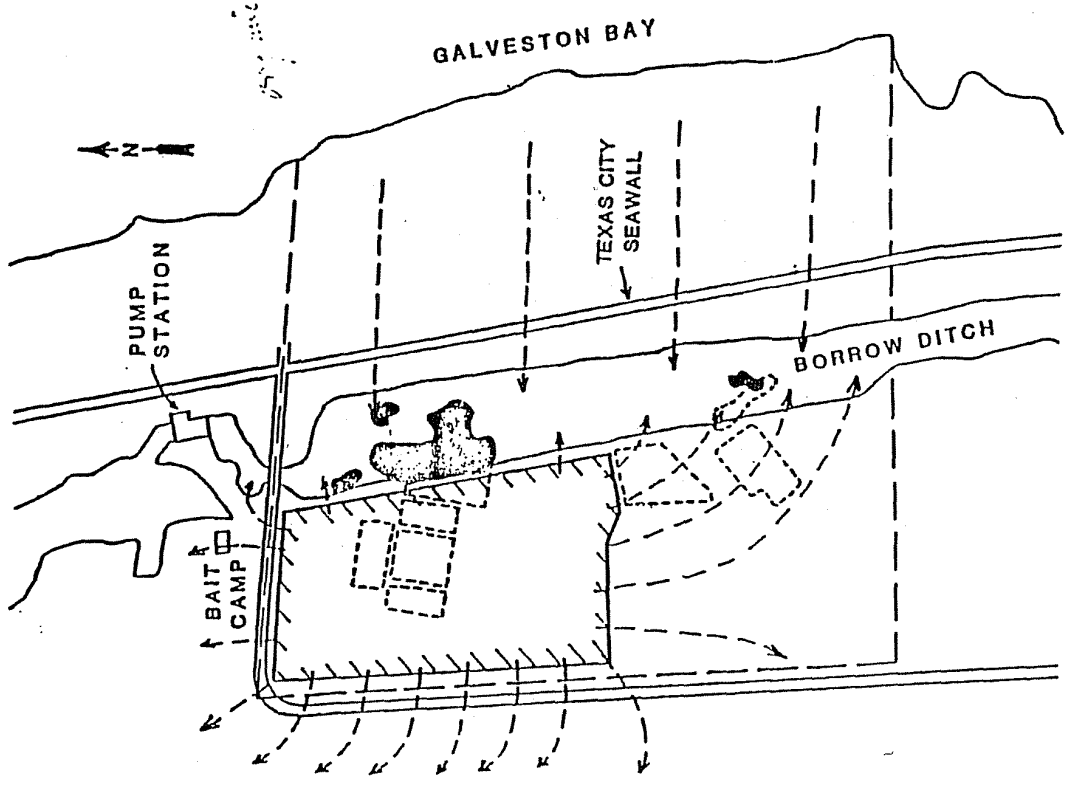
WATER_PCB-SD0000025401

IF THE FILM IMAGE IS LESS CLEAR
THAN THIS NOTICE, IT IS DUE
TO THE QUALITY OF THE DOCUMENT

MST 43 2052

MCO 7588327

PROTECTED MATERIAL: MONSANTO
INSURANCE COVERAGE LITIGATION



WATER_PCB-SD0000025402

IF THE FILM IMAGE IS LESS CLEAR
THAN THIS NOTICE, IT IS DUE
TO THE QUALITY OF THE DOCUMENT

SIGNIFICANT FINDINGS OF SITE ASSESSMENT

- GROUNDWATER AND SOIL CONTAMINATION
- MULTI-PHASE FLOW OF CHLORINATED HYDROCARBONS AND CONTAMINATED GROUNDWATER
- CHLORINATED HYDROCARBONS ARE INCREASING PERMEABILITY OF NATIVE CLAYS
- WASTE MATERIALS ARE MIGRATING FROM EAST HALF OF PROPERTY TOWARD BORROW DITCH BUT DO NOT CONTRIBUTE TO SHEEN AT THIS TIME

EAST 43

PROTECTED MATERIAL: MONSANTO

WATER_PCB-SD0000025403

IF THE FILM IMAGE IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT

MST 43

OBJECTIVES OF REMEDIAL ACTION

- CONTROL RELEASE OF FLOATING ORGANIC MATTER ("SHEEN") TO "BORROW DITCH"
- CONTROL OFF-SITE MIGRATION OF CONTAMINATED GROUNDWATER

MCO 7588329

PROTECTED MATERIAL: MONSANTO INSURANCE COVERAGE LITIGATION

WATER_PCB-SD0000025404

TECHNICAL APPROACH

- PHASE I
  - TRENCH DRAIN NETWORK IN SETTLING POND
  - CLAY CAP OVER WEST SIDE
- PHASE II (IF NEEDED)
  - SUBSTITUTE CONDUIT OR CULVERT FOR BORROW DITCH
  - BACKFILL BORROW DITCH
  - CONCRETE SLURRY WALL ALONG SOUTH PROPERTY LINE
- PHASE III (IF NEEDED)
  - SOIL-BENTONITE SLURRY WALLS ALONG NORTH AND WEST PROPERTY LINES

MCO 7588330

PROTECTED MATERIAL: MONSANTO
INSURANCE COVERAGE LITIGATION

IF THE FILM IMAGE IS LESS CLEAR
THAN THIS NOTICE, IT IS DUE
TO THE QUALITY OF THE DOCUMENT

MST 43

WATER_PCB-SD0000025405

CONCLUSIONS

- GROUNDWATER CONTAMINATION PROBLEMS AT NORTH 80 AND SOUTH 20 HAVE BEEN ADEQUATELY ASSESSED
- AREAS OF POTENTIAL SITE GROUNDWATER CONTAMINATION IDENTIFIED
- ADDITIONAL WORK IN PROGRESS
- ASSESSMENT HAS INCREASED KNOWLEDGE AND AWARENESS
- TEXAS CITY PLANT IS COMMITTED TO AND ADEQUATELY ADDRESSING ITS KNOWN AND POTENTIAL GROUNDWATER PROBLEMS

IF THE FILM IMAGE IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE DOCUMENT

MST 43

PROTECTED MATERIAL: MONSANTO

WATER_PCB-SD0000025406