PLAINTIFF'S
EXHIBIT
DUP-1431

INDUSTRIAL CHEMICALS DEPARTMENT

	PLANTS
A. W. BEASLEY	- AUGUSTA PLANT
C. E. WATKINS	- BEAUMONT PLANT
R. J. McAULIFFE	- BURNSIDE PLANT
R. W. BAYRER	- CLEVELAND PLANT
H. S. BOYLE	- DELAWARE RIVER PLANT
S. T. ALLEN	- EAST CHICAGO PLANT
W. F. BRINT	- FORT HILL PLANT
E. C. BELL	- FORTVILLE PLANT
R. D. TURNER	- GRASSELLI PLANT
H. A. ROSCOE	- HEALING SPRINGS PLANT
D. I. GARNETT	- HOUSTON PLANT
L. A. BIDEZ	- HURON PLANT
A. SINNICKSON	- JAMES RIVER PLANT
M. B. BURTON	- MEMPHIS PLANT
H. E. HIESTAND	- NIAGARA FALLS PLANT
M. D. MASON	- PHILADELPHIA PLANT
S. HYDE	- PINEVILLE PLANT
J. M. LOETHER	- REPAUNO PLANT
R. J. ROUSH	- TOLEDO PLANT
E. J. PECHEUX	- WURTLAND PLANT

271

120898

DUP 0902751

DU 024133

E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED
WILMINGTON, DELAWARE 19898

INDUSTRIAL CHEMICALS DEPARTMENT

CC: JCMuller
WHKelso
LDGreenberg
RSWangelin
TTChase
CCQuarles
WHMcCoy

June 19, 1972

TO: ALL PLANTS

FROM: R. C. OTT RCO

MONITORING OF AIRBORNE CONCENTRATION OF ASBESTOS IN THE PLANT

Concern has been raised about monitoring airborne asbestos and determining the concentration. The attached letter asks the operating departments to solicit suggestions and comments from their installations on how to meet this new Federal requirement. Larger installations may want to set up to make their own counts, while unit plants will find it more economical to make other arrangements. Should there be a central Du Pont service?

Please forward your answers to John Haverty by July 7 for transmittal to C. F. Reinhardt.

Attachment
RCO:dac

Standard as of June 7, 1972

[illegible]

Avg. concentration [illegible] per cc effective July 1, 1976. (Considered by [illegible] impossible to meet.)

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120891

DU 024134

REV. 7-66

K- 3.13

E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED
WILMINGTON, DELAWARE 19898

CHEMICALS AND PIGMENTS DEPARTMENT

cc: EPBlanchard
WRGalloway
R&D and Research Mgrs.
Manufacturing Mgrs.
Production Mgrs.
SH&E Coordinators
LCSkaggs - PA

March 1, 1983

C&P DIVISION HEADS
C&P SITE HEADS

SAFETY, HEALTH AND ENVIRONMENTAL REPORT
FOURTH QUARTER AND YEAR 1982

Enclosed is the regular report of the C&P Department's performance as well as items of interest in the areas of safety, occupational health, environmental protection, and regulation of product hazards. An executive summary of the report is attached to this letter.

Major national and Corporate issues are addressed in the attached summary of the Du Pont Environmental Committee Annual Report.

Comments and questions will be welcomed by any member of the Environmental and Regulatory Affairs Staff.

T. E. LEWIS

TEL/nvw
Attachment

DUP 1013580

DU 053683

SAFETY, HEALTH AND ENVIRONMENTAL REPORT

FOURTH QUARTER, 1982

SAFETY AND HEALTH*

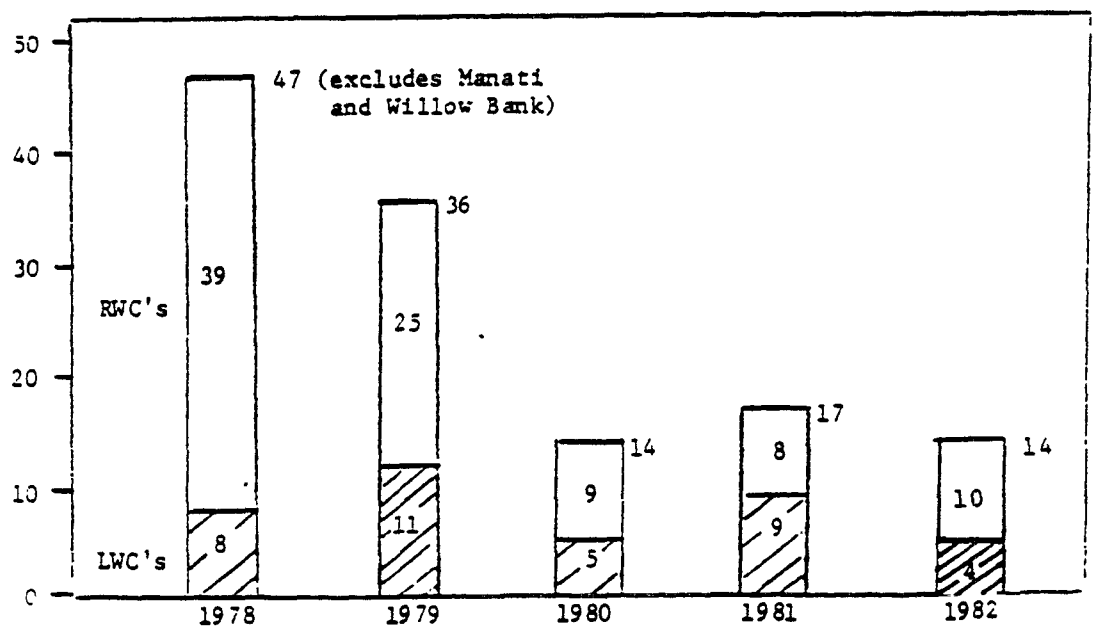
SAFETY PERFORMANCE FREQUENCY RATES, 1982

	Plants		Department	Du Pont Worldwide	
	Goal	Actual	Actual	Goal	Actual
LWC	.02	.043	.037	.030	.019
LWC + RWC	.07	.151	.130	.135	.082
OFF-THE-JOB	.40	.526	.507	.680	.601

With two LWC's and two RWC's in the 4th Quarter, C&P plants injury rate for 1982 was essentially the same as in 1981 (0.151 vs 0.154), while company experience was much improved. Off-the-job injury experience in 1982 was slightly better than the previous year (.526 vs .549). Rates for Plants fell seriously short of Production Division 1982 goals. Goals for 1983 have been set at LWC = 0.022, LWC + RWC = 0.075 and OTJ = 0.46.

CHEMICALS AND PIGMENTS DEPARTMENT INJURY EXPERIENCE

INJURIES



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DU 053688

C&P INJURY STATISTICS AND 1982 THROUGH 4TH QUARTER

Site	Injuries (LWC-RWC)/Rate 1981		1982		Off Job Injuries/Rate 1981		1982		Medical Treatment 1981	1982
Chambers Works	0-1	.03	0-0	0	40	.63	40	.66	79	72
Cleveland	0-1	.35	0-0	0	6	1.11	2	.41	4	5
Deer Park	0-0	0	0-0	0	1	.33	0	0	8	2
De Lisle	1-2	.53	1-2	.54	5	.47	5	.49	10	20
East Chicago	0-0	0	0-0	0	4	.72	2	.41	5	4
Edge Moor	0-0	0	0-1	.18	6	.54	7	.67	9	12
Florida	0-0	0	0-1	.41	2	.39	3	.64	4	6
Grasselli	0-0	0	0-0	0	4	.68	2	.39	4	2
Johnsonville	1-0	.12	1-0	.12	9	.54	6	.36	32	19
Memphis	1-0	.10	0-0	0	3	.16	8	.44	10	8
Newark	0-0	0	0-0	0	3	.37	2	.28	2	3
Newport	1-1	.16	0-0	0	6	.52	1	.14	5	1
Niagara Falls	1-2	.33	1-2	.44	9	.51	5	.37	20	12
Repauno	2-1	.63	1-3	.94	4	.43	7	.86	9	5
Wurtland	0-0	0	0-0	0	0	0	0	0	2	0
Unit Plants	1-0	1.25	0-1a	.65	5	2.39	3b	.99	6	5c
Antioch*	0-4	1.00	0-0	0	6	.77	1	.83	22	4
Beaumont*	2-0	.18	0-0	0	6	.23	1	.45	13	0
Plant Total	8-8	.15	4-10	.15	108	.55	95	.53	209	180
Jackson Lab	0-0	0	0-0	0	5	.52	5	.54	2	6
C&P Res. Lab	0-0	0	0-0	0	2	.72	2	.73	6	2
Chestnut Run Lab	1-0	.85	0-0	0	0	0	2	.43	0	0
Adm. & Mktng.	0-0	0	0-0	0	8	.52	3	.21	0	0
C&P Total	9-8	.14	4-10	.13	123	.54	106	.51	217	188
Colorquim (Lerma)	0-0	0	0-0	0	3	.42	7	.98	6	4
PPQ (Altamira)	0-0	0	0-1	.18	11	1.08	11	1.08	2	2
Allied En. (Plant)	-	-	1-4	2.43	-	-	11	2.93	-	7

* 1982 statistics for Antioch and Beaumont are for C&P employees only; 1981 for whole site.
a) RWC Toledo-1
b) OTJ Burnside - 2; Healing Springs - 1
c) MTC Burnside - 1; Ft. Hill - 3; Toledo - 1

LWC AND RWC DESCRIPTIONS - CURRENT QUARTER

Repauno	Nov. 2, 1982	LWC	Thermal burns of body.
Repauno	Nov. 2, 1982	RWC	Thermal burns of arm.
Johsonville	Nov. 13, 1982	LWC	Chlorine inhalation.
Repauno	Dec. 9, 1982	RWC	Fractured arm.

1548M

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SAFETY AWARDS/ACCOMPLISHMENTS

On December 17, 1982, EDGE MOOR exceeded its best previous record for exposure hours (7,329,504 hours worked) without a lost workday injury.

1982 marked the first year since 1973 the CLEVELAND Plant operated without a serious injury.

ANTIOCH established a new plant record of accumulated manhours without a Lost Workday Case (5,446,932 hours worked) on January 1, 1983.

MSHA presented FLORIDA two certificates of honor in recognition of reaching 5,300,000 hours worked (through 1981) without an LWC.

BURNSIDE received its sixth Board of Directors' Award in December.

SAFETY SURVEYS

The most recent ratings for all plants are summarized on the next page. S&F surveys were made at MEMPHIS, BURNSIDE, JAMES RIVER, (good-to-excellent in all categories rated) and DE LISLE, GRASSELLI, PPQ, TEMPSA (fair-to-good in all categories rated). In occupational health, COLORQUIM was rated excellent and JAMES RIVER and TEMPSA rated good. In 1982, 20 sites received safety surveys. Good-to-excellent ratings were received in all categories evaluated at 15 sites, fair-to-good at 4 sites. Eleven sites had occupational health surveys, 4 were rated excellent, 7 good.

SAFETY & FIRE ANNUAL REPORT

Based on an analysis of survey observations for the C&P Department, S&FPD cites the following as still in need of continuing improvement, although progress has been shown at most sites:

- Formal, documented operator training/retraining programs and effective follow up.
- Auditing of process hazards management programs (but they commented that management programs are well organized).
- Thorough analysis of results of critical inspections and tests, such as relief valves.
- Inspection and testing of fire protection equipment.
- Respiratory protection programs, primarily the management of respirators.
- Refinement of air monitoring programs, i.e. additional peak sampling, statistical analysis of results, etc.

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SURVEYS & AUDITS
C&P SITES

Location	SAFETY Last Survey Mo./Yr.-Type*	SAFETY Rating	OCCUPATIONAL HEALTH Last Survey Mo./Yr.	OCCUPATIONAL HEALTH Rating	RHYTHM Last Survey Mo./Yr.	RHYTHM Rating	MEDICAL Last Audit Mo./Yr.	MEDICAL Rating
Antioch	1/82-C	Good	8/81	Excellent	8/79	Good	8/81	Superior
Chambers Works	9/82-SE 2,3,4	Good	4,82	Good	11/81	Excellent	2/82	Above Avg
Cleveland	11/81	Good	3/82	Excellent	2/80	Good	9/81	Above Avg
*Deer Park	4/82	Excellent	11/80	Excellent			5/80	Good
Delisle	10/82-SE 1,2,5	G,F,G	1/82	Good	7/80	Good	3/82	Superior
East Chicago	12/81 SE 1,2,3	Good	3/81	Good	9/80	Good	9/81	Average
Edgemoor	6/82-SE 2,5	Excellent	3/81	Excellent	6/82	Excellent	4/81	Above Avg.
Florida	6/82 C	Good	12/81	Good	7/79	Excellent	12/81	Above Avg
Grasselli	11/82-SE 4,2,3	F,G,G	7/82	Good	9/81	Excellent	4/81	Average
Johnsonville	8/82-1-5	G,G,E,E,G	5/81	Good	9/81	Good	3/81	Above Avg
Memphis	12/82-SE 5,2,4	E,G,G	9/82	Excellent	5/81	Excellent	6/82	Above Avg.
Newark	3/82-C	Good	1/81	Good	8/81	Good	6/81	Above Avg.
Newport	8/82-SE 2,3,4	G,G,E	3/81	Excellent	3/82	Good	2/82	Above Avg
Niagara Falls	8/82-SE 2,5	Good	3/82	Good	9/80	Good	10/81	Above Avg.
*Repauno	8/82-SE 2,3,4	Good	2/82	Good			3/82	Above Avg.
Wurtland	1/82 C	Good	6/82	Excellent	9/81	Excellent	8/81	Average
Augusta	6/81-C	Good	9/80	Excellent	2/81	Good		
Burnside	12/82-SE 5.2 1	E,E,G	12/81	Good	10/79	Good	3/82	
Fort Hill	9/81-C	Fair	10/81	Good	9/81	Fair		
Fortville	9/81-C	Good	4/80	Excellent	2/80	Good		
*Healing Springs	9/82-C	Good	3/81	Good				
James River	12/82-SE 2,4,5	Good	11/82	Good	9/81	Good		
Pineville	7/81-C	Good	7/80	Excellent	10/79	Fair		
Toledo	3/82-C	Good	3/81	Good	10/81	Good		
Jackson Lab	12/81-C	Excellent	See Chambers		See Chambers			
Beaumont	11/81-C	Excellent	5/81	Good	5/80	Excellent		
Chloroprene	7/81-C	Good	10/82	Excellent	11/79	Excellent		
PPQ	11/82-SE 5,2,3	G F,G	8/81	Good	3/80	Good		
Tampa	9/82-SE 3,4,5	Fair	10/82	Good	6/79	Good		

C = Complete
SE = Special emphasis (1 Process Hazards Mgmt.
SA = Special Assistance (2 Work Practices
(3 Emergency Control
(4 Work Environment
(5 Administration
*Rated under new comprehensive survey and includes Rhythm.

2/7/83
PJG

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- Elimination, where possible, of pressure unloading.

- Emergency shut-off systems and/or fume release detection devices.

- Cargo tank inspections, particularly to insure relief devices are in place and valves are checked for leaks.

REGULATORY ACTIVITIES

Formaldehyde

Litigation and regulation concerning formaldehyde has continued unabated. The Natural Resources Defense Council has given EPA the 60-day' notice required by TSCA prior to suing for failure to regulate formaldehyde as an imminent hazard under the Toxic Substances Control Act. The Formaldehyde Institute filed a motion to intervene in the UAW suit filed (August, 1982) against OSHA for failure to issue an emergency temporary formaldehyde standard. The three-judge panel of the U.S. Court of Appeals for the Fifth Circuit heard oral arguments in the suit against CPSC (UFFI ban) on December 9. A decision is not expected before March, 1983. The Ontario Minister of Labor announced intent to regulate workplace formaldehyde exposure and extensive comments have been filed through Du Pont of Canada. Appointed CAL/OSHA officials left office, because of the administration change, so it is unlikely that we will see any action in the first part of '83 to reduce the state workplace formaldehyde standard.

OSHA Lead Standard

Although OSHA announced intent (1981) to modify the lead standard, it has to date not done so. The significant standard impact within C&P is on lead chromate. In 1982, we filed extensive comments and worked with the OSHA contractor in an effort to document our position that compliance with a 50 mg/m^3 limit, solely through engineering controls, was not technically feasible for our lead chromate manufacturing operation. We are hopeful that our efforts will be reflected in any standard modifications.

Agency Inspections

FDA, DOT, and ERA representatives inspected HEALING SPRINGS in November and found no violations. DOT found no deficiencies in an October inspection of EDGE MOOR's railroad system. Based on data collected at FLORIDA during an October visit, the State Department of Health & Rehabilitative Services concluded that our mining operation does not constitute a significant enhancement of local natural gamma radiation. At our request, a University of Florida health physicist conducted background radiation checks and no problems are anticipated. A Union complaint led to an OSHA investigation of REPAUNO's November LWC and RWC thermal burn injuries. Satisfactory resolution of the complaint was reached with

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the Regional Director without issuance of a citation. An OSHA inspection at CLEVELAND, triggered by an employee complaint of over exposure to all chemicals made or used on the site, resulted in no violations. Although OSHA made five C&P site investigations in 1982, no citations were issued.

Right-To-Know

As a result of active opposition to the New Jersey Right-to-Know bill, Senator Dalton attempted to develop an acceptable compromise bill. The revised bill, still unacceptable to industry, was submitted to Committee on January 27, 1983. Further modifications are planned and a committee vote has now been delayed until the end of February. The earliest projection for a Senate vote is April 1983. Modifications being considered by Dalton include mechanisms whereby firms with existing labeling and training systems can be certified out of those provisions of the bill. C&P and Du Pont are actively lobbying to improve the bill.

Incidental PCBs

On January 7, CHAMBERS WORKS received a complaint from EPA that they had manufactured and shipped material containing excessive amounts of incidental PCBs and had failed to notify EPA under TSCA 8(e). A civil penalty of $76M was proposed. Two meetings have been held with Region II in New York, January 14 and February 11. EPA has committed themselves to get back to us with a settlement offer by mid-March.

In 1983, EPA plans to develop rules allowing certain processes and/or products which contain incidental PCBs to be excluded from the manufacturing limits imposed by TSCA. Their basis for exclusion will be de minimis human exposure or environmental release. They have asked industry to supply or commit to supply data by April 1 which would support exclusions. EPA will be meeting with Du Pont on February 28 to discuss further their plans and our participation.

OSHA HEARING CONSERVATION AMENDMENT - STATUS

Thorne Auchter (Assist. Secretary for OSHA) has held up issuance of the final OSHA Hearing Conservation Amendment. At issue is the definition of significant threshold shift, a determination of which triggers compliance action. Auchter now feels the present definition is too conservative and would place an unnecessary compliance burden on industry. Final Amendment release date is now uncertain.

OSHA STANDARDS

Regulations which OSHA has announced will be under review in 1983 include: Asbestos; Identification, Classification, and Regulation of Potential Occupational Carcinogensis; Respiratory Protection; Ionizing and Non-ionizing Radiation; Personal Protective Equipment; Welding; Cutting and Brazing; Fire Protection and Prevention.

TERP INCIDENTS	4th Qtr. 1982	Total 1982	Total 1981
MAJOR INCIDENTS:			
Accident and Carrier Caused	1	1	18
Non-Accident Related	0	6	18
Sub-Total	1	7	36
MINOR INCIDENTS:			
Accident and Carrier Caused	3	24	19
Non-Accident Related	5	21	16
Sub-Total	8	45	35
TOTAL	9	52	71

One major incident occurred this quarter. A van carrying 80 drums of THF from Texas to Edmonton overturned in Alexander, North Dakota. There were no injuries and although some drums were damaged, none leaked.

Performance for the year was much improved over 1981 and continued the downward trend of the previous two years. Major incidents showed dramatic improvement. We believe these changes reflect improved preshipment inspections under RHYTHM and, to some degree, lesser volume of shipments due to reduced sales.

LITIGATION

During the fourth quarter, seven actions involving claims for injuries or damages arising from manufacturing or transportation incidents were added and four were closed at no cost. In 1982, 47 actions were closed at a cost to Du Pont of $472,450.

In the Jenkins action for claims from chlorine exposure at DE LISLE, Du Pont is appealing against Brown and Root but has paid $1.365 million to Jenkins and 11 other claimants and their wives.

The Moreno case alleging personal injuries caused by Du Pont's galvanizing flux was settled short of trial by payment of $350M.

Ten new actions with multiple plaintiffs involving exposure to asbestos in Delaware amd New Jersey plants were brought in the fourth quarter.

Actions pending at year end totaled 102, the same as at the beginning of 1982. In recent previous years, the case load had increased 25-35% per year.

Significant cases are listed on the following pages.

DUP 1013591

LITIGATION

CLAIMS FOR INJURIES OR DAMAGES ARISING FROM MANUFACTURING OR TRANSPORTATION INCIDENTS

Litigants	Damages Sought	Description	Status
Personal Injury - Du Pont Employee			
Millison et al (6 plaintiffs) vs Du Pont et al. (18 defendants)	$2MM each Plaintiff	Key asbestos case in N.J. Injuries resulting from exposure to asbestos at Repauno and Chambers Works.	Court dismissed Du Pont. Claims against physicians appealed.
Nutt et al (3 Plaintiffs) vs Du Pont et al. (13 Defendants)	$2.25MM	Key asbestos case in Del. Injuries resulting from exposure to asbestos at Newport.	Temporary stay as a result of Manville bankruptcy lifted. Discovery continues.
Personal Injury - Carrier's Employee			
Brunson vs Du Pont	$600M	Chronic exposure to formaldehyde, methanol, H_2O_2 and DMS shipped from Grasselli.	Case dismissed. Attempt at reactivating not executed properly.
Sanitate vs Du Pont	Unspecified	Sprayed with "Hylene" while loading truck.	Dismissed. Period to reinstate passed.
Personal Injury - Contractor's Employees			
Dyer vs Du Pont	$500M	Injured when beam fell during DeLisle construction.	Du Pont renewed motion for summary judgement.
Jenkins vs Du Pont	$100M	Exposure to Cl_2 at DeLisle.	Du Pont has paid $1.4MM and appealed.
Jones & Jones vs Du Pont & Henkels & McCoy, 4 actions	$10M	Death and injuries from exposure to energized power line at Newport.	Order of dismissal entered.
Lockwood & Lockwood vs Du Pont	$200M	Injured while cleaning TiO_2 slurry car at Edge Moor.	Contractors' employees admitted that goggles were not worn.
Maggee vs Du Pont	$ 8MM	Contractor's (B. F. Shaw) employee killed by escaping steam at Beaumont.	Taking depositions.
Sylvester vs Du Pont	$1MM	Injured in fall at DeLisle.	Plaintiff failed to provide devices and witnesses.

Litigants	Damages Sought	Description	Status
Personal Injury - Contractor's Employees (Cont'd)			
Williams, et al vs Du Pont	$6.2MM	Death by suffocation in vessel at Deer Park (Syngas)	Consolidated with Harron and Jones cases. Discovery continues.
Personal Injury - Other			
Beaumont Leukemia Cases 2 Plaintiffs & actions Multiple defendants	$75MM	Exposure to benzene and other agents caused leukemia.	Du Pont dismissed in three previous cases. Discovery continues.
Augusta Chemical Co. (8) vs Synalloy and Du Pont	$71MM	Augusta Chemical employees, exposure to B-naphthylamine.	Proceeding stayed pending Synalloy's appeal.
Adkinson, and Du Bose et al vs BFI, et al including Du Pont	$20MM Comp. $10MM Pun. Each	Class action alleging negligence in spreading NB + CN^- wastes on roads.	No action.
LaPoint vs Hooker, Du Pont, et al, 9 Defendants	$15MM	Exposure to toxic chemicals from Love Canal.	Amended complaint filed. Du Pont denied responsibility.
Chisum vs Allied Chemical Corp., et al	$10MM	Governmental criminologist claims bladder cancer caused by benzidine-containing products.	Du Pont will file motion for summary judgment.
Luciano vs Connecticut General et al	$ 3MM	Waste Barge Collision	C&P authorized $3M settlement offer.
Shaw, et al vs American Cyanamid, et al, Du Pont, et al	$ 2MM	Exposure to materials containing formaldehyde caused nasal cancer.	Du Pont has contributed $5M towards settlement.
Fleming vs International Container Services et al, 6 Defendants	$750M	Exposure to HF fumes as employee of shipping company.	C&P authorized $3M settlement offer.
Property Damage			
Olin vs Southern Pacific, et al	$629M	Du Pont loaded contaminated T/C with DNT which caused reactors to plug.	Local counsel retained. Du Pont not prime target. Discovery proceeding slowly.
American Steel vs Pressure Vessel Service, et al	$154M	Rupture of H_2SO_4 tank and spill.	Discovery continues.

Asbestos Program and Case Litigation

Du Pont has agreed to fund an Asbestos-related Disability Criteria study by Irving J. Selikoff, M.D. The C&P Department is providing $20,000 of the $34,101 requested for the 3-month study. The goal is a quantitative, reproducible procedure for evaluation of asbestos-related disability. Results are not expected until 2Q'83 and, therefore, will not be useful in the two pending Delaware Workers' Compensation cases.

Medical records for the two Delaware cases were sent to Dr. Selikoff for evaluation. In both cases, he found moderately extensive pulmonary asbestosis. He would not quantify impairment, but his qualitative assessment was helpful. It is the consensus of all concerned that both these cases should be settled short of litigation.

The stay due to the Johns-Manville bankruptcy has been lifted on the Delaware civil cases, but Du Pont's Motion to Dismiss has not been considered. Plaintiff's attorney has indicated a desire to settle. We will listen to his proposal in February. The Johns-Manville bankruptcy stay has been lifted on New Jersey civil cases, but only for activity short of actually going to trial. Proceeding to trial requires a court order.

Plant tours of the EDGE MOOR and NEWPORT plants have been scheduled for Delaware plaintiff and defendant attorneys on Saturday, February 26, 1983, as a result of a discovery motion.

DEPARTMENTAL PROGRAMS

Hearing Conservation

The program to identify employees who may qualify for workers compensation for noise induced hearing loss continues to develop. To assist in causality determinations, Corporate Medical has provided to all departments a proposal prepared by J. Sataloff, M.D. (Philadelphia Otologist) calling for a centralized review of problem audiograms, audiometric consultation, and assistance in the establishment of otologic/audiologic referral sources. We believe Sataloff's program will result in cost savings on medical expense by limiting for referral at our expense only those employees who show true noise induced hearing threshold shifts.

Risk Management Information System (RMIS)

C&P is participating in a trial of the Corporate RMIS Program starting in February. The trial will last three months and will assess the new reporting forms and utility of information to be gained from the system. Prior to involving all C&P sites CHAMBERS WORKS and MEMPHIS were involved in a special critique of the forms. Their input made significant contributions to the improvement of the forms.

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PERS

Annual Safety Symposium

The C&P annual safety symposium was held in Wilmington on December 1 & 2. Major emphasis was on Contractor Control, the Corporate Safety study, C&P safety performance, and auditing. We are considering a combined health and safety symposium for late 1983. There will be no corporate symposia in 1983.

Procedures for Making/Breaking/Unplugging Lines

A review of site procedures for making, breaking and unplugging lines was done at the request of production management to address numerous injuries/incidents related to steam, hot water and hazardous chemicals. The review showed that all sites have established written procedures covering line break and line work activities. Generally site procedures are sufficiently descriptive in detail and contain the basic minimum elements such as lock, tag and try. Further analysis showed a link between favorable injury/incident experience and a work permit/work order (accountability) procedure limited in scope to cover only select high hazard activities.

TOXICITY AND PRODUCT HAZARDS

Toxic Substances Control Act (TSCA)

Data on production and on-site use volume, employee exposure and environmental release and general customer use information on twenty chemicals was provided EPA under the requirements of TSCA Section 8(a). This is an evergreen reporting rule and is triggered each time EPA lists chemicals for review either under Section 4 or as recommendations from the Interagency Testing Committee.

Under Section 8(d), of TSCA unpublished health and safety studies on approximately 80 C&P products including 40 dyes were submitted to EPA. Most of the supplied information consisted of Haskell toxicity reports but 2 plant studies from CHAMBERS WORKS on the health and environmental effects of hexafluoropropylene oxide and chloroanilines also qualified for submission. Like Section 8(a), Section 8(d) requirements are also evergreen and triggered by EPA publication of new lists of target chemicals for review or testing

TSCA Section 4 defines testing requirements for chemicals and mixtures. EPA and the nitrobenzene association have been negotiating a testing protocol for nitrobenzene. The total cost will be about $425M, of which Du Pont will pay $185M. EPA is required to finalize programs on aniline, chloro-anilines, nitroanilines, and the phenyldiamines in 1983. We are seeking to negotiate testing protocol with EPA on all these. We are working

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through the Aniline Association for aniline, with Mobay and Monsanto for chloro- and nitroanilines and by ourselves on the phenyldiamines. EPA has scheduled a meeting for February 25, which hopefully will clarify their position on these materials.

International Regulation of Hazardous Chemicals

Through collective efforts with R&D and the Information Systems Department, all but twenty C&P products have been cleared for entry into the European Inventory of Existing Chemical Substances (EINECS) which permits their continued use in the EEC. The twenty uncleared products include a few colored pigments and some specialty chemicals products which were not sold in Europe during the permissable export window (1/1/17 - 9/18/81) and for which European marketing is not presently contemplated. Also, certifications have been received from manufacturers of purchased ingredients that their products are similarly listed, which allows for their continued use.

Any unlisted or new product must undergo pre-market notification 45 days prior to sale within the EEC. We are presently assisting Specialty Chemicals in introducing a new fluoropolymer for textile application in Germany, France, and Italy; and Petroleum Chemicals in introducing 2-ethylhexyl nitrate diesel fuel additive into the United Kingdom.

Chemical Hazard Assessments

Haskell completed its hazard assessment on aniline following review of the CIIT data that showed splenic tumors in rats at 26 mg/kg/day. The assessment confirmed the existing 8-hr. AEL of 2 ppm. However, on the basis of hematologic effects observed in the CIIT study, Haskell elected to run additional tests on aniline half-life in blood and hematology. This work is expected to be completed by 1Q'83 and will govern the establishment of a 12-hr. AEL. Assistance was provided Marketing in revising the trade literature and MSDS on aniline to reflect the new information.

Chemical Industry Institute of Toxicology (CIIT) Testing Programs

The inhalation phase of the 12-month toxicity study on chlorine in rhesus monkeys has been completed and the animals sacrificed. Histopathology is underway. The chronic (24-month) inhalation toxicity study on dimethylamine continues on schedule. The 18-month interim sacrifice was completed last October. A review of the findings of the 90-day subchronic study, conducted at Battelle, has been requested of Haskell. The range finding phase of a 90-day study on methacrylic acid began last December. A similar study is planned for hydrogen chloride with range-finding to begin in early 1Q'83. The fertility study on methyl chloride in rats continues on schedule and histopathology on rat and mice tissues from the 90-day inhalation study on nitrobenzene is in progress and on schedule.

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Acceptable Exposure Limits (AEL)

During the quarter, Haskell assigned or confirmed Provisional or Final 8- or 12-hr AELs on the following compounds of interest to the Department: benzene, nitrobenzene, "Vazo" 64, "Vazo" 67, tetrafluoroethylene, dibutyl phthalate, "Zonyl" BA and 2-methoxyethanol. Additionally, toxicity tests to establish limits were initiated on 2-ethylhexyl nitrate.

Benzene

Preliminary reports have been received by Du Pont and CMA indicating that at least two current studies are showing tumors in animal exposure studies at high levels. Previous studies had shown only leukemia. We will be following these results as closely as possible as they could impact rulemaking.

The draft report on the CMA benzene epidemiology study is expected in March. Repauno and Sabine River are involved in this study for employees exposed during 1957-1975. Medical has proposed that we separately complete an internal epidemiology study of Repauno workers exposed between 1945 and 1977. The longer exposure time will add about 50% more employees. The epidemiology studies should supply data useful in the next round of negotiations on the benzene standard. The standard was stayed by the Supreme Court in 1980, but is expected to resurface in the next year.

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DU 053700

ENVIRONMENTAL PROTECTION

ENVIRONMENTAL INCIDENTS

Plant	Major	Serious Potential
Antioch	0	2
Augusta	0	0
Beaumont	0	1
Burnside	0	5
Chambers Works	0	5
Cleveland	0	3
DeLisle	0	0
Deer Park	0	2
East Chicago	0	0
Edge Moor	0	0
Florida	0	1
Fortville	0	0
Fort Hill	0	2
Grasselli	0	1
Healing Springs	0	0
James River	0	0
Memphis	0	3
New Johnsonville	0	3
Newark	0	1
Newport	0	0
Niagara Falls	1	1
Pineville	0	0
Repauno	0	3
Toledo	0	0
Wurtland	0	0
4th Q 1982 Total	1	33
3rd Q 1982	0	14
2nd Q 1982	1	26
1st Q 1982	0	35
1982	2	108
1981	1	161
1980	1	220

The total number of incidents for the year were siginificantly lower than last year and continued the downward trend. However, during the quarter, we had a sharp increase in SPIs with 60% of our sites experiencing at least one incident. We are canvassing these sites to determine whether or not any special effort is needed to get back on track. The following comments describe the major incident and the more significant serious potential incidents.

DUP 1013598

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MAJOR INCIDENTS

NIAGARA FALLS - On October 30, 1982, the Plant had a chlorine release of ~ 800 lbs. The plume carried to a stadium approximately a half mile away where a football game was in progress. As a precautionary measure, 76 people were taken to the hospital. Three were held for observation, two being released the next day and the third on the following day. A Superfund report was made to the National Response Center. The New York DEC issued a Consent Order which included a $5,000 fine and eleven corrective actions most of which were already in progress or scheduled to be started. The fine was paid, and all eleven items were completed on schedule.

SERIOUS POTENTIAL INCIDENTS

ANTIOCH - A chlorine breakthrough in the reaction area caused an off-site fume release. A neighbor notified two local TV stations which called the plant for details. They appeared to be satisfied with the plant's explanation and no media report resulted.

CHAMBERS WORKS - The plant had an upset of its Wastewater Treatment System when a material brought in for treatment under contract caused both phenol and BOD_5 to exceed NPDES permit limits. Also, a chlorine release of about 16 lbs. occurred from a corroded line. Automatic equipment shutdown minimized the release. The National Response Center was notified as required by Superfund.

NEWARK - A defective filter cartridge in a dust collector caused a release of pigment dust and resulted in a complaint from a neighbor. An inspector from the Newark Department of Health Air Pollution Division visited the plant a few weeks after the incident. At that time, he did not find any problems.

DEER PARK - An estimated 10 barrels of residuum spilled into the bay at the dock when the unloading line failed. The spill was contained, and clean up actions immediately initiated. There was no environmental damage. The National Response Center was notified as required by the Clean Water Act.

REGULATORY ACTIVITIES

Water

Congress adjourned without final action on the Clean Water Act, but is expected to act early in the 1983 session. The starting point is expected to be an Administration streamlined bill which would ease pretreatment requirements, extend the BAT compliance deadline, and lengthen the permit life. However, because of Congress' low regard for the EPA and greater number of Democrats in Congress, regulations are likely to be no less restrictive than they are now.

DUP 1013599

DU 053702

EPA recently presented to CMA a working draft of proposed BAT limits under consideration. Du Pont ESD engineers, from their cursory knowledge, believe that these limits may not be attainable at half Du Pont's plants. A program sanctioned by the EQC is underway for analyzing appropriate samples to build up to a data base from which to address EPA's proposal. C&P's Chambers Works, Deer Park, Repauno, Niagara Falls, and Newport will participate.

EPA is considering some desired changes to the water quality standards program. States would no longer be required to review all water quality standards every three years. Instead, priority water quality areas would be identified for such reviews. Also, states could elect to determine whether designated water uses are attainable and could revise the designation upward or downward as appropriate. Furthermore, EPA is attempting to give states guidance in the development of site-specific criteria.

Air

Contrary to industry's earlier expectations, Congress was not able to reauthorize less onerous Clean Air Act amendments because of continuing and at times heated debate over acid rain and hazardous air pollutants. These issues will be in the forefront in 1983, but for reasons noted earlier under water regulatory activities, we do not expect any relief. We will continue to support Legal's efforts for needed reform and to resist unnecessary and less than cost effective regulations, such as fence line incremental concentrations of hazardous pollutants (e.g. formaldehyde) which are insignificant in comparison with natural ambient levels.

In the absence of significant EPA action, a number of states have initiated regulations and guidelines for the control of hazardous air pollutants. These guidelines generally are based on an arbitrary small fraction of workplace threshold limit values (TLV's). Anticipating potential impact on our plants and customer facilities, we encouraged the formation of and are involved with a Corporate Ad Hoc Committee on this subject. This committee is developing a scientific basis for response to the state initiatives and to assure that Du Pont emissions remain at safe levels.

Waste Disposal

The new Congress is expected to put high priority on closing "loopholes" in the Resources Conservation and Recovery Act (RCRA). Congress is expected to reflect strong public sentiment and impose more restrictive controls on landfills. Also, through Legal, we wil continue to work to prevent a RCRA ban on Class IV disposal wells (which would impact JOHNSONVILLE) from being part of legislative proposals.

DUP 1013600

DU 053703

At year-end, EPA announced that it is reassessing RCRA hazardous waste rules, not only to make them more workable and cost effective, but also to control new wastes and new processes. For the latter, EPA has focused first on organic chemicals and dyes and pigments industries to study wastes that are not now specifically regulated. EPA has sent questionnaires to CHAMBERS WORKS, NEWARK and NEWPORT.

Ocean Dumping

EPA has publicly proposed to permit continued use of the "106 mile" ocean dump site for aqueous industrial materials. GRASSELLI and EDGE MOOR presently have dumping permits for the site. Also, EPA is proposing to allow disposal of municipal sewage sludge therein for a five-year trial period. We are monitoring the situation, because the possible negative reaction to these proposals might be adverse to our needs.

Deepwells

The Tennessee Waste Quality Control Division indicated it would seriously consider the extensive JOHNSONVILLE comments made during the on-plant review of its draft deepwell regulations. (Similar reviews were held with others including environmentalists.) We expect that the proposed regulations, scheduled for publication in February, will contain provisions making it possible to continue deep well disposal at JOHNSONVILLE.

PCBs - Electrical Rules

CMA intervened in the lawsuit brought by the Environmental Defense Fund and Natural Resources Defense Council. EDF and NRDC challenge EPA's final electrical rules which allow continued use of PCB transformers and most PCB capacitators. We are providing support to the CMA since non-PCB replacements would cost C&P in excess of $5MM.

Superfund

In the December 30, 1982 Federal Register, EPA published a 418 site National Priorities List (NPL) for superfund activities. A review of the NPL indicates C&P sent chemical wastes to two sites (Summit, Ohio, and Seymour, Indiana) both of which have been the subject of prior cleanup efforts by State and/or EPA and to which C&P has been a voluntary participant. Four other sites on the list not yet subject of EPA or state action were used by C&P for non-chemical wastes and we have made such a response to earlier agency questions.

DUP 1013601

DU 053704

A Tennessee "Superfund" Act is expected in 1983. Du Pont, through the Tennessee Manufacturer's Association (TMA), has been working to formulate a responsible bill which in addition to the fund for cleanup (which would cost C&P $30M-$40M/year) would include treatment and disposal facility siting provisions. A Task Force report, recently submitted to the Governor's Safe Growth Team, outlined the general provisions which should be contained in the bill. TMA and Environmentalists were on the Task Force.

Last year's fee structure for New York's superfund law was expected to collect $10 million a year and $5 million by September, 1982. Since only $650,000 have been generated during the past four months, Senator Dunn, sponsor of the original bill, is expected to introduce an amendment to increase revenues. If certain exemptions are revoked, NIAGARA FALLS will be required to pay fees for Necco Park which could amount to $2MM versus the present fees of only $30M for the plant proper.

New Jersey DEP is proposing a rule to allow the County Health Department to charge and collect a mandatory fee from owners or operators of any sanitary landfill facility within its jurisdiction. The fees would be used for enforcement activities. Du Pont has submitted comments challenging the purpose of and authority for the rule.

Superfund legislation also is expected in California, Ohio, New Jersey, Florida, West Virginia, and Louisiana. We will monitor activities in these states and, with Legal's assistance, work to minimize the impact on our operations.

PLANT ACTIVITIES

Water

Several revisions to the draft NPDES permit suggested by ANTIOCH were discussed with and agreed to in principle by the Regional Water Quality Control Board. Major elements were: eliminate bioassay monitoring of rutile slurry container rinse water, reduce sampling frequency, and increase the proposed Pb limit to the current permitted level. (We could not operate with the proposed Pb limit.)

DELISLE, in a meeting with the laboratory director for the Bureau of Pollution Control, successfully resolved significant differences between state NPDES compliance analyses and plant laboratory analyses for duplicate bay sediment and deepwell samples. Several errors were found during review of the state's data. We accepted the state's request for copies of Du Pont analytical procedures.

Based on five-years of EDGE MOOR data, the state agreed to higher TSS and iron permit limits for the wastewaters discharged from our Cherry Island landfill. In separate negotiations involving the

DUP 1013602

plant's NPDES permit as proposed by the state, we again reviewed our request for exemption from the state's 2 ppm iron limit and our alternate proposal for permitting on a "net" basis. We emphasized that plant treatment already exceeded BAT as defined by EPA Effluent Guidelines for the TiO_2 industry. We are awaiting the State's response.

All analyses run by JOHNSONVILLE for the annual Quality Assurance Testing were within acceptable limits. Review of a draft NPDES permit has begun.

In November, the New Jersey State Office of Cancer and Toxic Research sampled the CHAMBERS WORKS' WWTP effluent and the river water influent. They plan to analyze for organics and priority pollutants and to conduct Ames tests. The plant is testing duplicate samples. In December, the same agency sampled the plants' "worst" monitor well. They plan to analyze this sample in a like manner. The plant again took a duplicate. Separately, State people discussed the Chambers Works groundwater monitoring and recovery program. They were concerned about the plant not having a more aggressive program for lining the ditches and basins. If mandated, lining ditches and basins could cost in excess of $25MM. We do not believe such a program is Justified in view of the excellent control of groundwater contamination by the groundwater interceptor wells.

REPAUNO was one of twelve companies to be included in a civil suit being initiated by the Trial Lawyers, who were representing a Nader-related Student's Public Interest Group of New Jersey. The Trial Lawyers were alleging repeated violations of NPDES permits. Du Pont Legal contacted the Trial Lawyers who agreed to remove REPAUNO from the suit if we supplied information which supported our position that the plant's permit excursions were de minimis and caused no environmental harm. Also, REPAUNO signed a State Administrative Consent Order dealing with these violations. The order enumerated measures already in progress to insure improved plant performance and provided for renewal of the NPDES permit (which had previously received little attention from the state). The New Jersey DEP has agreed with us on the elements to be included in a new permit. The permit, in general, relaxes discharge limits as we requested. After agreement by the EPA and DRBC, the draft will be published for public comment. The new permit would have eliminated 90+% of the violation cited by the Trial Lawyers.

NEWARK's proposal to avoid the expense of compliance with EPA chrome pigment pretreatment guidelines by reducing its effluent volume enough to meet the "small discharger exclusion" was presented to New Jersey DEP. The DEP agreed to accept calculations rather than metered volumes as proof of compliance. A written proposal signed by Mr. Blair was submitted for approval.

BURNSIDE, responding to a Notice of Deficiency from the EPA, has arranged for on-site testing of sulfite in its effluent, thereby

DUP 1013603

DU 053706

eliminating lagtime between sampling and analysis at a contract laboratory. With apology for misplacing BURNSIDE's draft permit file, EPA has reopened consideration of plant comments submitted over a year ago. Continuing effort will be made to convince the agency that their proposed permit requirements are excessive.

Ohio and Federal EPA personnel visited CLEVELAND to discuss NPDES permit renewal and sampling of the influent and efffluents for use in setting new permit limits. (Such samples were taken in early January, 1983.) Also, Cleveland has been working with EPA to provide the requested information which is to serve as the basis for a zinc chloride inorganic effluent guideline.

At EAST CHICAGO, because of State and EPA concern about potential groundwater contamination, EPA planned to install groundwater monitoring wells on plant in January, 1983. Two wells were drilled down-gradient of the plant and a third up-gradient near the Grand Calumet River. Ecology and Environmental, Inc. will do the sampling and analytical work for EPA. The plant will analyze split samples at least until we are satisfied with the contractors performance.

After a lapse of nearly ten months, the Ohio Attorney General's Office proposed a draft NPDES permit for FORT HILL. Their proposal was acceptable except for continuous pH monitoring with 99% compliance. We encouraged Ohio to accept pH grab sampling, in line with plant practice which thus far has proven satisfactory.

MEMPHIS completed the 1982 calendar year without an NPDES permit excursion. Also, annual groundwater monitoring data confirmed that barium leachate has not caused environmental damage nor posed a health threat.

In mid-December NIAGARA FALLS held a meeting with the State to discuss outstanding issues on the draft SPDES Permit. The State has agreed to reinstate net rather than gross limits; we believe the former better represent plant activities. However, the State has not yet accepted our position that proposed fluoride discharge limits are unreasonable and need to be modified to assure compliance.

The Industrial Liaison Committee (an organization composed of 25 local companies, including Du Pont, which use the Niagara Falls Wastewater Treatment Plant) filed a petition with the Supreme Court of the State of New York for a public hearing on the treatment plant's SPDES permit; suit aslo was filed by environmentalists. If enforced in its current form, the SPDES premit could require significant but unwarranted pretreatment of industry discharge to the treatment plant.

EPA issued a new NPDES permit to WURTLAND effective February 10, 1983. During pre-issuance discussions, we were able to convince the agency that: there was no need for proposed bio-monitoring; operating procedures already in place were equivalent to Best Management

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Practices; the sampling frequency could be reduced and limits for chromium and lead should be deleted. Savings even on this "simple" permit will amount to about $10M/year.

Air

DELISLE AND EDGE MOOR supplied information on emissions and control techniques for EPA's use in developing emissions standards for new TiO_2 sources. EPA also visited DELISLE. All confidential information was so labelled.

NEW JOHNSONVILLE received operating permits for six minor sources of air emissions. In accordance with new state guidelines, these minor source permits were issued without expiration dates and will be in effect indefinitely.

FLORIDA received a Notice of Excessive Visible Emissions. The plant's investigation revealed no recorded problems and the incident apparently was temporary and short-lived. The incident received media coverage.

BEAUMONT met with the Texas Air Control Board to review the aniline modernization project and to request an exemption from the permit system. The Board is currently considering a modification of an existing permit instead of the requested permit exemption.

FORT HILL installed a coalescer-demister and operated it successfully. This equipment was needed to meet the 20% maximum opacity standard for established sulfuric acid plants. FORT HILL also submitted application for an air emissions operating permit.

MEMPHIS began work with the state for regulatory change which would allow the plant to discontinue off-site ambient monitoring for SO_2. Data collected for a decade demonstrate that further monitoring is unnecessary. Potential savings are $20M/year.

Solid Waste

EPA recently published in the Federal Register, its proposed RCRA exclusion for BEAUMONT and REPAUNO nitrobenzene/aniline wastewaters. EPA will accept comments until January 21, 1983. Texas has agreed to honor the federal exclusion but New Jersey's position is still unknown.

ANTIOCH, in response to the state's October 26, 1982, demand letter, is expediting efforts for removal of lead sludge and contaminated soil from three concrete lined ponds and three unlined basins. The state is insisting on off-site disposal of all sludge (about 10M cubic yards), advocating off-site disposal of contaminated soil (at least 7M cubic yards), and asking for a detailed plan and

DUP 1013605

DU 053708

schedule by February 15, 1983. The Departmental Engineer's Office and Engineering Department are providing assistance. Although all information will probably not be available by mid-February, we believe that satisfactory relationships can be maintained by showing good faith effort by beginning field work before the end of the first quarter. The cleanup cost is likely to exceed $10MM. Alternatives are under consideration.

Solano County imposed a $2.00 per ton tax on hazardous waste disposal, effective October 1, 1982. This will cost ANTIOCH $44M/year maximum for iron chloride disposal at Benicia. However, the fee could be significantly less because the county tax ceases when $200M/year is collected.

NEW JOHNSONVILLE approached the Tennessee Solid Waste Management Division for permission to broaden the range of ash and sludge mixtures disposed of in the South Hollow landfill. We also asked the state to eliminate the present requirement for processing landfill run-on and leachate through the wastewater treatment system.

BURNSIDE transmitted settling pond sludge toxicity data to the state, thus completing steps necessary for exemption from Louisiana's hazardous waste permitting. The toxicity data developed at Haskell Laboratory showed that toxicity was well under state limits.

MEMPHIS developed and submitted closure plans to the state for hazardous waste facilities affected by shutdown of acrylonitrile manufacturing. Technical studies are in progress to assess the preferred disposal method for about 400M gallons (~30% solids) of sludge contained in a waste storage tank. The plant's RCRA status was also updated by advising the state of the deletion of the acrylonitrile process hazardous waste streams.

The State Board of Health has criticized FORTVILLE for questionable on-site waste disposal practices. Primary shortcomings were the presence of standing water and certain wastes (plasters, scrap metal, and one fibre drum) not allowed under state regulations. Landfilling of such materials has stopped and arrangements have been made for off-site disposal. We plan to close this landfill by leveling with dirt, but it is possible that the state may require treatment of the standing water.

NIAGARA FALLS has improved the pumping utility at Necco Park but still has not reached the desired level of 90%. The plant, with Engineering Department, will meet with the State in January to discuss progress and problems at Necco Park. A major concern is that the monitoring well results do not indicate that an adequate cone of depression has been formed at the current 15 gpm pumping rate. Another concern is that organics have at times shown up in the monitoring wells. More data are needed to scope the problems.

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EPA has made little progress on its proposed Superfund study of groundwater at Summit National, a former hazardous waste disposal facility used by CLEVELAND. The Agency authorized a $300M study but, because of a change in contractors, will not be able to drill test wells until spring.

MISCELLANEOUS

In December, the New Jersey State Department of Environmental Protection - Water Resources conducted an unannounced audit of the GRASSELLI PLANT. Items reviewed include NPDES's Permit, SPCC Plan, Manifest Compliance for waste shipments and hazardous waste reports. No deficiencies were noted.

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