



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

ENGINEERING DEPARTMENT
LOUVIERS BUILDING

March 9, 1983

CC: H.L. Adam-Emp Rel-Nemours Bldg
W.R. Chalker-ESD
O.T. Skretvedt-Tex Fib-Spruance
S.A. Tasher-Legal-Du Pont Bldg
J. Klassen-Du Pont Canada, Inc.-
Kingston
S.S. O'Shea-Du Pont Canada, Inc.-
Mississauga
R.R. Prescott-Conoco, Inc.
IC 32

PLAINTIFF'S
EXHIBIT
DUP-880

PRESENT: L. T. FREELAND - CHAIRMAN - PPD - BEAUMONT
R. L. BARNHART - PD - VICTORIA
J. H. BERTELS - TEXTILE FIBERS - COOPER RIVER
D. J. CALVO - PPD - LOUISVILLE
K. A. CHEN - C&P - CHAMBERS WORKS - BLDG 1094
R. C. COOLEY - EMP REL - NEMOURS BLDG
R. J. DAM - ER&D - EPL
J. F. DOUGHTY - PPD - WASHINGTON WORKS
W. C. HAAF - F&FP - BRANDYWINE BLDG
E. J. KAHAL - PD - SAVANNAH RIVER - BLDG 735A
J. A. MORELLO - ESD
L. F. PERCIVAL - CR&D - HASKELL
G. J. SZURELY - PHOTO PRODUCTS - PARLIN
P. W. WORMLEY - CR&D - E270/100
V. L. SELWAY (ALTERNATE FOR R. A. CROZIER, JR.) - STANDARDS SECTION

ABSENT: NONE

STANDARDS SECTION - ~~RESEARCH & OCCUPATIONAL HEALTH AND SAFETY COMMITTEE~~
MINUTES FOR THE MEETING HELD THURSDAY, MARCH 3, 1983
AT 8:30 A.M. IN ROOM 13067, DU PONT BUILDING

APPROVAL OF MINUTES

The minutes of the August 12, 1982, meeting were approved as issued.

ISSUED IN NOVEMBER

J3P S9H •

1. S2H - Respiratory Protective Equipment (12/78) - L. F. Percival
Reviewed marked copy which had been updated and reorganized. Send additional comments to L. F. Percival by March 31. New revised copy will be distributed prior to next meeting.
2. S15G - X-Ray Installations (2/79) - R. J. Dam
Send comments to R. J. Dam.
3. J3L - Wind Speed and Direction Stations (4/79) - W. C. Haaf
Release for issue if no further comments received by W. C. Haaf by March 17.
4. J2N - Odor Control (4/79) - E. J. Kahal
Reviewed proposed revisions. More research on solid waste control and landfills is necessary. W. C. Haaf will send a copy to Front Royal for comments. E. J. Kahal will update references; any other references for odor control should be sent to him.

DUP 1121462

DU 055997

5. J4L - Instrument Methods for Analysis for Sulfur Dioxide in Ambient Air (5/79) - J. A. Morello
Minor changes proposed. J. A. Morello will update prices and mark up a copy for R. A. Crozier who will distribute for comments and revise for next meeting.
6. J2P - Dispersion of Air Pollutants from Isolated Sources (5/79) - G. J. Szurley
Equations and references still viable. Minor revisions, released for issue. Proposed new standard for future consideration on guidance in emergency situations.
7. J4P - Evaluation of Air Pollution Abatement Methods (5/79) - W. C. Haaf
Marked-up copy reviewed. Send any further comments to W. C. Haaf. If no more revisions are received by April 1, release for issue.
8. J9M - Calibration Gas Standards for Source Monitoring Equipment (7/79) - L. T. Freeland
L. T. Freeland will mark up standard and send to R. A. Crozier for distribution and comments.
9. S4T - Measurement and Control of Asbestos Dust Exposure (10/79)
Reassigned to R. C. Cooley.
10. S21G - Radio Frequency and Microwave Radiation Safety (9/81) - R. J. Dam
Review of revised copy. General subcommittee disapproval of revised Paragraph 4.2.1, Monitoring Requirement. Comments will be sent to R. J. Dam who will recirculate.
11. S7H - Chemical Protective Clothing (12/81) - L. T. Freeland
No report.
12. S5T - Proposed Standard on Lead - L. F. Percival
Proposed revisions will be worked up by composition and distributed to subcommittee for comments.
13. Sl2T - Strategy for Work-Space Sampling for Exposure to Chemicals (10/79) - K. A. Chen
Standard will be revised to delete references to Logan 2 because it has not been financed and reflect instead how the information is derived. Versions of Logan at plant sites now will stay in effect. K. A. Chen will discuss revisions with R. Martin and mark up a copy for distribution. Further comments should be sent to K. A. Chen.

ADJOURNMENT

The meeting adjourned at 3:00 p.m.

NEXT MEETING

The next meeting of the Air Quality & Occupational Health Subcommittee is scheduled for Thursday, April 7, 1983, at 8:30 a.m. in Room 10047, Du Pont Building.

VLS:dlm

DUP 1121463

DU 055998



E. I. DU PONT DE NEMOURS & COMPANY

WILMINGTON, DELAWARE 19898

ENGINEERING DEPARTMENT
LOUVIERS BUILDING

cc: H.L. Adam-Emp.Rel.-Nemours
W.R. Chalker-ESD
O.T. Skretvedt-CR&D-Haskell Lab
S.A. Tasher-Legal-Du Pont
W.S. Cotton-Du Pont Canada, Inc.-Kingsto
S.S. O'Shea-Du Pont Canada, Inc.-
Mississauga
D.R. Bartee-Design
IC 32

December 10, 1981

PRESENT: L. T. FREELAND - CHAIRMAN - POLYMER PRODUCTS - BEAUMONT
R. L. BARNHART - PETROCHEMICALS - VICTORIA
J. H. BERTELS - TEXTILE FIBERS - COOPER RIVER
K. A. CHEN - C&P - CHAMBERS WORKS - BUILDING 1094
S. W. DIXON - CR&D - HASKELL LAB
J. R. MARTIN - EMPLOYEE RELATIONS - NEMOURS
R. A. MEAD - F&F - BRANDYWINE BUILDING
J. A. MORELLO - ESD
L. F. PERCIVAL - POLYMER PRODUCTS - MONTCHANIN BLDG.
R. W. STOWE - C&P - EDGE MOOR
G. J. SZURLEY - PHOTO PRODUCTS - PARLIN
R. A. CROZIER, JR. - STANDARDS SECTION *Doc*

ABSENT: D. J. CALVO - POLYMER PRODUCTS - LOUISVILLE
R. J. DAM - ER&D - EPL

VISITORS: R. J. GEISEN - C&P - WILMINGTON
M. E. SABLA - TEXTILE FIBERS - WILMINGTON
R. E. WHEELER - ENGINEERING - LOUVIERS

STANDARDS SECTION - AIR QUALITY & OCCUPATIONAL HEALTH SUBCOMMITTEE
MINUTES FOR THE MEETING HELD THURSDAY, DECEMBER 3, 1981
AT 8:30 A.M. IN ROOM 10047, DU PONT BUILDING

APPROVAL OF MINUTES

The minutes of the September 16, 1981 meeting were approved.

1. S20G - Laser Safety - R. J. Dam
Final draft is being circulated to Medical and Legal for comments.
2. J3P - Methods of Estimating Emissions to Air (6/78) - R. W. Stowe
Scope modifications, such as "This standard should be used for reporting or estimating purposes only. Do not use as a design basis.", are to be developed by R. W. Stowe.
3. Proposed Lead Standard
L. F. Percival presented an outline of the proposed standard. It was agreed that this will be a difficult standard to prepare and should be directed more towards maintenance procedures rather than manufacturing facilities.

DUP 1121465

DU 055999

4. S6T - Portable Oxygen Analyzers (10/77) - G. J. Szurley
Proposed revisions to S6T were approved. Standard is released for issue.
5. SL2T - Strategy for Work-Space Sampling for Exposure to Chemicals (11/78) - K. A. Chen, R. L. Barnhart, R. A. Mead
R. E. Wheeler made a presentation to clarify the intent of his August 25, 1981 letter to S. W. Dixon on sampling frequencies. After considerable discussion, the sub-committee agreed upon the following sampling frequencies:

COMPOUND CLASS*	95 PERCENTILE OF PEL	
	≤ 10%	> 10%
	RETURN PERIOD	
A. Carcinogens, Embryotoxins	Logan Annually or pooled sampling 1 sample every 2 months **	Logan Quarterly or pooled sampling 1 sample every week
B. Chemical asphyxiants, methemoglobinemia producers, nervous system toxins, organ damaging, respiratory sensitizers, others not listed in A or C.	Logan Bi-Annually or pooled sampling 1 sample every quarter ** Biennial	Logan Semi-Annually or pooled sampling 2 samples every month
C. Irritants, Narcotics, Nuisance particulates, vapors, or gases, Odorants, Simple asphyxiants	Logan Tri-Annually or pooled sampling 1 sample every 6 months ** Triennial	Logan Annually or pooled sampling 1 sample every month

* Class A generally includes substances in OSHA Major Health Categories I and II; Class B - OSHA Categories III to VI, and Class C OSHA Categories VII and VIII.

** A periodic return measurement is required if appreciable potential for exposure exist, due to poor warning properties, high volume usage, large number of personnel involved, or process control considerations, as discussed in Engineering Standard S11T, Paragraphs 6.4, 6.6, 6.7, and 6.8. An annual-~~triennial~~ frequency should be considered for these situations.
triennial

DUP 1121466

DU 056000

Logan requires a minimum of six (6) samples per campaign; if data is pooled (>10% PEL), twelve (12) samples per campaign are required. Economic penalties for incremental, as well as additional, samples will discourage the use of pooled data. The original intent of this revision was to reduce sampling requirements. The Ad Hoc Committee is to rewrite S12T and circulate draft copies to the subcommittee for review at the February meeting.

ADJOURNMENT

The meeting adjourned at 4:00 p.m.

NEXT MEETING

The next meeting of the Air Quality & Occupational Health Subcommittee is scheduled for Thursday, February 18, 1982 at 8:30 a.m. in Room 12015, Du Pont Building.

RACJr:ce

DUP 1121467

DU 056001



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WILMINGTON, DELAWARE 19898

ENGINEERING DEPARTMENT
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O.T. Skretvedt-CR&D-Haskell Lab
S.A. Tasher-Legal-Du Pont
W.S. Cotton-Du Pont Canada, Inc.-Kingston
S.S. O'Shea-Du Pont Canada, Inc.-
Mississauga
D.R. Bartee-Design
IC 3

September 22, 1981

PRESENT: L. T. FREELAND - CHAIRMAN - POLYMER PRODUCTS - BEAUMONT
D. J. CALVO - POLYMER PRODUCTS - LOUISVILLE
K. A. CHEN - C&P - CHAMBERS WORKS - BUILDING 1094
R. J. DAM - ER&D - EPL
J. R. MARTIN - EMPLOYEE RELATIONS - NEMOURS
L. F. PERCIVAL - POLYMER PRODUCTS - MONTCHANIN BLDG.
G. J. SZURLEY - PHOTO PRODUCTS - PARLIN
R. A. CROZIER, JR. - STANDARDS SECTION *Doc*

ABSENT: R. L. BARNHART - PETROCHEMICALS - VICTORIA
J. H. BERTELS - TEXTILE FIBERS - COOPER RIVER
S. W. DIXON - CR&D - HASKELL LAB
R. A. MEAD - F&F - BRANDYWINE
J. A. MORELLO - ESD
R. W. STOWE - C&P - EDGE MOOR

VISITOR: W. J. KAROLY - CR&D - HASKELL LAB

STANDARDS SECTION ~~STANDARDS SECTION~~ HEALTH SUBCOMMITTEE
MINUTES FOR THE MEETING HELD WEDNESDAY, SEPTEMBER 16, 1981
AT 8:30 A.M. IN ROOM 6045, DU PONT BUILDING

APPROVAL OF MINUTES

The minutes of the May 7, 1981 meeting were approved.

STATUS REPORT

Standards Issued in July 1981

J2M S8H

Standards Issued in September 1981

J8M S21G

Standards Issued in October

S3T

NEW STANDARDS

1. S7H (Proposed) (Safety and Fire Protection Subcommittee responsibility) - Chemical Protective Clothing - K. A. Chen, L. F. Percival
Serial letter comments and pink sheets will be circulated to the Air Quality Subcommittee for comment.

DUP 1121468

DU 056002

September 22, 1981

REVISED STANDARDS

2. S12T - Strategy for Workspace Sampling for Exposure to Chemicals (11/78) - K. A. Chen, S. W. Dixon, R. L. Barnhart
Reviewed the letter from R. Wheeler. After considerable discussion, it was decided to have R. Wheeler clarify his analysis, define criteria for analyzing trends in data, define sample frequency, and make a presentation at the December meeting.
3. S20G - Laser Safety - R. J. Dam
Send draft comments to R. J. Dam by October 15, 1981. Dam is to get Medical and then Legal approval by the December meeting.
Note to absentees: A copy of the draft distributed at the meeting is attached. Please send your comments to R. J. Dam by October 15, 1981.
4. S3T - Toxic Gas Detector Tubes (3/78) - J. H. Bertels
Released for issue.
5. Proposed Lead Standard
The subcommittee recommended a new standard on lead be developed. L. F. Percival is to develop an outline of the proposed standard for the December meeting.
6. S4T - Measurement and Control of Asbestos Dust Exposure (10/79) - K. A. Chen
K. A. Chen reported that Marshall Laboratory is no longer responsible for asbestos counting. This function has been transferred to Haskell Laboratory. Chen is to submit proposed revisions to S4T to R. A. Crozier by October 15, 1981.

ADJOURNMENT

The meeting adjourned at 2:45 p.m.

NEXT MEETING

The next meeting of the Air Quality and Occupational Health Subcommittee is scheduled for Thursday, December 3, 1981 at 8:30 a.m. in Room 10047, Du Pont Building.

PLEASE NOTE: THE MEETING SCHEDULED FOR OCTOBER 1, 1981 HAS BEEN CANCELED.

RACJr:ce

DUP 1121469

DU 056003



E. I. DU PONT DE NEMOURS & COMPANY

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WILMINGTON, DELAWARE 19898

ENGINEERING DEPARTMENT
LOUVIERS BUILDING

cc: E.M.Stouffer-Emp.Rel.-Nemours (Item 3)
 H.M.Baker,Jr.-Emp.Rel.-Wilm. (Item 8)
 R.Schmidt-Emp.Rel.-BOD 1442 (Item 9)
 W.S.Cotton-Du Pont Canada,Inc.-Kingston
 S.S.O'Shea-Du Pont Canada,Inc.-
 Mississauga

D.R.Bartee-Design
 IC 32

May 15, 1981

PRESENT: L. T. FREELAND - CHAIRMAN - POLYMER PROD. - BEAUMONT
 R. L. BARNHART - PETROCHEMICALS - VICTORIA
 J. H. BERTELS - TEXTILE FIBERS - COOPER RIVER
 D. J. CALVO - POLYMER PRODUCTS - LOUISVILLE
 K. A. CHEN - C&P - CHAMBERS WORKS - BUILDING 1094
 S. W. DIXON - CR&D - HASKELL LAB
 J. R. MARTIN - EMPLOYEE RELATIONS - NEMOURS
 R. A. MEAD - F&F - BRANDYWINE
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 L. F. PERCIVAL - POLYMER PRODUCTS - MONTCHANIN BLDG.
 R. W. STOWE - C&P - EDGE MOOR
 R. A. CROZIER, JR. - STANDARDS SECTION *Poc*

ABSENT: R. J. DAM - ER&D - EPL

VISITOR: W. H. DARNELL - C&P - BRANDYWINE

STANDARDS SECTION - AIR QUALITY SUBCOMMITTEE
 MINUTES FOR THE MEETING HELD THURSDAY, MAY 7, 1981
 AT 8:30 A.M. IN ROOM 619, HASKELL LAB

APPROVAL OF MINUTES

The minutes of the January 22, 1981 meeting were approved.

STATUS REPORTStandards Issued in March 1981

J1J	J2N
S2T	J1N
S11T	S4T

Standards Issued in April 1981

S8H

Standards Approved for Issue Pending Author's Final Review

S21G	S8H
S3T	S12T
J2M	J8M

DUP 1121470

DU 056004

NEW STANDARDS

1. S7H (Proposed) (Safety & Fire Protection Subcommittee responsibility) - Chemical Protective Clothing -
K. A. Chen, L. F. Percival
Approved for serial letter issue by the Safety & Fire Protection Subcommittee. Air Quality Subcommittee will be included on serial letter.
2. S21G (Proposed) - Microwave and Radio-Frequency Radiation Safety - R. J. Dam
Reviewed serial letter comments and approved replies.
R. J. Dam is to provide revised copy for composition by June 1, 1981.

REVISED STANDARDS

3. S12T - Strategy for Workspace Sampling for Exposure to Chemicals (11/78)
S. W. Dixon is to provide revised copy for composition by June 1, 1981. Revisions will define sampling periods for full shift samples.
4. J2M - Stack Gas Monitoring - Continuous Stack (7/77) -
R. A. Mead
R. A. Mead provided a revised draft which was approved with minor revisions. Composition copy required by June 1, 1981.
5. J8M - Continuous Stack Monitoring for NO_x (11/77) - R. L. Barnhart
Approved at the January meeting. Revised draft due by June 15, 1981 for composition. J8M will be revised to agree with J2M.
6. S3T - Toxic Gas Detector Tubes (3/78) - J. H. Bertels
Reviewed revised draft prepared by J. H. Bertels - approved with minor revisions. Composition copy due by June 15, 1981.
7. S8H - Fit Testing of Respiratory Protective Equipment (11/80)
Reviewed 3/12/81 letter from O. T. Skretvedt. D. J. Calvo will provide composition copy by July 1, 1981.
8. S11T - Priorities for Work-Space Sampling for Exposure to Chemicals (3/81) - S. W. Dixon, D. J. Calvo
Reviewed comments from H. M. Baker. These comments, although valid, do not warrant a reissue of this standard. The comments will be included in future issue.

9. S2T - Threshold Limit Values of Airborne Contaminants (3/81)
Discussed memo from Rainer Schmidt. Comments do not warrant
a reissue of this standard. Comments will be considered
when future revisions of S2T are required.

ADJOURNMENT

The meeting adjourned at 3:30 p.m.

TOUR OF HASKELL LAB FACILITIES

Tour of Haskell facilities was from 3:30 to 5:00 p.m.

NEXT MEETING

The next meeting of the Air Quality Subcommittee is scheduled for
Wednesday, September 16, 1981, at 8:30 a.m. in Room 6045, Du Pont
Building.

RACJr:ce

Atch - Standards cross index (Engineering Standard Number List,
By Subcommittee)

DUP 1121472

DU 056006

J1J

1 Air
 1 1 quality
 1 1 1 selected references
 2 Industrial hygiene, selected references

J2J

1 Air
 1 1 quality
 1 1 1 glossary of terms
 2 Glossary of terms, air quality

J3J

1 Air
 1 1 quality
 1 1 1 conversion factors
 2 Conversion
 2 1 factors, air quality

J2K

1 Air
 1 1 quality
 1 1 1 replies to questionnaires
 2 Form, printed
 2 1 air-emission source inventories
 3 Replies to air pollution questionnaires

J3K

1 Air
 1 1 quality
 1 1 1 compliance testing
 2 Compliance testing, air quality
 3 Test-Testing
 3 1 air quality - compliance

J4K

1 Air
 1 1 quality
 1 1 1 analyzer certification
 2 Certification of analyzers, air quality
 3 Test-Testing
 3 1 air quality analyzers

J2L

1 Air
 1 1 quality
 1 1 1 ambient air monitoring, dust fall and particulates
 2 Dust fall, ambient air monitoring
 3 Particulates
 3 1 ambient air monitoring, dust fall & total suspended
 4 Sampling
 4 1 ambient air monitoring, dust fall and particulates

J3L

1 Air
 1 1 quality
 1 1 1 ambient air monitoring, wind speed and direction

L-11W11
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 XDSM7204
 PRT E104

DUP 1121473

DU 056007

J3L

- 2 Instrument
- 2 1 wind speed and direction
- 3 Tower
- 3 1 for mounting wind speed and direction instruments
- 4 Wind speed and direction stations

J4L

- 1 Air
- 1 1 quality
- 1 1 1 ambient air monitoring, sulfur dioxide
- 2 Instrument
- 2 1 methods for sulfur dioxide analysis
- 3 Sulfur dioxide
- 3 1 ambient air monitoring

J5L

- 1 Air
- 1 1 quality
- 1 1 1 ambient air monitoring, gas standards
- 2 Calibration
- 2 1 gas standards
- 2 1 1 ambient air monitoring
- 3 Diffusion tubes, used for standard gases
- 4 Exponential dilution flask, use for gas standard
- 5 Permeation tubes, used for standard gases
- 6 Zero air system, equipment

J1M

- 1 Air
- 1 1 quality
- 1 1 1 measurement of visible emissions
- 2 Equivalent opacity of visible emissions
- 3 Opacity measurement of visible emissions
- 4 Ringelmann number, measurement of visible emissions
- 5 Smoke
- 5 1 measurement by Ringelmann number or opacity
- 6 Stack
- 6 1 measurement by Ringelmann number or opacity
- 7 Visible emissions, measurement of

J2M

- 1 Air
- 1 1 quality
- 1 1 1 stack sampling, continuous, sulfur dioxide
- 2 Flue gas
- 2 1 sulfur dioxide analysis
- 3 Stack
- 3 1 sampling, continuous
- 3 1 1 sulfur dioxide
- 4 Sulfur dioxide
- 4 1 analysis for in flue gases

J4M

- 1 Air
- 1 1 quality
- 1 1 1 stack sampling ports and facilities

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PRT E104

DUP 1121474

DU 056008

J4M

2 Sampling
 2 1 stack, port location
 3 Stack
 3 1 sampling ports and facilities

J5M

1 Air
 1 1 quality
 1 1 1 stack sampling, noncontinuous, nitrogen oxides
 2 Nitrogen
 2 1 oxides
 2 1 1 stack sampling, noncontinuous
 3 Stack
 3 1 sampling, noncontinuous
 3 1 1 nitrogen oxides

J6M

1 Air
 1 1 quality
 1 1 1 stack sampling, noncontinuous, sulfur dioxide
 2 Stack
 2 1 sampling, noncontinuous
 2 1 1 sulfur dioxide
 3 Sulfur dioxide
 3 1 stack sampling, noncontinuous

J7M

1 Air
 1 1 quality
 1 1 1 stack sampling, noncontinuous, particulates
 2 Computer
 2 1 program
 2 1 1 PARSAM - particulates in stacks
 2 1 2 particulates in stacks - PARSAM
 3 Form, printed
 3 1 computer program- input and instruction sheets
 3 1 1 calculation - particulates in stacks - PARSAM
 4 Hardware
 4 1 stack sampling, noncontinuous
 5 Noncontinuous stack sampling, particulates
 6 Particulates
 6 1 stack sampling, noncontinuous
 7 Stack
 7 1 sampling, noncontinuous
 7 1 1 particulates

J8M

1 Air
 1 1 quality
 1 1 1 stack sampling, continuous, nitrogen oxides
 2 Continuous
 2 1 stack sampling, nitrogen oxides
 3 Nitrogen
 3 1 oxides
 3 1 1 stack sampling, continuous
 4 Stack

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 PRT E104
 DUP 1121475

J8M

4 1 sampling, continuous
4 1 1 nitrogen oxides

J9M

1 Air
1 1 quality
1 1 1 stack sampling, gas standards
2 Calibration
2 1 gas standards
2 1 1 source monitoring
3 Source monitoring, calibration gas standards
4 Stack
4 1 sampling, calibration gas standards

J10M

1 Air
1 1 quality
1 1 1 stack sampling, water, carbon monox & diox, oxygen
2 Carbon dioxide
2 1 determination, stack sampling
3 Carbon monoxide
3 1 determination, stack sampling
4 Moisture
4 1 determination, stack sampling
5 Orsat analysis for carbon monoxide & dioxide, oxygen
6 Oxygen
6 1 determination, stack sampling
7 Stack
7 1 sampling, noncontinuous
7 1 1 water, carbon monoxide, carbon dioxide, oxygen

J1N

1 Air
1 1 quality
1 1 1 odor threshold
2 Odor threshold of vapor
3 Threshold
3 1 odor values, air pollution

J2N

1 Air
1 1 quality
1 1 1 odor control
2 Odor control
3 Smell, odor control

J2P

1 Air
1 1 quality
1 1 1 dispersion of air pollutants from isolated sources
2 Dispersion of air pollutants from isolated sources
3 Meteorology, dispersion of air pollutants
4 Smoke
4 1 dispersion from isolated sources
5 Stack
5 1 gases, air-pollution dispersion

L-11W11
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XDSV7204
PRT E104

DUP 1121476

J3P

- 1 Air
- 1 1 quality
- 1 1 1 method of estimating emissions
- 2 Flue gas
- 2 1 flow rate, estimating emissions to air
- 3 Form, printed
- 3 1 computer program- input and instruction sheets
- 3 1 1 calculation - storage tank emissions
- 4 Hydrocarbons, estimating losses to air from tanks
- 5 Nitrogen
- 5 1 oxides
- 5 1 1 estimating emission to air from flue gas
- 6 Oxides of nitrogen, estimating emission from flue gas
- 7 Particulates
- 7 1 estimating emission to air from flue gas
- 8 Storage
- 8 1 tank
- 8 1 1 vapor losses, hydrocarbons
- 9 Sulfur dioxide
- 9 1 estimating emission to air from flue gas
- 10 Tank
- 10 1 vapor losses, hydrocarbons

J4P

- 1 Air
- 1 1 quality
- 1 1 1 pollution
- 2 Evaluation, air pollution abatement methods
- 3 Particulates
- 3 1 removal methods, evaluation
- 4 Vapor
- 4 1 air pollution abatement methods, evaluation

J5P

- 1 Condensation
- 1 1 steam plumes, calculations
- 2 Psychrometric chart
- 2 1 extended range, predicting steam plumes
- 3 Steam
- 3 1 plumes, calculations

S2T

- 1 Air
- 1 1 contaminants, threshold limit values
- 2 American
- 2 1 Conference of Gov. Ind. Hygienists, TLV Tables
- 3 Carcinogens, OSHA, ACGIH, DuPont
- 4 Exposure to toxic substances, TLVs applicable
- 5 Maximum acceptable concentrations, air contaminants
- 6 Nontraditional work schedules, TLVs applicable
- 7 Safety
- 7 1 air contaminants, threshold limit values
- 7 2 threshold limit values for air contaminants
- 8 STELs, short term exposure limits
- 9 Threshold
- 9 1 limit values, air contaminants

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XDSM7201
PRT E104

DUP 1121477

S2T

- 10 TLVs, threshold limit values, airborne contaminants
- 11 Toxicity, air contaminants
- 12 Work schedules, nontraditional, TLVs applicable

S3T

- 1 Detector
- 1 1 tubes, toxic gases
- 2 Gas
- 2 1 detector
- 2 1 1 toxic gas detector tubes
- 3 Tester
- 3 1 detector tubes, toxic gases
- 4 Toxic gases
- 4 1 detector tubes

S4T

- 1 Asbestos
- 1 1 dust, measurement and control
- 2 Control
- 2 1 asbestos dust
- 3 Insulation
- 3 1 asbestos dust, measurement and control
- 4 Measurement
- 4 1 asbestos dust
- 5 Respirator requirements, asbestos dust
- 6 Sampling
- 6 1 asbestos dust

S11T

- 1 Chemical
- 1 1 exposure
- 1 1 1 priorities for sampling
- 2 Form, printed
- 2 1 risk appraisal
- 3 Priorities for workspace sampling for chem exposure
- 4 Sampling
- 4 1 priorities, for exposure to chemicals
- 5 Toxic gases
- 5 1 priorities for sampling
- 6 Workspace sampling, chemical exposure
- 6 1 priorities

S12T

- 1 Chemical
- 1 1 exposure
- 1 1 1 strategy for sampling of workspace
- 2 Permissible exposure limits, PEL
- 3 Sampling
- 3 1 strategy for workspace sampling
- 4 Statistical evaluation of workspace sampling
- 5 Strategy for workspace sampling, exposure to chemicals
- 6 Toxic gases
- 6 1 strategy for workspace sampling
- 7 Workspace sampling, chemical exposure
- 7 1 strategy for sampling

L-11W11
D.SHORTESS
XDSN7204
PRT E104
DUP 1121478

S13T

- 1 Analytical methods for workspace sampling, chem. exp.
- 2 Chemical
- 2 1 exposure
- 2 1 1 hardware and analytical methods
- 3 Hardware
- 3 1 workspace sampling, chemical exposure
- 4 Sampling
- 4 1 workspace, hardware, analytical methods
- 5 Toxic gases
- 5 1 sampling hardware, analytical methods
- 6 Workspace sampling, chemical exposure
- 6 1 hardware and analytical methods

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