Project No. E-26-638

Project Director: J. L. Carden

Sponsor: National Institute for Occupational Safety and Health

Type Agreement: Purchase Order No. 84-0794

Award Period: From 11/8/83 To 5/7/84 (Performance) --- (Reports)

Sponsor Amount:
- Estimated: $9,950 (Fixed Price)
- Funded: $9,950

Cost Sharing Amount: None

Title: Preparation of Lecture Outlines for Engineering College Wide Occupational Safety Health Course

DEFINITIONS

ADMIRISTRATIVE DATA

OCA Contact William F. Brown X4820

1) Sponsor Technical Contact:
Mr. John Talty, Project Officer
Nat'l Inst. for Occupational Safety & Health
Robert A. Taft Labs
4676 Columbia Parkway
Cincinnati, OH 45226
(513) 684-8231

2) Sponsor Admin/Contractual Matters:
Mr. Cecil L. Young, Contracting Officer
Nat'l Inst. for Occupational Safety & Health
Robert A. Taft Labs
4676 Columbia Parkway
Cincinnati, OH 45226
(513) 684-8217

Defense Priority Rating: None

Military Security Classification: None

(or) Company/Industrial Proprietary: ---

RESTRICTIONS

See Attached Supplemental Information Sheet for Additional Requirements.

Travel: Foreign travel must have prior approval -- Contact OCA in each case. Domestic travel requires sponsor approval where total will exceed greater of $500 or 125% of approved proposal budget category.

Equipment: Title vests with

COMMENTS:

Project Director shall notify Grants and Contracts Accounting when each task is complete and accepted for billing purposes.
GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION

SPONSORED PROJECT TERMINATION/CLOSEOUT SHEET

Date 8/5/86

Project No. E-25-671(formerly E-26-638)R5627-2A0
School/ME(formerly NE)

Includes Subproject No.(s) N/A

Project Director(s) John Carden GTRC

Sponsor DHHS/PHS/CDC/NIOSH

Title Preparation of Lecture Outlines for Engineering College-Wide Occupational Safety

Health Course (Task I only)

Effective Completion Date: 7/20/86 (Performance) (Reports)

Grant/Contract Closeout Actions Remaining:

☐ None
☐ Final Invoice or Final Fiscal Report
☐ Closing Documents
☐ Final Report of Inventions
☐ Govt. Property Inventory & Related Certificate
☐ Classified Material Certificate
☐ Other

All remaining funds ($3,950) and other activities transferred to EDL/ESHD Project No. A-4564 effective 7/21/86

Continues Project No. N/A Replaced and Continued by Project No. A-4564

COPIES TO:

Project Director
Research Administrative Network
Research Property Management
Accounting
Procurement/GTRI Supply Services
Research, Security Services
Reports Coordinator LORCA
Legal Services.

Library
GTRC
Research Communications (2)
Project File
Other

FORM OCA 69.285
March 20, 1986

Mr. John T. Talty
DTMD/NIOSH
Robert A. Taft Laboratory
4676 Columbia Parkway
Cincinnati, Ohio 45226

Dear John:

Please find enclosed a set of lecture notes prepared from each of the video tapes produced in the course, Engineering for Occupational Safety and Health offered by Professor Winston Boteler the Spring Quarter of 1985. These outlines are submitted to fulfill the requirements of your purchase order #84-0794.

I trust you will agree these outlines and the efforts of my colleagues, myself and students, to develop a solid occupational safety and health course for our undergraduate engineering students justify the resources you committed.

A number of factors combined to prevent the full achievement of our original "grand plan" for this course. As you recall, we formed a committee to develop goals and a syllabus for the course. The committee agreed on a series of 27 lectures to be videotaped for presentation. With topical outlines for each lecture, I contacted a number of individuals both on the faculty and in the professional community about participation. The response was quite positive as indicated by the attached list of lecturers who agreed to participate. I prepared information, enclosed, for these people and set up a schedule for taping. I made each aware of a computerized data base prepared by myself and two students containing training materials related to their topic and provided references as requested. (As you recall, this extensive data base was prepared to contribute to this program. We did the work without support from NIOSH i.e., no identified task, but credited NIOSH when it was published in the American Industrial Hygiene Association Journal 45, 8-7 (1984)). I asked each participant to prepare an outline of the material to be presented. The plan was to take this outline, augment it with any additional material actually presented in the lecture, and prepare an outline to be provided to each student participating. These outlines were those envisioned in the purchase order. The course was scheduled for implementation in early 1984. Another purchase order was required; however, (see attached letter) and unfortunately funding could not be made available that academic year. When funding did become available in October I was no longer a full time faculty member and my time was committed. Professor Winston Boteler agreed to put on the course and did offer it Spring Quarter; 1985. I was not at Georgia Tech the Summer Quarter of 1985 and my time was fully committed Fall Quarter so it was not possible for me to address the required outlines until Winter Quarter. Thus, we find ourselves at the end of a very long delay.
Professor Boteler gave the majority of lectures in the course, and has since retired. We did not have notes to work from so two graduate students and I prepared the outlines from the tapes. We restricted ourselves to material contained on the tapes since the idea was to prepare student materials for use with them.

I would like to give you an estimate of the time that actually went into this effort. I spent approximately 10 hours beyond Task 2 of P.O. 83-2104 preparing materials to take to prospective lecturers, than an average of 2 hours per lecturer (24 total hours) going over what we wanted and the support we could provide. Following Professor Boteler's offering of the course, I had two graduate students each devoting approximately 40 hours preparing draft outlines from the tapes of the course. I then spent approximately 20 hours working on these drafts and another 10 on this report. The data base development and preparation for publication required 130 hours of graduate student time and 30 hours of my time. I fear we vastly underestimated the time commitment required to accomplish the program of P.O. 84-0794 especially when you consider the cost of one detailed unit outline in P.O. 83-2104 was $2,950, which just covered the effort, and 84-0794 called for 27 such outlines. This under estimate of the effort required plus a glitch in the schedule due to delays in funding caused serious problems in the project.

I have within the last two months received calls from representatives of the Georgia Occupational Safety and Health community requesting information about training for engineers at Georgia Tech. One of these groups visited the Vice President for Academic Affairs and the Dean of the Engineering College. Our perception of need was quite correct and I feel that someday our "Grand Plan" will be realized. I am disappointed I will not be there to work with you, but I am confident you will find willing talent to participate.

Sincerely,

John L. Carden, Jr., Ph.D.

JLC/bc
Enclosures
ENGINEERING FOR OCCUPATIONAL SAFETY AND HEALTH

TRAINING MATERIALS AND TEXTS

A COMPUTER DATA BASE

PREPARED BY:

JOHN L. CARDEN, JR., PH.D.

N. C. HAWKINS

AND

S. V. MUSOLINO

THE GEORGIA INSTITUTE OF TECHNOLOGY

PUBLISHED AS:

DATA BASE FOR LOCATING OS&H TRAINING MATERIALS
AMERICAN INDUSTRIAL HYGIENE ASSOCIATION JOURNAL
VOL. 45, B-7 (1984)
A unique microcomputer searchable data base has been developed to assist in identifying materials for use in Occupational Safety & Health education and training. The data base identifies a broad spectrum of materials including videotapes, movies, reference and text books as well as training materials developed by NIOSH and OSHA.

The information about each item is organized into the seven categories shown in Table 1. Commercial file management software (PFS File, Software Publishing Corporation) is used, which provides considerable flexibility for accessing the information and for making additions for specialized applications. The most rapid search strategy is to use the "Topics" shown in Table 2. A "Topic" search must be carried out using the mnemonics shown in Table 2. The PFS File documentation manual provides a detailed description of how search strategies may be structured.

As an example of kinds of materials contained in the data base, consider the topic, "Hazardous Chemical Management". There are currently
16 items listed under this topic. Among these are "Flammable Liquids, Part 2", a 16 mm film prepared by the Labor Education and Research Service of Ohio State University, "Chemical Hazards and Waste Disposal Safety and Health", a training module prepared by the Center for Occupational Research and Development in Waco, Texas. "Health Risks to Farm Workers", a videotape prepared by NIOSH, module 14 of "Recognition of Health Hazards", a course prepared by NIOSH and the "National Materials Safety Seminar", a series of training modules prepared by the National Hazards Control Institute of the Starson Corporation.

An attempt has been made to provide enough information about each item to allow an initial screening. This is accomplished by providing information under "Summary" such as the table of contents, module subheadings, or other descriptive information as appropriate. "Title" identifies the item, and "Source" provides adequate information for direct inquiries or ordering. "Format" indicates the medium used: videotape, film training module, text, etc, and the "Cost" at the time of our inquiry (not necessarily current) is given. The "Date" of publication is also provided.

The hardware required to utilize the data base consists of an Apple IIe or compatible computer with one 5.25" disk drive. PFS File is also required to access the data disk. This commercial software can be obtained from most software retailers.
NIOSH provided support in developing the data base and has agreed to serve as a distributor. If you wish to use the data base, please send a written request to the following person for details as to how you can obtain a copy:

Mr. Stephen Bayer  
Training Instructor  
Division of Training and Manpower Development  
NIOSH  
4676 Columbia Parkway  
Cincinnati, Ohio 45226
<table>
<thead>
<tr>
<th><strong>TABLE 1</strong></th>
<th><strong>Information Categories for Each Item</strong></th>
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<tbody>
<tr>
<td><strong>TOPIC:</strong></td>
<td>subject(s) covered</td>
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<tr>
<td><strong>TITLE:</strong></td>
<td>of the item</td>
</tr>
<tr>
<td><strong>SOURCE:</strong></td>
<td>organization or publisher, author, address</td>
</tr>
<tr>
<td><strong>DATE:</strong></td>
<td>of publication</td>
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<tr>
<td><strong>FORMAT:</strong></td>
<td>videotape, book, film, module, etc.</td>
</tr>
<tr>
<td><strong>COST:</strong></td>
<td>purchase, rental fee, etc.</td>
</tr>
<tr>
<td><strong>SUMMARY:</strong></td>
<td>brief description of content</td>
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<tr>
<td>TOPIC</td>
<td>Mnemonic used in search</td>
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<td>ECONOMICS OF OCCUPATIONAL SAFETY AND HEALTH</td>
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<td>LAWS, REGULATIONS AND AGENCIES</td>
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<td>NOISE, HEARING CONSERVATION, VIBRATION</td>
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<td>NONIONIZING RADIATIONS</td>
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<td>OCCUPATIONAL SAFETY AND HEALTH PROGRAMS</td>
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<td>PERSONAL PROTECTIVE EQUIPMENT</td>
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<td>TEMPERATURE EXTREMES</td>
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<td>TOXICOLOGY, INDUSTRIAL</td>
<td>TOX</td>
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<tr>
<td>VENTILATION AND OTHER ENGINEERING CONTROLS</td>
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</table>
CONTROL STRATEGIES, EMISSIONS CONTROL
TITLE: ACCIDENT PREVENTION MANUAL FOR INDUSTRIAL OPERATIONS  
SOURCE: NATIONAL SAFETY COUNCIL  
DATE: FORMAT: NSC BOOK  COST: P  
SUMMARY: HISTORY, OSH ACT, PROGRAM ORGANIZATION, INSPECTION AND CONTROL PROCEDURES, REMOVAL OF JOB HAZARDS, ACCIDENT RECORDS AND INJURY RATES, INVESTIGATION, ANALYSIS, AND COSTS, WORKMAN'S COMPENSATION, SAFETY TRAINING, HUMAN FACTORS, HUMAN BEHAVIOR, OFFICE SAFETY, PUBLICIZING AND MAINTAINING SAFETY, PLANT LAYOUT, EMERGENCY PLANNING, PERSONAL PROTECTIVE EQUIPMENT, INDUSTRIAL SANITATION, HEALTH SERVICES, SOURCES OF HELP, MATERIALS HANDLING AND STORAGE, TOOLS AND EQUIPMENT SAFETY TECHNIQUES, METALS, EXHAUST AND VENTILATION, TOXICOLOGY, NOISE, ELECTRICAL HAZARDS, FIRE PROTECTION, SAFETY ENGINEERING TABLES

TITLE: AIRBORNE PARTICULATES: CASE STUDY  
SOURCE: UNIT 13, DEVELOPMENT OF AN INTERDISCIPLINARY COURSE IN OCCUPATIONAL HEALTH ENGINEERING, SMITH, OHIO STATE  
DATE: 10/82  FORMAT: OUTLINE  COST: NONE  
SUMMARY: LECTURE FOLLOWS SHOWING OF "FIRST CONSIDERATION: HEALTH HAZARD CONTROL IN THE PESTICIDE INDUSTRY", CONTROL STRATEGIES, EXPOSURE TO INORGANIC LEAD

TITLE: BEHAVIOR MANAGEMENT FOR OCCUPATIONAL SAFETY AND HEALTH  
SOURCE: NIOSH DTMD  
DATE: SEPTEMBER, 1979  FORMAT:  COST:  
TITLE: COLD CAN KILL
SOURCE: INTERNATIONAL FILM BUREAU, 332 S. MICHIGAN AVE., CHICAGO, IL 60604
DATE: ? FORMAT: 16 MM FILM OR VIDEO CASSETTE COST: $475 OR 45 RENTAL
SUMMARY: SYMPTOMS AND EFFECTS OF HYPOTHERMIA, CLOTHING, SUPPORTIVE TREATMENT

TITLE: COMFORT VENTILATION SYSTEMS
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: BASIC GOOD ENGINEERING DESIGN FOR COMFORT SYSTEMS

TITLE: CONTROL OF THE OCCUPATIONAL ENVIRONMENT- INSTRUCTORS MANUAL
SOURCE: NIOSH-DTMD
DATE: SEPTEMBER, 1980 FORMAT: COST:
SUMMARY: GENERAL CONCEPTS OF HAZARDS CONTROL, CONTROL OF AIRBORNE CONTAMINANTS, CONTROL OF RADIATION, CONTROL OF THERMAL STRESS, CONTROL OF NOISE
TITLE: DANGEROUS NOISE - HEARING CONSERVATION
SOURCE: INTERNATIONAL FILM BUREAU, 332 S. MICHIGAN AVE., CHICAGO, IL 60604
DATE: ? FORMAT: 16 MM FILM OR VIDEO CASSETTE COST: $375 OR 37.50 RENTAL
SUMMARY: ENGINEERING DESIGN, PERSONAL PROTECTIVE EQUIPMENT, AUDIOMETRIC TESTING, HEARING CONSERVATION

TITLE: ENGINEERING CONTROL OF OCCUPATIONAL HEALTH HAZARDS IN THE FOUNDRY INDUSTRY
SOURCE: NIOSH DTMD
DATE: AUGUST, 1980 FORMAT: 
COST: 
SUMMARY: POTENTIAL HAZARDS, CONTROL METHODS: SUBSTITUTION AND ISOLATION, CONTROL METHODS: INTRODUCTION TO VENTILATION, ENCLOSING, AND EXTERIOR HOODS, CONTROL METHODS: NON-RECEIVING HOODS AND GENERAL VENTILATION, MICROWAVE MONITORING, HOUSE KEEPING AND THE SEARCH FOR NEW AND IMPROVED CONTROL METHODS

TITLE: ESTIMATING METABOLIC RATES
SOURCE: NIOSH, DTMD (513)684-8231
DATE: ? FORMAT: VIDEO TAPE COST: $50-60
SUMMARY: WORK OBSERVATION TECHNIQUE DEMONSTRATED WITH OXYGEN CONSUMPTION VERIFICATION, USE OF TIME-LOCATION CHARTS, USEFUL FOR LOCATING WORK LOCATIONS THAT POSE HEAT STRESS HAZARD
TITLE: EVALUATION OF INDUSTRIAL HOODS
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: DESCRIBES HOODS AND METHODS OF EVALUATION (24 MIN)

TITLE: FINDING THE HIDDEN KILLERS
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS, SEE 82-102
DATE: ? FORMAT: 3/4 IN VIDEO CASSETTE COST: ?
SUMMARY: NON-TECHNICAL, CONTROL OF INDUSTRIAL ENVIRONMENT, ROLE OF OSHA, NIOSH, & OTHER AGENCIES

TITLE: FIRE PREVENTION AND EMERGENCY PROCEDURES, SAFETY AND HEALTH MODULE SH-05
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, SUITE C, 601 LAKE AIR DR., WACO, TX 76710
DATE: 1981 FORMAT: MODULE COST: P
SUMMARY: FIRE PREVENTION AND EMERGENCY PROCEDURES, CHEMISTRY OF FIRE, EXTINGUISHING EMERGENCY ACTION
TITLE: FIRST CONSIDERATION  
SOURCE: DTMD, NIOSH, (513) 684-8231  
DATE: 1981  FORMAT: VIDEO TAPE  COST: 50 - 60$  
SUMMARY: DEALS WITH AIRBORNE PARTICULATES, THEORY OF CONTROL TECHNOLOGY EXPLAINED IN DETAIL, DESIGNED FOR ENGINEERS

TITLE: FLAMMABLE ENGINEERING  
SOURCE: PROTECT-O-SEAL CO., 225 W. FOSTER AVE., BENSENVILLE, IL 60106  
DATE: ?  FORMAT: 16 MM FILM  COST: $195 OR LOAN  
SUMMARY: DESIGN OF CONTAINERS FOR TRANSPORT AND STORAGE, PHYSICAL AND MIGRATION CHARACTERISTICS OF VAPORS

TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE  
SOURCE: NATIONAL SAFETY COUNCIL  
DATE:  
FORMAT: NSC BOOK  COST:  
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS, PARTICULATES, DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION, TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION, AIR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVS, PELS, CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS, REVIEW OF MATHEMATICS,
TITLE: HEAT STRESS
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: HEALTH HAZARDS, WHERE LIKELY TO OCCUR, CONTROL

TITLE: HEAT STRESS
SOURCE: PRINCIPLES OF OS&H ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: BACKGROUND, HEAT EXCHANGE MECHANISMS, PHYSIOLOGIC RESPONSE, HEALTH HAZARDS, VARIABILITY, MEASUREMENT, HEAT STRESS ALGORITHMS, CONTROL

TITLE: HEATING AND COOLING FOR MAN IN INDUSTRY
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION
DATE: FORMAT: AIHA BOOK COST:
SUMMARY: PLANNING OF A TEMPERATE INDUSTRIAL ENVIRONMENT, HEAT EXCHANGE AND HUMAN TOLERANCE LIMITS, CONTROL OF RADIANT HEAT, TYPES OF VENTILATION SYSTEMS, ADDING HEAT TO SPACE, REMOVING HEAT FROM SPACE, MOISTURE CONTROL, MAKE-UP AIR AND HEAT CONSERVATION AND RECOVERY, AIR DISTRIBUTION, SELECTION AND APPLICATION OF AIR FILTERS, TESTING OF AIR FLOW SYSTEMS, INSTRUMENTS USED TO ASSESS THE THERMAL ENVIRONMENT, AIR FLOW AROUND BUILDINGS, BUILDING AIR FLOW AND PRESSURIZATION, SUPPLY & EXHAUST SYSTEM DESIGN
TITLE: INDUSTRIAL VENTILATION
SOURCE: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
DATE: FORMAT: ACGIH BOOK COST:
SUMMARY: GENERAL PRINCIPLES OF VENTILATION, DILUTION VENTILATION, VENTILATION FOR HEAT CONTROL, HOOD DESIGN, SPECIFIC OPERATIONS, DESIGN PROCEDURE, MAKE-UP AND RECIRC AIR, CONSTRUCTION SPECIFICATIONS, TESTING OF VENTILATION SYSTEMS, FANS, AIR CLEANING DEVICES

TITLE: INDUSTRIAL VENTILATION #588
SOURCE: NIOSH DTMD
DATE: FEBRUARY, 1980 FORMAT: COST:
SUMMARY: DILUTION VENTILATION, HOOD DESIGN, DESIGN PROCEDURE, MAKE-UP AND RECIRCULATED AIR, SPECIFICATIONS AND COST, TESTING OF VENTILATION SYSTEMS, FANS, AIR CLEANING DEVICES

TITLE: INDUSTRIAL HYGIENE ENGINEERING # 551
SOURCE: NIOSH DTMD
DATE: JANUARY, 1990 FORMAT: COST:
SUMMARY: ENGINEERING CONTROL, HEAT STRESS, INDUSTRIAL VENTILATION, ERGONOMICS, NOISE AND VIBRATION CONTROLS, RADIATION, ILLUMINATION
TITLE: INDUSTRIAL NOISE (#158)
SOURCE: NIOSH, DTMD, (513) 684-8231
DATE: ? FORMAT: VIDEO TAPE COST: FREE FOR SHORT PERIOD
SUMMARY: SCOPE: HAZARD, EFFECTIVE CONTROL TECHNOLOGIES, FOR ENGINEERS AND OTHER PROS

TITLE: INDUSTRIAL HYGIENE ENGINEERING
SOURCE: 551 COURSE SECTION 1, DTMD, NIOSH
DATE: 1/80 FORMAT: TEXT COST: ?
SUMMARY: TEXTILE PLANT EXAMPLE, EQUIPMENT LAYOUT, SUBSTITUTION AND PROCESS CONTROL, CONTROL OF DUST IN ASBESTOS INDUSTRIES, PROBLEMS

TITLE: INDUSTRIAL HYGIENE ENGINEERING
SOURCE: 551 COURSE SECTION 6, DTMD, NIOSH
DATE: 1/80 FORMAT: TEXT COST: ?
SUMMARY: CONTROL MEASURES
TITLE: INDUSTRIAL HYGIENE ENGINEERING
SOURCE: 551 COURSE, DTMD, NIOSH
DATE: 1/90 FORMAT: TEXT COST: ?
SUMMARY: PHYSICS OF SOUND, PARAMETERS, CONTROL, VIBRATION ISOLATION, PROBLEMS

TITLE: MAINTAINING FACILITIES AND OPERATIONS - INSTRUCTORS RESOURCE GUIDE
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1979 FORMAT:  COST: P
SUMMARY: IMPACT OF ACCIDENTS ON FACILITY OPERATION, ELEMENTS OF A HAZARD CONTROL PROGRAM, OCCUPATIONAL HEALTH, HAZARDOUS MATERIAL USE AND CONTROL, FIRE PROTECTION AND CONTROL, MACHINE GUARDING, BOILERS AND UNFIRED PRESSURE VESSELS, WELDING AND CUTTING

TITLE: NIOSH CONTROL TECHNOLOGY ASSESSMENT REPORTS
SOURCE: NIOSH
DATE: 1980 FORMAT: MODULE INC. INSTRUCTORS GUIDE, S
STUDENT OUTLINE, SLIDES COST: ?
SUMMARY: DEVELOPED FROM NIOSH CONTROL TECHNOLOGY ASSESSMENT REPORTS, FIRST MODULE ON FOUNDRY WITH OTHERS TO FOLLOW
TITLE: NOISE
SOURCE: PRINCIPLES OF OS&H ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83  FORMAT: OUTLINE  COST: NONE
SUMMARY: BACKGROUND, FUNDAMENTALS OF SOUND, PHYSIOLOGY OF HEARING, SOUND MEASUREMENT, EXPOSURE STANDARDS, CONTROL, HEARING PROTECTORS, REQUIRED HEARING PROTECTION PROGRAM.

TITLE: OCC HEALTH TRAINING COURSE FOR COMPLIANCE, SAFETY, AND HEALTH OFFICERS VOLUME I, II - INSTRUCTORS' MANUAL
SOURCE:
DATE:  FORMAT:  COST:
SUMMARY: BODY RESPONSES TO CHEMICALS, ROUTES OF ENTRY, DOSE RESPONSE, DERMATITIS, CARCINOGENS, AIRBORNE CONTAMINANTS, RESPIRATORY SYSTEM, PERMISSIBLE AIRBORNE CONCENTRATIONS CONTROL OF AIRBORNE HAZARDS, RESPIRATORY PROTECTION DEVICES, PHYSICAL STRESSES, NOISE, HEAT STRESS, IONIZING RADIATION, PRINCIPAL FIELD APPLICATIONS, STATISTICS, RECOGNITION OF HEALTH HAZARDS, ROLE OF THE SAFETY SPECIALIST, BRIEFING ON THE IHFOM, TOTAL DUST AND FUME SAMPLING, WEIGHING AND DESSICATION, RESPIRABLE DUST SAMPLING, DUST SAMPLING LABORATORY, CALCULATION S, OSHA ANALYTICAL LABORATORY, DETECTOR TUBE SAMPLING, NOISE MEASUREMENT AND SAMPLING

TITLE: OCCUPATIONAL DERMATOSES
SOURCE: PRINCIPLES OF OS&H ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83  FORMAT: OUTLINE  COST: NONE
SUMMARY: BACKGROUND, SKIN PHYSIOLOGY, PREDISPOSING FACTORS, DIRECT CAUSES, MECHANICAL AND PHYSICAL AGENTS, BIOLOGIC AGENTS, METHODS OF CONTROL, WORKERS AT RISK.
TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME III
SOURCE: EDITED BY LEWIS J. CRALLEY LESTER V. CRALLEY
DATE: FORMAT: BOOK COST: 
SUMMARY: RATIONALE, EMISSION INVENTORY, STATISTICAL DESIGN AND DATA ANALYSIS REQUIREMENTS, DATA AUTOMATION, ANALYTICAL MEASUREMENTS, MEASUREMENT OF WORKER EXPOSURE, BIOLOGICAL INDICATORS OF CHEMICAL DOSAGE AND BURDEN, EXPOSURE EVALUATION (TO CHEMICALS, IONIZING AND NONIONIZING RADIATIONS, NOISE, HOT AND COLD ENVIRONMENTS, VIBRATIONS, ABNORMAL PressURES, BIOLOGICAL AGENTS), TOXICOLOGICAL DATA EXTRAPOLATION, HEALTH SURVEILLANCE PROGRAMS IN INDUSTRY, PHILOSOPHY AND MANAGEMENT OF ENGINEERING CONTROLS, PERSONAL PROTECTION, JOB SAFETY AND HEALTH LAW, COMPLIANCE AND PROJECTION

TITLE: PITOT TRAVERSE
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: SAMPLING POINTS, MEASUREMENT TECHNIQUES AND DATA TREATMENT

TITLE: POLYCHLORINATED DIPHENYL IN THE WORKPLACE- A SPECIAL COURSE
SOURCE: NIOSH DTMD
DATE: AUGUST, 1980 FORMAT: COST: 
SUMMARY: CHEMICAL HEALTH HAZARDS, TLV'S AND PCB'S EFFECT ON MAN, CHEMICAL HAZARDS CONTROL, RESPIRATORY PROTECTION, PERSONAL PROTECTION WEAR, RECORD KEEPING, MEDICAL MONITORING, MATERIAL HANDLING, AIR SAMPLING
TITLE: RECOGNITION OF HEALTH HAZARDS IN INDUSTRY
SOURCE: WILLIAM A. BURGESS
DATE: FORMAT: BOOK COST:
SUMMARY: INDUSTRIAL UNIT OPERATIONS, ABRASIVE BLASTING, ACID/ALKALI METAL CLEANING, DEGREASING, ELECTROPLATING, FORGING, FOUNDRIES, GRINDING, POLISHING, BUFFING, HEAT TREATING, RADIOGRAPHY, MACHINING, METAL THERMAL SPRAYING, NONDESTRUCTIVE TESTING, PAINTING, SOLDERING, BRAZING, WELDING, PRODUCTION FACILITIES, ABRASIVES, ACIDS, ALUMINUM, AMMONIA, ARTWORK, ASBESTOS, ASPHALT, BATTERIES, BERYLLIUM, BRICK AND TILE, CEMENT, CHLORINE, COTTON, FERTILIZERS, FOOD, GARAGES, GLASS, IRON AND STEEL, LEATHER, LIME, PAINT, PETROLEUM, PLASTICS, POTTERY, PULP AND PAPER, RAYON, RENDERING PLANTS, RUBBER, SHIPBUILDING AND REPAIR, SMELTING, STONE QUARRYING, UNDERGROUND MINING

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS #510, APPENDICES F-L
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980 FORMAT: COST:
SUMMARY: PROGRAM OF INSTRUCTION, INSTRUCTOR DIRECTIONS, COURSE SAMPLER, TESTING, ANSWER KEY

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS #510, VOL II
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980 FORMAT: COST:
SUMMARY: ILLUMINATION, HEAT STRESS, OCCUPATIONAL CANCER, ECONOMICS, WELDING, METAL PROCESSING AND CONTROLS, WELDING AND METAL WORKSHOP, INSTRUMENTATION, PHYSICAL HAZARDS, PHYSICAL HAZARDS WORKSHOP, VIBRATION, BACK ON THE JOB, ERGONOMICS, MORE ABOUT ILLUMINATION, MONITORING, INSTRUMENTATION,
TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS #510, VOL I
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980 FORMAT: COST:
SUMMARY: BIOMODES OF ENTRY, TOXICITY OF CHEMICAL AGENTS, PATHOLOGY OF OCC
DISEASES, INDUSTRIAL HYGIENE SURVEYS, SURVEY PROCEDURES, EPIDEMIOLOGICAL
FACTORS, EVALUATION OF TOXICITY, DEVELOPMENT AND APPLICATION OF STANDARDS,
PNEUMOCONIOSIS, CHEMICAL HAZARDS/WORKSHOP, PREVENTION, OCCUPATIONAL SKIN
DISEASES, PHYSICAL AGENTS - ELECTROMAGNETIC SPECTRUM, IONIZING RADIATION, NOISE,
NOISE WORKSHOP, CHEMICAL TREATMENT, CHEMICAL TREATMENT WORKSHOP

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS
SOURCE: 510 COURSE MANUAL VOL 2, DTMD, NIOSH
DATE: 12/31/74 FORMAT: TEXT COST: ?
SUMMARY: MODULES 36, 43

TITLE: SAFETY IN ACADEMIC CHEMISTRY LABORATORIES
SOURCE: AMERICAN CHEMICAL SOCIETY
DATE: FORMAT: COST: BOOKLET
SUMMARY: THE BOOKLET GIVES GENERAL RECOMMENDATIONS ON LABORATORY SAFETY AND ALSO
GIVES SPECIFIC INFORMATION ON CERTAIN HAZARDS. THERE IS SOME DISCUSSION OF
PERSONAL PROTECTIVE EQUIPMENT AND ALSO OF EMERGENCY PROCEDURES.
TITLE: THE INDUSTRIAL ENVIRONMENT—ITS EVALUATION AND CONTROL
SOURCE: NIOSH
DATE: FORMAT: BOOK COST:
SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY, PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS, GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING, DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS CHROMATOGRAPHY, QUALITY CONTROL IN LABORATORY ANALYSIS, PHYSICS OF SOUND, EAR PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS, RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL,

TITLE: TOXIC GASES AND VAPORS: CASE STUDIES
SOURCE: UNIT 17, DEVELOPMENT OF AN INTERDISCIPLINARY COURSE IN OCCUPATIONAL HEALTH ENGINEERING, SMITH, OHIO STATE
DATE: 10/82 FORMAT: OUTLINE COST: NONE
SUMMARY: BEHAVIORAL TOXICOLOGY, CONTROL OF INORGANIC MERCURY, CARBON MONOXIDE

TITLE: VENTILATION, PART 1
SOURCE: OHIO STATE UNIVERSITY, LABOR EDUCATION AND RESEARCH SERVICE, 156 W. 19TH AVE., COLUMBUS OH 43210
DATE: FORMAT: SLIDES AND AUDIO CASSETTE COST: $54 INC GUIDE
SUMMARY: BASIC PRINCIPLES, COMMON SYSTEMS
TITLE: VIBRATION
SOURCE: PRINCIPLES OF OSH ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83  FORMAT: OUTLINE  COST: NONE
SUMMARY: BACKGROUND, TERMINOLOGY, WHOLE BODY, SEGMENTAL
INDUSTRIAL DISEASES
TITLE: AIRBORNE PARTICULATES: CASE STUDY  
SOURCE: UNIT 13, DEVELOPMENT OF AN INTERDISCIPLINARY COURSE IN OCCUPATIONAL HEALTH ENGINEERING, SMITH, OHIO STATE  
DATE: 10/82  
FORMAT: OUTLINE  
COST: NONE  
SUMMARY: LECTURE FOLLOWS SHOWING OF "FIRST CONSIDERATION: HEALTH HAZARD CONTROL IN THE PESTICIDE INDUSTRY", CONTROL STRATEGIES, EXPOSURE TO INORGANIC LEAD

TITLE: BASIC INDUSTRIAL HYGIENE  
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION' BY RICHARD S. BRIEF  
DATE:  
FORMAT: A TRAINING MANUAL, AIHA  
COST:  
SUMMARY: REFERENCE LIST, GENERAL PRINCIPLES, MATHEMETICS, INDUSTRIAL PHYSICIAN, TOXICOLOGIST, SAMPLING FOR GASES AND VAPORS, ANALYTICAL CHEMISTRY, PARTICULATE SAMPLING, CALIBRATION OF AIR SAMPLING INSTRUMENTS, NOISE, EM SPECTRUM, IONIZING RADIATION, ULTRAVIOLET, VISIBLE LIGHT, MICROWAVES, LASERS, HEAT AND COLD STRESS, INDUSTRIAL VENTILATION, RESPIRATORY PROTECTIVE DEVICES, LABORATORY EXERCISES

TITLE: CASARETT AND DOULL'S TOXICOLOGY  
SOURCE: EDITED BY JOHN DOULL CURTIS D. KLAASSEN MARY O. AMDUR  
DATE:  
FORMAT: MACMILLAN BOOK  
COST:  
SUMMARY: ORIGIN AND SCOPE OF TOXICOLOGY, TOX SAFETY EVALUATIONS, ABSORPTION,DISTRIBUTION,EXCRETION, METABOLISM OF TOXIC SUBSTANCES, INFLUENCING FACTORS, CHEMICAL CARCINOGENS, GENETIC TOX, TERATOGENS, CENTRAL NERVOUS SYSTEM RESPONSES, LIVER, KIDNEY, RESPIRATORY SYSTEM, EYE, BLOOD, REPRODUCTIVE SYSTEM RESPONSES, PESTICIDES, METALS, SOLVENTS, RADIOACTIVE MATERIALS, PLASTICS, TOXINS OF ANIMAL ORIGIN, PHYOTOXICOLOGY, FOOD ADDITIVES, AIR POLLUTANTS, WATER/SOIL POLLUTANTS, FORENSIC TOXICOLOGY, CLINICAL, OCCUPATIONAL TOX, REGULATORY TOX, TOXICOLOGY AND THE LAW
TITLE: CLINICAL SYMPOSIA VOLUME 30 NUMBER 4, 1978 OCCUPATIONAL PULMONARY DISEASE
SOURCE: CLINICAL SYMPOSIA PUBLISHED BY CIBA ARTICLE BY MORTON M. ZISKIND
DATE: FORMAT: BOOKLET COST:
SUMMARY: INHALED PARTICLES AND GASES, ACUTE REACTIONS, SUBACUTE REACTIONS, CHRONIC DISEASE, DIAGNOSIS, TREATMENT, PREVENTION

TITLE: ERGONOMICS
SOURCE: PRINCIPLES OF OS&H ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: DEFINITIONS, RELATED DISEASES, ANATOMY, PHYSIOLOGY, WORKPLACE ENVIRONMENT, DESIGN, MANUAL MATERIAL HANDLING

TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NBC BOOK COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS, PARTICULATE, DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION, TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION, AIR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVS, PELS, CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS, REVIEW OF MATHEMATICS,
TITLE: FUNDAMENTALS OF INDUSTRIAL TOXICOLOGY
SOURCE: BY KIM ANDERSON AND RONALD SCOTT
DATE: FORMAT: BOOK COST:
SUMMARY: DEFINITION/SCOPE OF TOXICOLOGY, HISTORY, ROLE OF TOXICOLOGY, PHYSIOLOGY,
MODE OF ACTION, DOSE-RESPONSE RELATIONSHIP, TYPES OF EXPOSURES, IDENTIFICATION
OF CONTAMINANTS, BASIS OF AGENCIES, SOURCES OF INFORMATION

TITLE: HANDBOOK OF OCCUPATIONAL SAFETY AND HEALTH
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: BOOK COST: P
SUMMARY: SAFETY AND GOOD BUSINESS, OSHA CONSIDERATIONS, SAFE & HEALTHFUL WORKING
CONDITIONS, SAFETY INSPECTIONS, ACCIDENT RECORDS AND REPORTS, TRAINING,
PROMOTION, MOTIVATION OF EMPLOYEES, SAFEGUARDING MACHINES, MATERIALS HANDLING AND
STORAGE, PERSONAL PROTECTIVE EQUIPMENT, FIRE PROTECTION, INDUSTRIAL HYGIENE AND
HEALTH

TITLE: HEALTH HAZARDS IN THE ARTS AND CRAFTS
SOURCE: PROCEEDINGS OF THE SOCIETY FOR OCCUPATIONAL SAFETY AND HEALTH
CONFERENCE ON HEALTH HAZARDS IN THE ARTS AND CRAFTS, 1980
DATE: FORMAT: SOEH BOOK COST:
SUMMARY: CASE STUDIES OF HEALTH PROBLEMS (CADMIUM POISONING, PERFORMING ARTS,
stained glass workers), SURVEYS AND MONITORING STUDIES IN THE WORKPLACES (COLLEGE ARTS DEPARTMENTS, SMALL FURNITURE STRIPPING SHOPS, CONSUMER BENZENE
EXPOSURES DUE TO STRIPPING OF FURNITURE, POTTING STUDIO AND CLASSROOM, LEAD
EXPOSURE IN STAINED GLASS INDUSTRY, ROCK DUST EXPOSURE TO SCULPTORS),
eVALUATION OF INGREDIENTS IN ARTS AND CRAFTS MATERIALS TO MAKE THEM SAFER,
LEGAL, REGULATORY, AND POLICY ISSUES
TITLE: HEAT STRESS
SOURCE: PRINCIPLES OF OS&H ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: BACKGROUND, HEAT EXCHANGE MECHANISMS, PHYSIOLOGIC RESPONSE, HEALTH HAZARDS, VARIABILITY, MEASUREMENT, HEAT STRESS ALGORITHMS, CONTROL

TITLE: INDUSTRIAL ENVIRONMENTAL HEALTH
SOURCE: EDITED BY LESTER V. CRALLEY PATRICK R. ATKINS
DATE: FORMAT: BOOK, ACADEMIC PRESS COST:
SUMMARY: EPIDEMIOLOGIC STUDIES OF OCCUPATIONAL DISEASE, TOXICOLOGY, NOISE, NONIONIZING RADIATION, IONIZING RADIATION, WORK IN HOT ENVIRONMENTS: TLV'S AND PROPOSED STANDARDS, EVALUATION OF CHEMICAL HAZARDS IN THE ENVIRONMENT, HAZARD EVALUATION AND CONTROL, PERSONAL PROTECTIVE DEVICES, OFF-JOB ENVIRONMENTAL HEALTH STRESS AS RELATED TO THE WORKPLACE, IMPACT OF GOVERNMENTAL ENVIRONMENTAL REGULATIONS UPON INDUSTRIAL ACTIVITIES

TITLE: INDUSTRIAL NOISE AND HEARING CONSERVATION
SOURCE: NATIONAL SAFETY COUNCIL EDITED BY JULIAN OLISHIFSKI EARL HARFORD
DATE: FORMAT: BOOK COST:
SUMMARY: INTRODUCTION, MEASUREMENT OF SOUND, EFFECTS OF NOISE ON MAN, CONTROL OF NOISE, INDUSTRIAL AUDIOMETRY, INDUSTRIAL HEARING CONSERVATION PROGRAMS, THIS DOCUMENT CONTAINS OVER ONE THOUSAND PAGES OF DETAILED DISCUSSION ABOUT ALL ASPECTS OF OCCUPATIONAL EXPOSURES TO NOISE.
TITLE: INDUSTRIAL HEALTH
SOURCE: BY JACK PETERSON
DATE: FORMAT: BOOK COST:
SUMMARY: ENTRY & TOXIC ACTIONS OF CHEMICAL SUBSTANCES, LABORATORY DETERMINATION OF TOXICITY, GASES, METALS AND METALLOIDS, PNEUMOCONIOSES, ORGANIC SOLVENTS, MONOMERS AND POLYMERS, PESTICIDES, SENSITIZATION & DERMATITIS, CARCINOGENESIS, ABNORMAL PRESSURE, NOISE, BIOThERMAL STRESS, NONIONIZING RADIATION, IONIZING RADIATION, HAZARD EVALUATION AND CONTROL, REVIEW OF ORGANIC CHEMISTRY NOMENCLATURE

TITLE: INDUSTRIAL NOISE MANUAL
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION
DATE: FORMAT: AIHA BOOK COST:
SUMMARY: PHYSICS OF SOUND, INSTRUMENTS FOR SOUND MEASUREMENTS, TECHNIQUE FOR SOUND MEASUREMENT, NOISE SURVEYS, VIBRATION, ANATOMY/PHYSIOLOGY OF THE EAR, EFFECTS OF NOISE ON MAN, HEARING MEASUREMENT, MEDICAL ASPECTS OF HEARING CONSERVATION, PERSONAL PROTECTIVE DEVICES, HEARING CONSERVATION PROGRAMS, ENGINEERING CONTROL, LEGAL ASPECTS

TITLE: INDUSTRIAL HYGIENE REVIEW MANUAL
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1982 FORMAT: COST:
SUMMARY: CHEMISTRY, BIOCHEMISTRY AND PHYSICS, TOXICOLOGY, RESPIRATORY DISEASE, OCCUPATIONAL DERMATOSES, EXPOSURE CRITERIA, MEDICAL MONITORING, HEAT STRESS, NOISE: EFFECTS AND PROTECTION, OXYGEN LIMITED ENVIRONMENTS, INDUSTRIAL VENTILATION, ECONOMICS, HEALTH PHYSICS, NON-IONIZING RADIATION, ILLUMINATION, STATISTICS IN I.H., SAFETY, OSHA
TITLE: INDUSTRIAL DERMATOSES
SOURCE: UNIT 6, DEVELOPMENT OF AN INTERDISCIPLINARY COURSE IN OCCUPATIONAL HEALTH ENGINEERING, SMITH, OHIO STATE
DATE: 10/82 FORMAT: OUTLINE COST: NONE
SUMMARY: PREDISPOSITION, CAUSES, CONTROL

TITLE: INDUSTRIAL TOXICOLOGY
SOURCE: PRINCIPLES OF OS&H ENGINEERING, ZIMMERMANN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: HISTORICAL, TYPES OF TOXIC EFFECTS, DOSE RESPONSE, ROUTES OF ENTRY, PATHWAYS, SITES, TISSUE RESPONSE SENSITIZERS, BIOLOGICAL MONITORING, REPRODUCTIVE EFFECTS, LEAD AND FEMALE WORKERS

TITLE: LASER SAFETY HANDBOOK
SOURCE: BY ALEX MALLOW & LEON CHABOT
DATE: FORMAT: BOOK COST:
SUMMARY: INTRODUCTION TO LASER SAFETY, BASICS OF LASERS, BIOLOGICAL EFFECTS OF LASER RADIATION, ASSOCIATED LASER HAZARDS, LASER MEASUREMENTS, PROTECTIVE STANDARDS, LASER BEAM HAZARD EVALUATION, CONTROL OF LASER RADIATION HAZARD, CONTROL OF ASSOCIATED LASER HAZARDS, PUBLIC LAWS, LASER SAFETY PROGRAM, SAFETY IN THE CLASSROOM, MEDICAL SURVEILLANCE, LASER PROTECTIVE EYEWEAR, ATMOSPHERIC EFFECTS
TITLE: LEGAL ASPECTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 #599
STUDENT MANUAL
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: EXCERPTS FROM:"OCCUPATIONAL INJURIES & ILLNESSES"BY INDUSTRY 1972,
"OCCUPATIONAL SAFETY & HEALTH" DEPT OF LABOR, "LEGISLATIVE HISTORY" LAWS AND
PRACTICE, SPEECHES OF DR. EDNA BINGHAM, SAFETY STANDARDS REVISION PROCEDURE 41
CFR 17100 (1978), NATIONAL EMPHASIS PROGRAM, SECTION 2(5) OF NATIONAL LABOR
RELATIONS ACT 29, USC 151(J) 1970, BRIEF OF THE SOLICITOR OF LABOR IN GOODWIN VS
OSHRC (9(J 1975)), BOOKLET - "OCCUPATIONAL SAFETY AND HEALTH FOR THE FEDERAL
EMPLOYEE", CASES ON STATE JURISDICTION, WORKMEN'S COMPENSATION AND SECTION
4(6)(4), EFFECT OF OSHA ON SMALL BUSINESSES, DECEMBER, 1974, TRANSCRIPT OF
TESTIMONY TAKEN DURING THE HEARINGS HELD BY THE SUBCOMMITTEE 1974 AGREEMENT
MEMORANDUM BETWEEN OSHA & SMALL BUSINESS ADMIN, ORGANIZATIONAL CHARTS OF NIOSH &
THE DEPARTMENT OF LABOR

TITLE: NOISE
SOURCE: PRINCIPLES OF OS&H ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: BACKGROUND, FUNDAMENTALS OF SOUND, PHYSIOLOGY OF HEARING, SOUND
MEASUREMENT, EXPOSURE STANDARDS, CONTROL, HEARING PROTECTORS, REQUIRED HEARING
PROTECTION PROGRAM.

TITLE: NOW HEAR THIS
SOURCE: MINE SAFETY APPLIANCES, INC., MARKET DEVELOPMENT GROUP, 600 PENN CENTER
BLVD., PITTSBURGH, PA 15235
DATE: ? FORMAT: 2X2 SLIDES WITH AUDIO CASSETTE COST: LOAN
SUMMARY: ANATOMY OF EAR, HOW HEARING LOSS OCCURS, STANDARDS, INSTRUMENTATION FOR
MEASURING NOISE LEVEL, PROTECTIVE EQUIPMENT
TITLE: OCCUPATIONAL EPIDEMIOLOGY
SOURCE: BY RICHARD R. MONSON, MD, DSC
DATE: FORMAT: COST:
SUMMARY: HISTORY, NATURE OF EPI. DATA, COLLECTION OF EPI. DATA, ANALYSIS OF DATA, INTERPRETATION OF EPI. DATA, OCCUPATIONAL EPIDEMIOLOGY, STUDIES OF MORTALITY, STUDIES OF MORBIDITY, SURVEYS OF HEALTH STATUS OF EMPLOYEES, CURRENT PROBLEMS IN OCCUPATIONAL EPI., RESPIRATORY CANCER, CARDIOVASCULAR DISEASES (OCCUPATIONAL)

TITLE: OCCUPATIONAL DISEASES - GUIDE FOR THEIR RECOGNITION
SOURCE: NIOSH PUB. 77-181
DATE: JUNE, 1977 FORMAT: COST:
SUMMARY: ROUTES OF ENTRY/MODES OF ENTRY, BIOLOGICAL HAZARDS, DERMATOSES, DISEASES OF THE AIRWAYS, PLANT AND WOOD HAZARDS, CHEMICAL HAZARDS, CHEMICAL CARCINOGENS, PESTICIDES, PHYSICAL HAZARDS
TITLE: OCCUPATIONAL HEALTH TRAINING COURSE FOR COMPLIANCE SAFETY AND HEALTH OFFICERS
SOURCE: NATIONAL AUDIOVISUAL CENTER, NATIONAL ARCHIVES AND REPORTS SERVICE, GENERAL SERVICES ADMINISTRATION, ORDER SECTION RD, WASHINGTON, DC 20409
DATE: ? FORMAT: SLIDES 523 @ 2X2 COST: SLIDES 208.50, INST. MAN. 69.25, STUD MAN. 36.25
SUMMARY: COVERS RECOGNITION AND CONTROL OF OCCUPATIONAL HEALTH HAZARDS

TITLE: OCCUPATIONAL DERMATOSES
SOURCE: PRINCIPLES OF OS&H ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: BACKGROUND, SKIN PHYSIOLOGY, PREDISPOSING FACTORS, DIRECT CAUSES, MECHANICAL AND PHYSICAL AGENTS, BIOLOGIC AGENTS, METHODS OF CONTROL, WORKERS AT RISK

TITLE: PATTY’S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME III
SOURCE: EDITED BY LEWIS J. CRALLEY LESTER V. CRALLEY
DATE: FORMAT: BOOK COST:
SUMMARY: RATIONALE, EMISSION INVENTORY, STATISTICAL DESIGN AND DATA ANALYSIS REQUIREMENTS, DATA AUTOMATION, ANALYTICAL MEASUREMENTS, MEASUREMENT OF WORKER EXPOSURE, BIOLOGICAL INDICATORS OF CHEMICAL DOSAGE AND BURDEN, EXPOSURE EVALUATION (TO CHEMICALS, IONIZING AND NONIONIZING RADIATIONS, NOISE, HOT AND COLD ENVIRONMENTS, VIBRATIONS, ABNORMAL PRESSURES, BIOLOGICAL AGENTS), TOXICOLOGICAL DATA EXTRAPOLATION, HEALTH SURVEILLANCE PROGRAMS IN INDUSTRY, PHILOSOPHY AND MANAGEMENT OF ENGINEERING CONTROLS, PERSONAL PROTECTION, JOB SAFETY AND HEALTH LAW, COMPLIANCE AND PROJECTION
TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME I
SOURCE: EDITED BY GEORGE D. CLAYTON FLORENCE E. CLAYTON
DATE: FORMAT: BOOK  COST:
SUMMARY: IH-RETRORSPECT AND PROSPECT, LEGISLATION AND LEGISLATIVE TRENDS, IH RECORDS AND REPORTS, SURVEYS AND PERSONNEL, EPIDEMIOLOGY, MODE OF ENTRY AND ACTION OF TOXIC MATERIALS, PULMONARY EFFECTS OF INHALED INORGANIC DUSTS, OCC DERMATOSES, PHYSIOLOGICAL EFFECTS OF ABNORMAL ATMOSPHERIC PRESSURES, NOISE AND HEARING CONSERVATION, NONIONIZING, IONIZING RADIATION, LIGHTING, AIR POLLUTION, AGRICULTURAL HAZARDS, ODOR MEASUREMENT AND CONTROL, SAMPLING AND ANALYSIS, ENGINEERING CONTROLS, AIR POLLUTION CONTROLS, HEAT STRESS, RESPIRATORY PROTECTION, ERGONOMICS, QUALITY CONTROL, CALIBRATION, SANITATION, FIRE AND EXPLOSION HAZARDS

TITLE: POLYCHLORINATED BIPHENYL IN THE WORKPLACE- A SPECIAL COURSE
SOURCE: NIOSH DTMD
DATE: AUGUST, 1980  FORMAT:  COST:
SUMMARY: CHEMICAL HEALTH HAZARDS, TLV'S AND PCB'S EFFECT ON MAN, CHEMICAL HAZARDS CONTROL, RESPIRATORY PROTECTION, PERSONAL PROTECTION WEAR, RECORD KEEPING, MEDICAL MONITORING, MATERIAL HANDLING, AIR SAMPLING

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS #510, VOL II
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980  FORMAT:  COST:
SUMMARY: ILLUMINATION, HEAT STRESS, OCCUPATIONAL CANCER, ECONOMICS, WELDING, METAL PROCESSING AND CONTROLS, WELDING AND METAL WORKSHOP, INSTRUMENTATION, PHYSICAL HAZARDS, PHYSICAL HAZARDS WORKSHOP, VIBRATION, BACK ON THE JOB, ERGONOMICS, MORE ABOUT ILLUMINATION, MONITORING, INSTRUMENTATION,
TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS
SOURCE: 510 COURSE MANUAL VOL 1, DTMD, NIOSH
DATE: 12/31/74 FORMAT: TEXT COST: ?
SUMMARY: MODULE 3. BIODES OF ENTRY, 5. PATHOLOGY OF OCCUPATIONAL DISEASES, 9. EPIDEMIOLOGIC FACTORS, 12. PNEUMOCONIOSIS, 17. OCCUPATIONAL SKIN DISEASES
TITLE: SPIROMETRY INSTRUCTORS GUIDE
SOURCE: NIOSH DTMD
DATE: APRIL, 81 FORMAT: COST:
SUMMARY: SUGGESTIONS FOR TEACHING, EVALUATION MATERIALS, CERTIFICATION GUIDES

TITLE: SPIROMETRY WORKBOOK
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: PULMONARY ANATOMY/PHYSIOLOGY, TECHNIQUES, CALCULATIONS, INSTRUMENT SPECIFICATIONS SURVEILLANCE

TITLE: THE INDUSTRIAL ENVIRONMENT__ ITS EVALUATION AND CONTROL
SOURCE: NIOSH
DATE: FORMAT: BOOK COST:
SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY, PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS, GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING, DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS CHROMATOGRAPHY, QUALITY CONTROL INLABORATORY ANALYSIS, PHYSICS OF SOUND, EAR PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS, RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL,
TITLE: VIBRATION
SOURCE: PRINCIPLES OF OS&H ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: BACKGROUND, TERMINOLOGY, WHOLE BODY, SEGMENTAL

TITLE: WOMEN IN THE WORKPLACE
SOURCE:
DATE: MARCH 1977 FORMAT: COST:
SUMMARY: HOW THE OCC ENVIRONMENT AFFECTS WORKER HEALTH, HOW THE OCCUPATIONAL ENVIRONMENT CAN AFFECT WOMEN WHO WANT TO HAVE HEALTHY CHILDREN, HAZARDS THAT AFFECT REPRODUCTION, BEHAVIORAL TOXICOLOGY, HEALTH HAZARDS TO WOMEN, PROBLEMS OF ALLEGED DISCRIMINATION, MEDICAL/LEGAL ASPECTS, GUIDELINES FOR EVALUATING THE DISABILITY OF PREGNANCY, TRENDS IN FEDERAL OSH STANDARDS, JOB MODIFICATION FOR BETTER SAFETY AND EFFICIENCY, THE TRADE UNIONS PERSPECTIVE ON WOMEN IN THE WORKPLACE
ECONOMICS OF OCCUPATIONAL SAFETY AND HEALTH
TITLE: ACCIDENT PREVENTION MANUAL FOR INDUSTRIAL OPERATIONS
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST: P
SUMMARY: HISTORY, OSH ACT, PROGRAM ORGANIZATION, INSPECTION AND CONTROL
PROCEDURES, REMOVAL OF JOB HAZARDS, ACCIDENT RECORDS AND INJURY RATES,
INVESTIGATION, ANALYSIS, AND COSTS, WORKMAN'S COMPENSATION, SAFETY TRAINING,
HUMAN FACTORS, HUMAN BEHAVIOR, OFFICE SAFETY, PUBLICIZING AND MAINTAINING
SAFETY, PLANT LAYOUT, EMERGENCY PLANNING, PERSONAL PROTECTIVE EQUIPMENT,
INDUSTRIAL SANITATION, HEALTH SERVICES, SOURCES OF HELP, MATERIALS HANDLING AND
STORAGE, TOOLS AND EQUIPMENT SAFETY TECHNIQUES, METALS, EXHAUST AND
VENTILATION, TOXICOLOGY, NOISE, ELECTRICAL HAZARDS, FIRE PROTECTION, SAFETY
ENGINEERING TABLES

TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS,
PARTICULATES, DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION,
TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION,
AIR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL
METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF
PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVS, PELS,
CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS,
REVIEW OF MATHEMATICS

TITLE: INDUSTRIAL HYGIENE ENGINEERING
SOURCE: 551 COURSE SECTION 7, DTMD, NIOSH
DATE: 1/80 FORMAT: TEXT COST: ?
SUMMARY: INDUSTRIAL CRITERIA, FIXTURE EVALUATION AND SELECTION, GLOSSARY,
ECONOMIC ANALYSIS, REFRESHER
TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS #510, VOL II  
SOURCE: NIOSH DTMD  
DATE: DECEMBER, 1980  
FORMAT: COST:  
SUMMARY: ILLUMINATION, HEAT STRESS, OCCUPATIONAL CANCER, ECONOMICS, WELDING, METAL PROCESSING AND CONTROLS, WELDING AND METAL WORKSHOP, INSTRUMENTATION, PHYSICAL HAZARDS, PHYSICAL HAZARDS WORKSHOP, VIBRATION, BACK ON THE JOB, ERGONOMICS, MORE ABOUT ILLUMINATION, MONITORING, INSTRUMENTATION, 

TITLE: RECOGNITION OF ACCIDENT POTENTIAL IN THE WORKPLACE DUE TO HUMAN FACTORS #512  
SOURCE: NIOSH DTMD  
DATE: MAY, 1977  
FORMAT: COST:  
SUMMARY: MEASURING COST OF ACCIDENTS, WHERE, HOW, WHY DO ACCIDENTS OCCUR, THE BEHAVIORAL SCIENCE METHOD TO RECOGNIZE ACCIDENT POTENTIAL, DECISION MAKERS, INSIDE THE SUPERVISOR-WORKER TEAM, THE ORGANIZATIONAL FACTORS, GROUP INFLUENCES ON BEHAVIOR, INDIVIDUAL FACTORS, USING CLUES TO DETERMINE SOCIO-PSYCHOLOGICAL PROBLEMS, PSYCHOLOGICAL FACTORS THAT INCREASE ACCIDENT SUSCEPTIBILITY, FUNDAMENTALS OF THE MAN-MACHINE SYSTEM, CLUES TO ACCIDENT POTENTIAL, JOB SAFETY ANALYSIS, HOW TO CONDUCT AN ACCIDENT PROBE, WORKER SAFETY TRAINING AND SUPERVISOR TRAINING 

TITLE: SELF EVALUATION OF OCCUPATIONAL SAFETY AND HEALTH PROGRAMS NIOSH PUBLICATION 73-187  
SOURCE: NIOSH DTMD  
DATE: FORMAT: COST:  
SUMMARY: EMPLOYEE CENTERED PROGRAM, RECOGNIZING AND CONTROLLING HAZARDS, EMPLOYEE SELECTION AND TRAINING FOR SPECIFIC TASKS, MEASURING PROGRAM EFFICACY, SOURCES OF INFO AND CONSULTATION, CHEMICAL, BIOLOGICAL, PHYSICAL & PSYCHOLOGICAL AGENTS, PLANT SAFETY AND HEALTH
ELECTRICAL HAZARDS
TITLE: ACCIDENT PREVENTION MANUAL FOR INDUSTRIAL OPERATIONS
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST: P
SUMMARY: HISTORY, OSH ACT, PROGRAM ORGANIZATION, INSPECTION AND CONTROL
PROCEDURES, REMOVAL OF JOB HAZARDS, ACCIDENT RECORDS AND INJURY RATES,
INVESTIGATION, ANALYSIS, AND COSTS, WORKMAN'S COMPENSATION, SAFETY TRAINING,
HUMAN FACTORS, HUMAN BEHAVIOR, OFFICE SAFETY, PUBLICIZING AND MAINTAINING
SAFETY, PLANT LAYOUT, EMERGENCY PLANNING, PERSONAL PROTECTIVE EQUIPMENT,
INDUSTRIAL SANITATION, HEALTH SERVICES, SOURCES OF HELP, MATERIALS HANDLING AND
STORAGE, TOOLS AND EQUIPMENT SAFETY TECHNIQUES, METALS, EXHAUST AND
VENTILATION, TOXICOLOGY, NOISE, ELECTRICAL HAZARDS, FIRE PROTECTION, SAFETY
ENGINEERING TABLES

TITLE: HAZARDS IN THE CHEMISTRY LABORATORY - STUDENT MANUAL
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1979 FORMAT: COST:
SUMMARY: SAFETY ORIENTATION, SAFE PRACTICES, LABORATORY BENCH EQUIPMENT, SAFE
LABELING PRACTICES, HANDLING AND STORAGE OF REAGENTS, ELECTRICAL HAZARDS

TITLE: RECOGNIZING JOB SAFETY HAZARDS
SOURCE: SAFETY AND HEALTH MODULE SH-09, CENTER FOR OCCUPATIONAL RESEARCH AND
DEVELOPMENT, 601 LAKE AIR DRIVE, SUITE C, WACO, TEXAS 76710
DATE: FORMAT: MODULE COST:
SUMMARY: ACCIDENTS, JOB SAFETY HAZARDS, FIRE HAZARDS, MACHINE HAZARDS, GOOD
HOUSE KEEPING, LIFTING HAZARDS, ELECTRICAL HAZARDS
SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY, PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS, GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING, DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS CHROMATOGRAPHY, QUALITY CONTROL IN LABORATORY ANALYSIS, PHYSICS OF SOUND, EAR PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS, RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL,
ERGONOMICS AND HUMAN FACTORS
TITLE: ACCIDENT PREVENTION MANUAL FOR INDUSTRIAL OPERATIONS
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST: P
SUMMARY: HISTORY, OSH ACT, PROGRAM ORGANIZATION, INSPECTION AND CONTROL
PROCEDURES, REMOVAL OF JOE HAZARDS, ACCIDENT RECORDS AND INJURY RATES,
INVESTIGATION, ANALYSIS, AND COSTS, WORKMAN'S COMPENSATION, SAFETY TRAINING,
HUMAN FACTORS, HUMAN BEHAVIOR, OFFICE SAFETY, PUBLICIZING AND MAINTAINING
SAFETY, PLANT LAYOUT, EMERGENCY PLANNING, PERSONAL PROTECTIVE EQUIPMENT,
INDUSTRIAL SANITATION, HEALTH SERVICES, SOURCES OF HELP, MATERIALS HANDLING AND
STORAGE, TOOLS AND EQUIPMENT SAFETY TECHNIQUES, METALS, EXHAUST AND
VENTILATION, TOXICOLOGY, NOISE, ELECTRICAL HAZARDS, FIRE PROTECTION, SAFETY
ENGINEERING TABLES

TITLE: AND THEN THERE WERE TWO
SOURCE: INTERNATIONAL FILM BUREAU, 332 S. MICHIGAN AVE., CHICAGO, IL 60604
DATE: FORMAT: 16 MM FILM AND VIDEO CASSETTE COST: $375 OR 45 RENTAL
SUMMARY: ROLE OF HUMAN FACTORS AND SUPERVISORY PRESSURE IN ACCIDENTS

TITLE: CASE STUDY OF AN ASSEMBLY LINE
SOURCE: NIOSH, DTMD (513)684-8231
DATE: FORMAT: VIDEO TAPE COST: $40-50
SUMMARY: DISCUSSES BIOMECHANICS AND ERGONOMICS ALONG A TELEPHONE ASSEMBLY LINE
TITLE: ERGONOMICS
SOURCE: PRINCIPLES OF OS&H ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: DEFINITIONS, RELATED DISEASES, ANATOMY, PHYSIOLOGY, WORKPLACE
ENVIRONMENT, DESIGN, MANUAL MATERIAL HANDLING

TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS,
PARTICULATES, DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION,
TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION,
AIR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL
METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF
PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVS, PELS,
CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS,
REVIEW OF MATHEMATICS,

TITLE: HEALTH ERGONOMIC CONSIDERATIONS OF VISUAL DISPLAY UNITS
SOURCE:
DATE: MARCH 1982 FORMAT: COST:
SUMMARY: OFFICE AUTOMATION POST INDUSTRIAL REVOLUTION, OVERVIEW OF VDU
PROBLEMS, VISION AND THE VDU, BODY POSTURE, HOW TO FIT THE EQUIPMENT TO
OPERATOR, LIGHTING WORKPLACES WITH V D TERMINALS, IS THERE A RADIATION RISK?,
VDU WORK TASK CATEGORIES, HOW TO FIT THE WORK TO THE OPERATOR, THE INTERNATIONAL
PERSPECTIVE
TITLE: HUMAN FACTORS AND SYSTEMS PRINCIPLES FOR OCCUPATIONAL SAFETY AND HEALTH
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1979 FORMAT: COST:
SUMMARY: HISTORY OF HUMAN FACTORS THEORY AND ITS EXTENSION TO OCCUPATIONAL SAFETY AND HEALTH, CYBERNETIC RESEARCH FOUNDATIONS OF HUMAN FACTORS PRACTICES, HUMAN FACTORS IN DESIGN AND OPERATION OF TOOLS, MACHINES AND EQUIPMENT FOR SAFETY AND HEALTH, INTEGRATION OF HUMAN FACTORS WITH HAZARD MANAGEMENT, HUMAN-FACORS DESIGN OF ACCIDENT ANALYSIS AND RESEARCH

TITLE: INDUSTRIAL HYGIENE ENGINEERING # 551
SOURCE: NIOSH DTMD
DATE: JANUARY, 1980 FORMAT: COST:
SUMMARY: ENGINEERING CONTROL, HEAT STRESS, INDUSTRIAL VENTILATION, ERGONOMICS, NOISE AND VIBRATION CONTROLS, RADIATION, ILLUMINATION

TITLE: INDUSTRIAL HYGIENE ENGINEERING
SOURCE: 551 COURSE SECTION 4, DTMD, NIOSH
DATE: 1/90 FORMAT: TEXT COST:
SUMMARY: MINIMIZING FATIGUE, MAN-MACHINE SYSTEMS, ERGONOMICS CHECKLIST, SOURCE MATERIALS
TITLE: MAKE LIGHT OF LIFTING
SOURCE: BNA COMMUNICATIONS, INC., 9104 DECOVERLY HALL RD., ROCKVILLE, MD 20850
DATE: ? FORMAT: 16 MM FILM AND VIDEO CASSETTE COST: $425 OR 80 RENTAL
SUMMARY: LIFTING SYSTEM DESCRIBED, HOW BACK INJURIES ARE PRODUCED

TITLE: MATERIALS HANDLING, SAFETY AND HEALTH MODULE SH-01
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO, TX 76710
DATE: 1981 FORMAT: MODULE COST: ?
SUMMARY: SAFE MANUAL AND MECHANICAL LIFTING

TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME III
SOURCE: EDITED BY LEWIS J. CRALLEY LESTER V. CRALLEY
DATE:  FORMAT: BOOK COST:
SUMMARY: RATIONALE, EMISSION INVENTORY, STATISTICAL DESIGN AND DATA ANALYSIS REQUIREMENTS, DATA AUTOMATION, ANALYTICAL MEASUREMENTS, MEASUREMENT OF WORKER EXPOSURE, BIOLOGICAL INDICATORS OF CHEMICAL DOSAGE AND BURDEN, EXPOSURE EVALUATION (TO CHEMICALS, IONIZING AND NONIONIZING RADIATIONS, NOISE, HOT AND OLD ENVIRONMENTS, VIBRATIONS, ABNORMAL PRESSURES, BIOLOGICAL AGENTS), TOXICOLOGICAL DATA EXTRAPOLATION, HEALTH SURVEILLANCE PROGRAMS IN INDUSTRY, PHILOSOPHY AND MANAGEMENT OF ENGINEERING CONTROLS, PERSONAL PROTECTION, JOB SAFETY AND HEALTH LAW, COMPLIANCE AND PROJECTION
SUMMARY: IH-RETRoSPect AND PROsPECT, LEGISLATION AND LEGISLATIVE TRENDS, IH RECORDS AND REPORTS, SURVEYS AND PERSONNEL, EPIDEMIOLOGY, MODE OF ENTRY AND ACTION OF TOXIC MATERIALS, PULMONARY EFFECTS OF INHAled INORGAnIC DUSTS, OCC DERMATOSES, PHYSIOLOGICAL EFFECTS OF ABNORMAL ATMOSPHERIC PRESSURES, NOISE AND HEARING CONSERVATION, NONIONIZING, IONIZING RADIATION, LIGHTING, AIR POLLUTION, AGRICULTURAL HAZARDS, ODOR MEASUREMENT AND CONTROL, SAMPLING AND ANALYSIS, ENGINEERING CONTROLS, AIR POLLUTION CONTROLS, HEAT STRESS, RESPIRATORY PROTECTION, ERGONOMICS, QUALITY CONTROL, CALIBRATION, SANITATION, FIRE AND EXPLOSION HAZARDS

SUMMARY: ILLUMINATION, HEAT STRESS, OCCUPATIONAL CANCER, ECONOMICS, WELDING, METAL PROCESSING AND CONTROLS, WELDING AND METAL WORKSHOP, INSTRUMENTATION, PHYSICAL HAZARDS, PHYSICAL HAZARDS WORKSHOP, VIBRATION, BACK ON THE JOB, ERGONOMICS, MORE ABOUT ILLUMINATION, MONITORING, INSTRUMENTATION.
TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS
SOURCE: 510 COURSE MANUAL VOL 2, DTMD, NIOSH
DATE: 12/31/74 FORMAT: TEXT COST: ?
SUMMARY: MODULES 28, 41

TITLE: RECOGNIZING JOB HEALTH HAZARDS, SAFETY AND HEALTH MODULE SH-08
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR.,
SUITE C., WACO TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: DISCUSSES 4 GENERAL CLASSES OF ENVIRONMENTAL STRESSES INC CHEMICAL,
PHYSICAL, BIOLOGIC, AND ERGONOMIC. ALSO MODES OF ENTRY, SOURCES, PROTECTIVE
MEASURES, HOW TO RECOGNIZE HEALTH HAZARDS

TITLE: SAFETY PROGRAM DESIGN AND MANAGEMENT - MAN, MACHINE, AND ENVIRONMENT
INSTRUCTOR/STUDENT MANUALS
SOURCE: NIOSH DTMD
DATE: ? FORMAT: COST:
SUMMARY: SYSTEM SAFETY DEVELOPMENT AND SAFETY TECHNIQUES, LOGIC DIAGRAMS AND
SYMBOLS, MULTIPLE SYSTEM SAFETY METHODS, SUCCESS ANALYSIS, ENERGY TRANSFER
CONTROL STRATEGY
TITLE: THE INDUSTRIAL ENVIRONMENT—ITS EVALUATION AND CONTROL
SOURCE: NIOSH
DATE: FORMAT: BOOK COST:
SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY, PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS, GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING, DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS CHROMATOGRAPHY, QUALITY CONTROL IN LABORATORY ANALYSIS, PHYSICS OF SOUND, EAR PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS, RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL.

TITLE: THEY CAN BE GUARDED
SOURCE: INTERNATIONAL FILM BUREAU, 322 S. MICHIGAN BLVD., CHICAGO, IL 60604
DATE: FORMAT: 16MM FILM OR VIDEO CASSETTE COST: $275 OR 27 RENTAL
SUMMARY: PRESS BRAKES, HOLD BACK AND PULL BACK GUARDS, HAND AND FEED CONTROLS, LOCKOUTS, PHOTO BEAMS, EYE AND EAR PROTECTION

TITLE: WOMEN IN THE WORKPLACE
SOURCE:
DATE: MARCH 1977 FORMAT: COST:
SUMMARY: HOW THE OCC ENVIRONMENT AFFECTS WORKER HEALTH, HOW THE OCCUPATIONAL ENVIRONMENT CAN AFFECT WOMEN WHO WANT TO HAVE HEALTHY CHILDREN, HAZARDS THAT AFFECT REPRODUCTION, BEHAVIORAL TOXICOLOGY, HEALTH HAZARDS TO WOMEN, PROBLEMS OF ALLEGED DISCRIMINATION, MEDICAL/LEGAL ASPECTS, GUIDELINES FOR EVALUATING THE DISABILITY OF PREGNANCY, TRENDS IN FEDERAL OSH STANDARDS, JOB MODIFICATION OR BETTER SAFETY AND EFFICIENCY, THE TRADE UNIONS PERSPECTIVE ON WOMEN IN THE WORKPLACE.
SUMMARY: BASIS FOR GUIDE: EPIDEMIOLOGICAL, BIOMEDICAL, PHYSIOLOGICAL, AND PSYCHOLOGICAL APPROACHES, ADMINISTRATIVE CONTROLS, ENGINEERING CONTROLS, RECOMMENDATIONS.
EXPOSURE EVALUATION
TITLE: ANALYTICAL METHODS APPLICATIONS IN SAFETY ENGINEERING - TRAINING MONOGRAPH
SOURCE: NIOSH DTMD
DATE: OCTOBER, 1982 FORMAT: COST:
SUMMARY: FUNDAMENTAL CONCEPTS OF ANALYTICAL METHODS, LINEAR PROGRAMMING APPLICATIONS, TRANSPORTATION MODELS, LOCATION METHODS, SIMULATION

TITLE: APPLIED INDUSTRIAL HYGIENE #549
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980 FORMAT: COST:
SUMMARY: GAS AND VAPOR SAMPLING, AIR FLOW MEASUREMENTS, PARTICULATE SAMPLING, INDUSTRIAL VENTILATION, HEAT STRESS, RADIATION, NOISE

TITLE: ASB CALC 5
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE COMPUTER COST: NONE
SUMMARY: CALCULATION BASED ON MICROSCOPIC COUNTING DATA
TITLE: ASBESTOS SAMPLING
SOURCE: NIOSH DTMD (513) 684-8231
DATE: ? FORMAT: VIDEO TAPE COST: $40-50
SUMMARY: DESCRIBES OSHA ASBESTOS SAMPLING PROGRAM

TITLE: BASIC INDUSTRIAL HYGIENE
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION: BY RICHARD S. BRIEF
DATE: ? FORMAT: A TRAINING MANUAL, AIHA COST: 
SUMMARY: REFERENCE LIST, GENERAL PRINCIPLES, MATHEMATICS, INDUSTRIAL PHYSICIAN, TOXICOLOGIST, SAMPLING FOR GASES AND VAPORS, ANALYTICAL CHEMISTRY, PARTICULATE SAMPLING, CALIBRATION OF AIR SAMPLING INSTRUMENTS, NOISE, EM SPECTRUM, IONIZING RADIATION, ULTRAVIOLET, VISIBLE LIGHT, MICROWAVES, LASERS, HEAT AND COLD STRESS, INDUSTRIAL VENTILATION, RESPIRATORY PROTECTIVE DEVICES, LABORATORY EXERCISES

TITLE: BEHAVIOR MANAGEMENT FOR OCCUPATIONAL SAFETY AND HEALTH
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1979 FORMAT: 
TITLE: COMBUSTIBLE GAS DETECTORS
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: DESCRIPTION OF USE ATMOSPHERES, DEMONSTRATION OF USE

TITLE: COMBUSTIBLE GAS METER CALIBRATION
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE 2 COST: NONE
SUMMARY: TO ACCOMPANY DTMD EXERCISE IN DYNAMIC CALIBRATION OF A CG METER
TITLE: COMpendiUM OF MATERIALS FOR NOISE CONTROL NIOSH PUB # 75-165
SOURCE: NIOSH DTMD
DATE: MAY, 1981 FORMAT: COST:
SUMMARY: THRESHOLD LIMITS: THEIR USE AND MISUSE, VALID REPRESENTATIVE AIR SAMPLES, MEASUREMENT OF GASES, DUST, DETECTOR TUBES, PROBLEM SET: DETERMINATION OF NON-COMPLIANCE, OXYGEN DEFICIENCY AND COMBUSTIBLE GAS METERS, PREPARATION OF CONTROLLED GAS AND VAPOR CONCENTRATIONS, COMBUSTIBLE GAS METER CALIBRATION APPARATUS, LEGAL ASPECTS OF OCCUPATIONAL SAFETY AND HEALTH ACT, LABORATORY SECTION

TITLE: DB + DB
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE 2 COST: NONE
SUMMARY: ADDING DECIBELS

TITLE: DIRECT READING COLORIMETRIC INDICATOR TUBES MANUAL
SOURCE:
DATE: 1976 FORMAT: COST:
SUMMARY: OPERATING PRINCIPLE, METHODS USED /COLORIMETRIC INDICATOR SYSTEMS, APPLICATIONS, INTERCHANGEABILITY OF INDICATOR TUBES AND PUMPS, PUMP TESTING MAINTENANCE, VERIFICATION OF TESTING OF COLORIMETRIC TUBES, READING DETECTOR TUBES, FIELD MEASUREMENTS, INSTRUMENTATION, SUMMARY OF LIMITATIONS, CERTIFICATION PROGRAM, STATISTICS OF SAMPLING
TITLE: EVALUATION AND CONTROL OF WORKPLACE ACCIDENTS POTENTIAL #513
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: PRINCIPLES OF HAZARD CONTROL MANAGEMENT, HAZARD IDENTIFICATION AND ASSESSMENT, CONTROL OF UNDESIRED ENERGY RELEASE, MONITORING AND INSPECTION, EVALUATION OF PROGRAMS

TITLE: EXHAUST, DUST CONTROL AND VENTILATION SYSTEMS, SAFETY AND HEALTH MODULE SH-44
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO TX 76710
DATE: ? FORMAT: MODULE COST: :
SUMMARY: CONTAMINANTS THAT CAN BE CONTROLLED BY EX VENTILATION, TYPES OF SYSTEMS, COMPONENTS

TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS, PARTICULATES, DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION, TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION, AIR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVS, PELs, CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS, REVIEW OF MATHEMATICS,
TITLE: FUNDAMENTALS OF INDUSTRIAL TOXICOLOGY  
SOURCE: BY KIM ANDERSON AND RONALD SCOTT  
DATE: FORMAT: BOOK COST:  
SUMMARY: DEFINITION/SCOPE OF TOXICOLOGY, HISTORY, ROLE OF TOXICOLOGY, PHYSIOLOGY, MODE OF ACTION, DOSE-RESPONSE RELATIONSHIP, TYPES OF EXPOSURES, IDENTIFICATION OF CONTAMINANTS, BASIS OF AGENCIES, SOURCES OF INFORMATION  

TITLE: GAS AND VAPOR SAMPLING  
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS  
DATE: FORMAT: VIDEO CASSETTE COST:  
SUMMARY: FIELD INSTRUMENTATION AND SAMPLING ARE DISCUSSED  

TITLE: GAS, VAPOR AND PARTICULATE SAMPLING #592  
SOURCE: NIOSH DTMD  
DATE: MARCH, 1981 FORMAT: COST:  
SUMMARY: THRESHOLD LIMITS: THEIR USE AND MISUSE, VALID REPRESENTATIVE AIR AMPLES, MEASUREMENT OF GASES, DUST, DETECTOR TUBES, PROBLEM SET: DETERMINATIONS OF NON-COMPLIANCE, OXYGEN DEFICIENCY AND COMBUSTIBLE GAS METERS, PREPARATION OF CONTROLLED GAS AND VAPOR CONCENTRATIONS, COMBUSTIBLE GAS METER CALIBRATION PARATUS, LEGAL ASPECTS OF OCCUPATIONAL SAFETY AND HEALTH ACT, LABORATORY ECTION
HAZARDOUS MATERIALS SAFETY SEMINAR
National Hazards Control Institute, Starson Corp., P.O. Box 133, Stanton, N.J., 08885
Date: 1979 Format: Text Cost: ?
SUMMARY: RADIOACTIVE EFFECTS AND HAZARDS, CLASSIFICATION OF RADIOACTIVE MATERIALS, POLICIES AND PROCEDURES FOR ISOTOPES, MONITORING PROGRAMS, PROTECTIVE EQUIPMENT

HAZARDOUS MATERIALS SAFETY SEMINAR
National Hazards Control Institute, Starson Corp., Stanton, N.J., 08885
Date: 1979 Format: Text Cost: ?
SUMMARY: SAMPLING AND MEASUREMENT TECHNIQUES FOR HAZARDOUS MATERIALS - APPROPRIATE MONITORING SYSTEMS: SELECTION AND USE

HEALTH HAZARDS IN THE ARTS AND CRAFTS
Proceedings of the Society for Occupational Safety and Health Conference on Health Hazards in the Arts and Crafts, 1980
Date: Format: Book Cost: ?
SUMMARY: CASE STUDIES OF HEALTH PROBLEMS (CADMIUM POISONING, PERFORMING ARTS, STAINED GLASS WORKERS), SURVEYS AND MONITORING STUDIES IN THE WORKPLACES (COLLEGE ARTS DEPARTMENTS, SMALL FURNITURE STRIPPING SHOPS, CONSUMER BENZENE EXPOSURES DUE TO STRIPPING OF FURNITURE, POTTING STUDIO AND CLASSROOM, LEAD EXPOSURE IN STAINED GLASS INDUSTRY, ROCK DUST EXPOSURE TO SCULPTORS), EVALUATION OF INGREDIENTS IN ARTS AND CRAFTS MATERIALS TO MAKE THEM SAFER, LEGAL, REGULATORY, AND POLICY ISSUES
TITLE: HEATING AND COOLING FOR MAN IN INDUSTRY
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION
DATE: FORMAT: AIHA BOOK COST:
SUMMARY: PLANNING OF A TEMPERATE INDUSTRIAL ENVIRONMENT, HEAT EXCHANGE AND HUMAN
TOLERANCE LIMITS, CONTROL OF RADIANT HEAT, TYPES OF VENTILATION SYSTEMS, ADDING
HEAT TO SPACE, REMOVING HEAT FROM SPACE, MOISTURE CONTROL, MAKE-UP AIR AND HEAT
CONSERVATION AND RECOVERY, AIR DISTRIBUTION, SELECTION AND APPLICATION OF AIR
FILTERS, TESTING OF AIR FLOW SYSTEMS, INSTRUMENTS USED TO ASSESS THE THERMAL
ENVIRONMENT, AIR FLOW AROUND BUILDINGS, BUILDING AIR FLOW AND PRESSURIZATION,
SUPPLY & EXHAUST SYSTEM DESIGN

TITLE: IF YOU CAN'T STAND THE HEAT
SOURCE: NIOSH, DTMD
DATE: FORMAT: VIDEO TAPE COST: $40-50
SUMMARY: EVALUATE AND CONTROL HEAT EXPOSURE USING SHIPBOARD EXAMPLE

TITLE: INDUSTRIAL ENVIRONMENTAL HEALTH
SOURCE: EDITED BY LESTER V. CRALLEY PATRICK R. ATKINS
DATE: FORMAT: BOOK, ACADEMIC PRESS COST:
SUMMARY: EPIDEMIOLOGIC STUDIES OF OCCUPATIONAL DISEASE, TOXICOLOGY, NOISE,
IONIZING RADIATION, IONIZING RADIATION, WORK IN HOT ENVIRONMENTS: TLV'S AND
PROPOSED STANDARDS, EVALUATION OF CHEMICAL HAZARDS IN THE ENVIRONMENT, HAZARD
VALUATION AND CONTROL, PERSONAL PROTECTIVE DEVICES, OFF-JOB ENVIRONMENTAL
HEALTH STRESS AS RELATED TO THE WORKPLACE, IMPACT OF GOVERNMENTAL ENVIRONMENTAL
REGULATIONS UPON INDUSTRIAL ACTIVITIES
TITLE: INDUSTRIAL HEALTH
SOURCE: BY JACK PETERSON
DATE: FORMAT: BOOK COST:
SUMMARY: ENTRY & TOXIC ACTIONS OF CHEMICAL SUBSTANCES, LABORATORY DETERMINATION OF TOXICITY, GASES, METALS AND METALLOIDS, PNEUMOCONDRIOSIS, ORGANIC SOLVENTS, MONOMERS AND POLYMERS, PESTICIDES, SENSITIZATION & DERMATITIS, CARCINOMAESIS, ABNORMAL PRESSURE, NOISE, BIOTHERMAL STRESS, NONIONIZING RADIATION, IONIZING RADIATION, HAZARD EVALUATION AND CONTROL, REVIEW OF ORGANIC CHEMISTRY NOMENCLATURE

TITLE: INDUSTRIAL HYGIENE SAMPLING - ADMINISTERING A SAMPLING PROGRAM #555
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY:

TITLE: INDUSTRIAL HYGIENE SAMPLING - SAMPLING METHODS #554
SOURCE: NIOSH DTMD
DATE: JULY, 1978 FORMAT: COST:
SUMMARY: INDUSTRIAL HYGIENE BACKGROUND FOR SAMPLING METHODOLOGY, PHYSICAL SAMPLING, STATISTICS, FUNDAMENTALS AND QUALITY CONTROL
TITLE: INDUSTRIAL HYGIENE SAMPLING - SAMPLING STRATEGIES #553
SOURCE: NIOSH DTMD
DATE: APRIL, 1980 FORMAT: COST:
SUMMARY: STATISTICS FUNDAMENTALS

TITLE: INDUSTRIAL HYGIENE MEASUREMENTS # 550
SOURCE: NIOSH DTMD
DATE: MAY, 1982 FORMAT: COST:
SUMMARY: GAS AND VAPOR SAMPLING, AIR FLOC MEASUREMENTS, PARTICULATE SAMPLING, INDUSTRIAL VENTILATION, HEAT STRESS, RADIATION, NOISE

TITLE: INDUSTRIAL HYGIENE CHEMISTRY #590
SOURCE: NIOSH DTMD
DATE: AUGUST, 1980 FORMAT: COST:
SUMMARY: ION SELECTIVE ELECTRODE LABORATORY, AA LAB, GC LAB, TITRAMETRIC DETERMINATION OF SO2 LAB, COLORIMETRIC DETERMINATION OF SO2 LAB
TITLE: INDUSTRIAL HYGIENE ENGINEERING
SOURCE: 551 COURSE SECTION 2, DTMD, NIOSH
DATE: 1/80 FORMAT: TEXT COST: ?
SUMMARY: EFFECTS ON HEALTH AND PERFORMANCE, CONTROL, HEAT STRESS INDICES, PROBLEMS

TITLE: INDUSTRIAL HYGIENE SURVEYING TECHNIQUES
SOURCE:
DATE: OLD FORMAT: INSTRUCTORS AND STUDENT MANUALS, SLIDE SET COST: ?
SUMMARY: FORERUNNER TO RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS 510 COURSE

TITLE: MICROSCOPE QUIZ 2
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE COMPUTER COST: NONE
SUMMARY: QUIZ IN USE OF MICROSCOPE FOR ASBESTOS COUNTING
TITLE: NOISE
SOURCE: PRINCIPLES OF OSHA ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: BACKGROUND, FUNDAMENTALS OF SOUND, PHYSIOLOGY OF HEARING, SOUND MEASUREMENT, EXPOSURE STANDARDS, CONTROL, HEARING PROTECTORS, REQUIRED HEARING PROTECTION PROGRAM.

TITLE: NOISE DOSE 2
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE COMPUTER COST: NONE
SUMMARY: DOSE CALCULATED FROM SPL AND EXPOSURE TIME.
TITLE: NOW HEAR THIS
SOURCE: MINE SAFETY APPLIANCES, INC., MARKET DEVELOPMENT GROUP, 600 PENN CENTER BLVD., PITTSBURGH, PA 15235
DATE: ? FORMAT: 2X2 SLIDES WITH AUDIO CASSETTE COST: LOAN
SUMMARY: ANATOMY OF EAR, HOW HEARING LOSS OCCURS, STANDARDS, INSTRUMENTATION FOR MEASURING NOISE LEVEL, PROTECTIVE EQUIPMENT

TITLE: ODA TO DBA
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE COMPUTER COST: NONE
SUMMARY: CONVERTS OCTAVE BAND SPL TO DBA VALUE

TITLE: OCC HEALTH TRAINING COURSE FOR COMPLIANCE, SAFETY, AND HEALTH OFFICERS VOLUME I, II - INSTRUCTORS' MANUAL
SOURCE:
DATE: FORMAT: COST:
SUMMARY: BODY RESPONSES TO CHEMICALS, ROUTES OF ENTRY, DOSE RESPONSE, contact dermatitis, carcinogens, airborne contaminants, respiratory system, permissible airborne concentrations control of airborne hazards, respiratory protection devices, physical stresses, noise, heat stress, ionizing radiation, practical field applications, statistics, recognition of health hazards, role of the safety specialist, briefing on the ihfom, total dust and fume sampling, weighing and dessication, respirable dust sampling, dust sampling laboratory, calculation, osha analytical laboratory, detector tube sampling, noise measurement and sampling
TITLE: OCCUPATIONAL EXPOSURE SAMPLING STRATEGY MANUAL NIOSH PUB 77-173
SOURCE: NIOSH DTMD
DATE: JANUARY, 1977 FORMAT: COST:
SUMMARY: BACKGROUND, NEED FOR EXPOSURE MEASUREMENTS, SAMPLING STRATEGY, STATISTICAL ANALYSIS OF RESULTS

TITLE: OCCUPATIONAL EXPOSURE LIMITS
SOURCE: PRINCIPLES OF OSH ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: RATIONALE FOR LIMITS, TYPES OF LIMITS, RADIATION, LIMITS ON PROTECTION PROVIDED, OTHER COUNTRIES, NOVEL WORKSHIFTS, AGENCIES INVOLVED IN DEVELOPMENT

TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME III
SOURCE: EDITED BY LEWIS J. CRALEY LESTER V. CRALEY
DATE: FORMAT: BOOK COST:
SUMMARY: RATIONALE, EMISSION INVENTORY, STATISTICAL DESIGN AND DATA ANALYSIS REQUIREMENTS, DATA AUTOMATION, ANALYTICAL MEASUREMENTS, MEASUREMENT OF WORKER EXPOSURE, BIOLOGICAL INDICATORS OF CHEMICAL DOSAGE AND BURDEN, EXPOSURE EVALUATION (TO CHEMICALS, IONIZING AND NONIONIZING RADIATIONS, NOISE, HOT AND COLD ENVIRONMENTS, VIBRATIONS, ABNORMAL PRESSURES, BIOLOGICAL AGENTS), TOXICOLOGICAL DATA EXTRAPOLATION, HEALTH SURVEILLANCE PROGRAMS IN INDUSTRY, PHILOSOPHY AND MANAGEMENT OF ENGINEERING CONTROLS, PERSONAL PROTECTION, JOB SAFETY AND HEALTH LAW, COMPLIANCE AND PROJECTION
TITLE: PERSONAL SAMPLER PUMPS
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: VARIOUS TYPES OF PUMPS DEMONSTRATED AND CALIBRATION PROCEDURES SHOWN

TITLE: PERSONAL SAMPLER CALIBRATION
SOURCE: EDUCATIONAL RESOURCE CENTERS, NIOSH
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: CALIBRATION OF FLOW RATE WITH BURETTE AND WET TEST METER.
TITLE: POLYCHLORINATED DIPHENYL IN THE WORKPLACE - A SPECIAL COURSE
SOURCE: NIOSH DTMD
DATE: AUGUST, 1980 FORMAT: COST:
SUMMARY: CHEMICAL HEALTH HAZARDS, TLV'S AND PCB'S EFFECT ON MAN, CHEMICAL HAZARDS CONTROL, RESPIRATORY PROTECTION, PERSONAL PROTECTION WEAR, RECORD KEEPING, MEDICAL MONITORING, MATERIAL HANDLING, AIR SAMPLING

TITLE: PUMP CALIBRATION Y
SOURCE: DTMD, NIOSH
DATE: FORMAT: PROGRAM FOR APPLE COMPUTER COST: NONE
SUMMARY: CALIBRATION OF PERSONAL AIR SAMPLING PUMPS

TITLE: RECOGNITION OF HEALTH HAZARDS IN INDUSTRY
SOURCE: WILLIAM A. BURGESS
DATE: FORMAT: BOOK COST:
SUMMARY: INDUSTRIAL UNIT OPERATIONS, ABRASIVE BLASTING, ACID/ALKALI METAL CLEANING, DEGREASING, ELECTROPLATING, FORGING, FOUNDRY'S, GRINDING, POLISHING, DIPPING, HEAT TREATING, RADIOGRAPHY, MACHINING, METAL THERMAL SPRAYING, NONDESTRUCTIVE TESTING, PAINTING, SOLDERING, BRAZING, WELDING, PRODUCTION FACILITIES, ABRASIVES, ACIDS, ALUMINUM, AMMONIA, ARTWORK, ASBESTOS, ASPHALT, BATTERIES, BERYLLIUM, BRICK AND TILE, CEMENT, CHLORINE, COTTON, FERTILIZERS, CHOC, GARAGES, GLASS, IRON AND STEEL, LEATHER, LIME, PAINT, PETROLEUM, PLASTICS, POTTERY, PULP AND PAPER, RAYON, RENDERING PLANTS, RUBBER, SHIPBUILDING AND REPAIR, SMELTING, STONE QUARRYING, UNDERGROUND MINING
TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS #510, APPENDICES F-L
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980
FORMAT: COST:
SUMMARY: PROGRAM OF INSTRUCTION, INSTRUCTOR DIRECTIONS, COURSE SAMPLER, TESTING, ANSWER KEY

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS #510, VOL II
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980
FORMAT: COST:
SUMMARY: ILLUMINATION, HEAT STRESS, OCCUPATIONAL CANCER, ECONOMICS, WELDING, METAL PROCESSING AND CONTROLS, WELDING AND METAL WORKSHOP, INSTRUMENTATION, PHYSICAL HAZARDS, PHYSICAL HAZARDS WORKSHOP, VIBRATION, BACK ON THE JOB, ERGONOMICS, MORE ABOUT ILLUMINATION, MONITORING, INSTRUMENTATION,

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS #510, VOL I
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980
FORMAT: COST:
SUMMARY: BIOMODES OF ENTRY, TOXICITY OF CHEMICAL AGENTS, PATHOLOGY OF OCC DISEASES, INDUSTRIAL HYGIENE SURVEYS, SURVEY PROCEDURES, EPIDEMIOLOGICAL FACTORS, EVALUATION OF TOXICITY, DEVELOPMENT AND APPLICATION OF STANDARDS, NEUMOCONIOSIS, CHEMICAL HAZARDS WORKSHOP, PREVENTION, OCCUPATIONAL SKIN DISEASES, PHYSICAL AGENTS - ELECTROMAGNETIC SPECTRUM, IONIZING RADIATION, NOISE, DISE WORKSHOP, CHEMICAL TREATMENT, CHEMICAL TREATMENT WORKSHOP
TITLE: RECOGNITION OF ACCIDENT POTENTIAL IN THE WORKPLACE - PHYSICAL ENVIRONMENTAL FACTORS #511
SOURCE: NIOSH DTMD
DATE: FORMAT: COST: 
SUMMARY:

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS
SOURCE: 510 COURSE MANUAL, VOL 1, DTMD, NIOSH
DATE: 12/31/74 FORMAT: TEXT COST: ?
SUMMARY: INDUSTRIAL HYGIENE SURVEY WITH PROCEDURES ( MODULES 6&7 )

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS
SOURCE: 510 COURSE MANUAL, VOL 2, DTMD, NIOSH
DATE: 12/31/74 FORMAT: TEXT COST: ?
SUMMARY: COVERS MONITORING AND INSTRUMENTATION ( MODULES 29,33,44 )
TITLE: RECOGNIZING JOB HEALTH HAZARDS, SAFETY AND HEALTH MODULE SH-08
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C., WACO TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: DISCUSSES 4 GENERAL CLASSES OF ENVIRONMENTAL STRESSES INC CHEMICAL, PHYSICAL, BIOLOGIC, AND ERGONOMIC. ALSO MODES OF ENTRY, SOURCES, PROTECTIVE MEASURES, HOW TO RECOGNIZE HEALTH HAZARDS

TITLE: ROOM CONSTANT 24
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE COMPUTER COST: NONE
SUMMARY: CALCULATES ROOM CONSTANT OR SPL AT A GIVEN DISTANCE FROM SOURCE WHEN APPROPRIATE DATA ARE SPECIFIED.

TITLE: ROTAMETER CALIBRATION
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: CALIBRATION OF PERSONAL AIR SAMPLING PUMP ROTAMETERS
TITLE: ROTAMETER CORR 5
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE COMPUTER COST: NONE
SUMMARY: CALCULATES ACTUAL FLOW FROM INDICATED FLOW, TEMPERATURE, PRESSURE

TITLE: SELF EVALUATION OF OCCUPATIONAL SAFETY AND HEALTH PROGRAMS NIOSH
PUBLICATION 73-187
SOURCE: NIOSH DTMD
DATE: FORMAT:
SUMMARY: EMPLOYEE CENTERED PROGRAM, RECOGNIZING AND CONTROLLING HAZARDS, EMPLOYEE SELECTION AND TRAINING FOR SPECIFIC TASKS, MEASURING PROGRAM EFFICACY, SOURCES OF INFO AND CONSULTATION, CHEMICAL, BIOLOGICAL, PHYSICAL & PSYCHOLOGICAL AGENTS, PLANT SAFETY AND HEALTH

TITLE: SOUND LEVEL METER CALIBRATION
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: ACCURACY DETERMINATION UNDER FIELD CONDITIONS
TITLE: THE HEAT STRESS MONSTER
SOURCE: NATIONAL NAVAL MEDICAL CENTER, EDUCATION AND TRAINING COMMAND, AUDIOVISUAL RESOURCES BRANCH, CODE 221, BETHESDA, MD 20014
DATE: ? FORMAT: 16 MM FILM COST: ?
SUMMARY: PHYSIOLOGIC STRESS, THERMAL REGULATION MECHANISMS, PHYSIOLOGIC MANIFESTATIONS, EMERGENCY CARE, WET BULB GLOBE TEMPERATURE, SAFE LIMITS OF EXPOSURE

TITLE: THE INDUSTRIAL ENVIRONMENT__ ITS EVALUATION AND CONTROL
SOURCE: NIOSH
DATE: FORMAT: BOOK COST:
SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY, PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS, GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING, DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS CHROMATOGRAPHY, QUALITY CONTROL IN LABORATORY ANALYSIS, PHYSICS OF SOUND, EAR PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS, RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL,

TITLE: TOXIC GASES AND VAPORS: CASE STUDIES
SOURCE: UNIT 17, DEVELOPMENT OF AN INTERDISCIPLINARY COURSE IN OCCUPATIONAL HEALTH ENGINEERING, SMITH, OHIO STATE
DATE: 10/82 FORMAT: OUTLINE COST: NONE
SUMMARY: BEHAVIORAL TOXICOLOGY, CONTROL OF INORGANIC MERCURY, CARBON MONOXIDE
SUMMARY: DETECTOR TUBES, ELECTRONIC FIELD INSTRUMENTS, H2S, CO, COMBUSTIBLE GAS, HG, ORGANIC VAPORS, IR ANALYZER
TITLE: ACCIDENT PREVENTION MANUAL FOR INDUSTRIAL OPERATIONS
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST: P
SUMMARY: HISTORY, OSH ACT, PROGRAM ORGANIZATION, INSPECTION AND CONTROL PROCEDURES, REMOVAL OF JOB HAZARDS, ACCIDENT RECORDS AND INJURY RATES, INVESTIGATION, ANALYSIS, AND COSTS, WORKMAN'S COMPENSATION, SAFETY TRAINING, HUMAN FACTORS, HUMAN BEHAVIOR, OFFICE SAFETY, PUBLICIZING AND MAINTAINING SAFETY, PLANT LAYOUT, EMERGENCY PLANNING, PERSONAL PROTECTIVE EQUIPMENT, INDUSTRIAL SANITATION, HEALTH SERVICES, SOURCES OF HELP, MATERIALS HANDLING AND STORAGE, TOOLS AND EQUIPMENT SAFETY TECHNIQUES, METALS, EXHAUST AND VENTILATION, TOXICOLOGY, NOISE, ELECTRICAL HAZARDS, FIRE PROTECTION, SAFETY ENGINEERING TABLES

TITLE: CASE STUDY OF AN ASSEMBLY LINE
SOURCE: NIOSH, DTMD (513)684-8231
DATE: ? FORMAT: VIDEO TAPE COST: $40-50
SUMMARY: DISCUSSES BIOMECHANICS AND ERGONOMICS ALONG A TELEPHONE ASSEMBLY LINE

TITLE: COST OF CHAOS
SOURCE: BNA COMMUNICATIONS, INC., 9401 DECOVERLY HALL RD., ROCKVILLE, MD 20850
DATE: ? FORMAT: 16 MM FILM OR 3/4 IN VIDEO CASSE
TE COST: $200 PURCHASE OR $80 RENTAL
SUMMARY: CONSTRUCTION SITE MAINTENANCE, PLANNING, ACCESS, ETC. (12 MIN.)
TITLE: FLAMMABLE LIQUIDS, PART 2
SOURCE: OHIO STATE UNIV., LABOR EDUCATION AND RESEARCH SERVICE, 156 W. 19TH ST.,
COLUMBUS, OH 43210
DATE: ? FORMAT: 16 MM FILM COST: $90 OR 30 RENTAL P
SUMMARY: INDUSTRIAL TRANSPORTATION AND STORAGE OF FLAMMABLES, REQUIREMENTS FOR
CONTAINERS AND STORAGE AREAS, VENTILATION AND STATIC CONTROL

TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS,
PARTICULATES, DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION,
TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION,
AIR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL
METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF
PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVS, PELS,
CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS,
REVIEW OF MATHEMATICS.

TITLE: HANDBOOK OF OCCUPATIONAL SAFETY AND HEALTH
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: BOOK COST:
SUMMARY: SAFETY AND GOOD BUSINESS, OSHA CONSIDERATIONS, SAFE & HEALTHFUL WORKING
CONDITIONS, SAFETY INSPECTIONS, ACCIDENT RECORDS AND REPORTS, TRAINING,
REHAB, MOTIVATION OF EMPLOYEES, SAFEGUARDING MACHINES, MATERIALS HANDLING AND
STORAGE, PERSONAL PROTECTIVE EQUIPMENT, FIRE PROTECTION, INDUSTRIAL HYGIENE AND
HEALTH.
TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., STANTON, N.J., 08885
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: WORKING AREAS, VENTILATION, CHEMICAL STORAGE, DISPENSARY, REFERENCES

TITLE: HEALTH HAZARDS IN THE ARTS AND CRAFTS
SOURCE: PROCEEDINGS OF THE SOCIETY FOR OCCUPATIONAL SAFETY AND HEALTH
CONFERENCE ON HEALTH HAZARDS IN THE ARTS AND CRAFTS, 1980
DATE: FORMAT: SOEH BOOK COST:
SUMMARY: CASE STUDIES OF HEALTH PROBLEMS (CADMIUM POISONING, PERFORMING ARTS, STAINED GLASS WORKERS), SURVEYS AND MONITORING STUDIES IN THE WORKPLACES (COLLEGE ARTS DEPARTMENTS, SMALL FURNITURE STRIPPING SHOPS, CONSUMER BENZENE EXPOSURES DUE TO STRIPPING OF FURNITURE, POTTING STUDIO AND CLASSROOM, LEAD EXPOSURE IN STAINED GLASS INDUSTRY, ROCK DUST EXPOSURE TO SCULPTORS), VALUATION OF INGREDIENTS IN ARTS AND CRAFTS MATERIALS TO MAKE THEM SAFER, LEGAL, REGULATORY, AND POLICY ISSUES
TITLE: HEATING AND COOLING FOR MAN IN INDUSTRY
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION
DATE: FORMAT: AIHA BOOK COST:
SUMMARY: PLANNING OF A TEMPERATE INDUSTRIAL ENVIRONMENT, HEAT EXCHANGE AND HUMAN TOLERANCE LIMITS, CONTROL OF RADIANT HEAT, TYPES OF VENTILATION SYSTEMS, ADDING HEAT TO SPACE, REMOVING HEAT FROM SPACE, MOISTURE CONTROL, MAKE-UP AIR AND HEAT CONSERVATION AND RECOVERY, AIR DISTRIBUTION, SELECTION AND APPLICATION OF AIR FILTERS, TESTING OF AIR FLOW SYSTEMS, INSTRUMENTS USED TO ASSESS THE THERMAL ENVIRONMENT, AIR FLOW AROUND BUILDINGS, BUILDING AIR FLOW AND PRESSURIZATION, SUPPLY & EXHAUST SYSTEM DESIGN

TITLE: INDUSTRIAL VENTILATION
SOURCE: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
DATE: FORMAT: ACGIH BOOK COST:
SUMMARY: GENERAL PRINCIPLES OF VENTILATION, DILUTION VENTILATION, VENTILATION FOR HEAT CONTROL, HOOD DESIGN, SPECIFIC OPERATIONS, DESIGN PROCEDURE, MAKE-UP AND RECIRC AIR, CONSTRUCTION SPECIFICATIONS, TESTING OF VENTILATION SYSTEMS, FANS, AIR CLEANING DEVICES

TITLE: INDUSTRIAL HYGIENE ENGINEERING
SOURCE: 551 COURSE SECTION 1, DTMD, NIOSH
DATE: 1/80 FORMAT: TEXT COST: ?
SUMMARY: TEXTILE PLANT EXAMPLE, EQUIPMENT LAYOUT, SUBSTITUTION AND PROCESS CONTROL, CONTROL OF DUST IN ASBESTOS INDUSTRIES, PROBLEMS
TITLE: MATERIALS HANDLING, SAFETY AND HEALTH MODULE SH-01
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO, TX 76710
DATE: 1981 FORMAT: MODULE COST: ?
SUMMARY: SAFE MANUAL AND MECHANICAL LIFTING

TITLE: NATIONAL HAZARDS CONTROL INSTITUTE
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., STANTON, N.J., 08885
DATE: 1979 FORMAT: TEXT COST: P
SUMMARY: OVERVIEW OF FIRE AND EXPLOSION HAZARDS, PROPERTIES OF FLAMABLE SOLIDS, LIQUIDS AND GASES, FLASH POINT, AUTOIGNITION TEMP., FLAMMABLE LIMITS, FIRE EXTINGUISHERS, FACILITY DESIGN, NFPA NATIONAL FIRE CODES, SOLVENT STORAGE, REFERENCES

TITLE: POLYCHLORINATED BIPHENYL IN THE WORKPLACE- A SPECIAL COURSE
SOURCE: NIOSH DTMD
DATE: AUGUST, 1980 FORMAT: COST:
SUMMARY: CHEMICAL HEALTH HAZARDS, TLV'S AND PCB'S EFFECT ON MAN, CHEMICAL HAZARDS CONTROL, RESPIRATORY PROTECTION, PERSONAL PROTECTION WEAR, RECORD KEEPING, MEDICAL MONITORING, MATERIAL HANDLING, AIR SAMPLING
TITLE: RECOGNITION OF HEALTH HAZARDS IN INDUSTRY
SOURCE: WILLIAM A. BURGESS
DATE: FORMAT: BOOK COST:
SUMMARY: INDUSTRIAL UNIT OPERATIONS, ABRASIVE BLASTING, ACID/ALKALI METAL CLEANING, DEGREASING, ELECTROPLATING, FORGING, FOUNDRYS, GRINDING, POLISHING, BUFFING, HEAT TREATING, RADIOGRAPHY, MACHINING, METAL THERMAL SPRAYING, NONDESTRUCTIVE TESTING, PAINTING, SOLDERING, BRAZING, WELDING, PRODUCTION FACILITIES, ABRASIVES, ACIDS, ALUMINUM, AMMONIA, ARTWORK, ASBESTOS, ASPHALT, BATTERIES, BERYLLIUM, BRICK AND TILE, CEMENT, CHLORINE, COTTON, FERTILIZERS, FOOD, GARAGES, GLASS, IRON AND STEEL, LEATHER, LIME, PAINT, PETROLEUM, PLASTICS, POTTERY, PULP AND PAPER, RAYON, RENDERING PLANTS, RUBBER, SHIPBUILDING AND REPAIR, SMELTING, STONE QUARRYING, UNDERGROUND MINING

TITLE: RECOGNITION OF ACCIDENT POTENTIAL IN THE WORKPLACE #511 INSTRUCTOR
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1881 FORMAT: COST:
SUMMARY: BASIC CONCEPTS, SITE AND STRUCTURES, OPERATING MACHINERY AND EQUIPMENT, MATERIALS, ENERGY, COMPLETE LIST OF CLUES

TITLE: SAFETY FEATURES FOR FLOOR AND WALL OPENINGS AND STAIRWAYS, SAFETY AND HEALTH MODULE SH-36
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, SUITE C, 601 LAKE AIR R., WACO, TX 76710
DATE: FORMAT: MODULE COST:
SUMMARY: FALLING / TRIPPING, FALLING MATERIALS, STAIRWAY STRENGTH, RAILINGS
TITLE: SAFETY FEATURES OF MATERIAL AND PERSONNEL MOVEMENT DEVICES, SAFETY AND HEALTH MODULE SH-25
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, SUITE C, 601 LAKE AIR DRIVE, WACO, TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: CONVEYORS, ELEVATORS, ESCALATORS, MOVING WALLS, FORKLIFTS, MANLIFTS, MOTORIZED HAND TRUCKS, AND AERIAL BUCKETS

TITLE: SAFETY IN ACADEMIC CHEMISTRY LABORATORIES
SOURCE: AMERICAN CHEMICAL SOCIETY
DATE: FORMAT: COST: BOOKLET
SUMMARY: THE BOOKLET GIVES GENERAL RECOMMENDATIONS ON LABORATORY SAFETY AND ALSO GIVES SPECIFIC INFORMATION ON CERTAIN HAZARDS. THERE IS SOME DISCUSSION OF PERSONAL PROTECTIVE EQUIPMENT AND ALSO OF EMERGENCY PROCEDURES.

TITLE: SAFETY IN THE SCHOOL SCIENCE LABORATORY #25
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: SCOPE, NEEDS ASSESSMENT, LEGAL ASPECTS, STUDENT INVOLVEMENT, EYE & FACE PROTECTION, HANDLING CHEMICALS, STORAGE/DISPOSAL OF CHEMICALS, LABELING, HANDLING GLASSWARE, BIOLOGICAL AND ANIMAL HAZARDS, VENTILATION, FIRE CONTROL, LABORATORY HARDWARE AND RECORDS
TITLE: SAFETY IN THE LABORATORY #580  
SOURCE: NIOSH DTMD  
DATE: FORMAT: COST:  
SUMMARY: LABORATORY OPERATIONS, FACILITIES, FIRE SUPPRESSION AND CONTROL, PHYSICAL AGENTS, WORKER CONSIDERATIONS

TITLE: STRUCTURAL EGRESS AND EMERGENCY PROCEDURES, SAFETY AND HEALTH MODULE SH-10  
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, SUITE C, 601 LAKE AIR DR., WACO, TX 76710  
DATE: FORMAT: MODULE COST: P  
SUMMARY: PROVIDING EMERGENCY EVACUATION EXITS, EMERGENCY ACTION PLANS, EMERGENCY PREPAREDNESS

TITLE: THE INDUSTRIAL ENVIRONMENT—ITS EVALUATION AND CONTROL  
SOURCE: NIOSH  
DATE: FORMAT: BOOK COST:  
SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY, PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS, GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING, DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS CHROMATOGRAPHY, QUALITY CONTROL IN LABORATORY ANALYSIS, PHYSICS OF SOUND, EAR PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS, RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL.
TITLE: SAFE HANDLING AND USE OF FLAMMABLE AND COMBUSTIBLE MATERIALS, SAFETY AND HEALTH MODULE SH-30
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO TX 76710
DATE: ? FORMAT: MODULE COST: P
SUMMARY: TERMS, CLASSIFICATIONS, IGNITION SOURCES, STORAGE PROCEDURES AND FACILITIES, FIRE FIGHTING EQUIPMENT

TITLE: SAFETY IN ACADEMIC CHEMISTRY LABORATORIES
SOURCE: AMERICAN CHEMICAL SOCIETY
DATE: FORMAT: COST: BOOKLET
SUMMARY: THE BOOKLET GIVES GENERAL RECOMMENDATIONS ON LABORATORY SAFETY AND ALSO GIVES SPECIFIC INFORMATION ON CERTAIN HAZARDS. THERE IS SOME DISCUSSION OF PERSONAL PROTECTIVE EQUIPMENT AND ALSO OF EMERGENCY PROCEDURES.

TITLE: SAFETY IN THE SCHOOL SCIENCE LABORATORY #25
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: SCOPE, NEEDS ASSESSMENT, LEGAL ASPECTS, STUDENT INVOLVEMENT, EYE & FACE PROTECTION, HANDLING CHEMICALS, STORAGE/DISPOSAL OF CHEMICALS, LABELING, HANDLING LABWARE, BIOLOGICAL AND ANIMAL HAZARDS, VENTILATION, FIRE CONTROL, LABORATORY HARDWARE AND RECORDS
TITLE: WALKING AND WORKING SURFACES, SAFETY AND HEALTH MODULE SH-06  
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR.,  
SUITE C, WACO TX 76710  
DATE: ? FORMAT: MODULE COST: ?  
SUMMARY: FLOORS, STAIRWAYS, LADDERS, SCAFFOLDS, EXIT REQUIREMENTS

TITLE: WHEN THE FIRE STARTS  
SOURCE: INTERNATIONAL FILM BUREAU, 332 S. MICHIGAN AVE., CHICAGO, IL 60604  
DATE: ? FORMAT: 16 MM FILM AND VIDEO CASSETTE COST: $375 OR 45 RENTAL  
SUMMARY: VARIOUS INDUSTRIAL FIRE DETECTION AND CONTROL SYSTEMS, FIRE EVACUATION PROCEDURES
HAZARDOUS CHEMICAL MANAGEMENT
TITLE: EVALUATION AND CONTROL OF WORKPLACE ACCIDENTS POTENTIAL #513
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: PRINCIPLES OF HAZARD CONTROL MANAGEMENT, HAZARD IDENTIFICATION AND ASSESSMENT, CONTROL OF UNDESIRED ENERGY RELEASE, MONITORING AND INSPECTION, EVALUATION OF PROGRAMS

TITLE: EYE AND FACE PROTECTION IN CHEMICAL LABORATORIES
SOURCE: NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS, PUBLIC INFORMATION DEPT., 79 MADISON AVE., NEW YORK, N.Y. 10016
DATE: FORMAT: 16 MM FILM, SOUND, COLOR COST: ?
SUMMARY:

TITLE: FLAMMABLE LIQUIDS, PART 2
SOURCE: OHIO STATE UNIV., LABOR EDUCATION AND RESEARCH SERVICE, 156 W. 19TH ST., COLUMBUS, OH 43210
DATE: FORMAT: 16 MM FILM COST: $90 OR 30 RENTAL P
SUMMARY: INDUSTRIAL TRANSPORTATION AND STORAGE OF FLAMMABLES, REQUIREMENTS FOR CONTAINERS AND STORAGE AREAS, VENTILATION AND STATIC CONTROL
TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS, PARTICULATES, DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION, TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION, AIR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVS, PELS, CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS, REVIEW OF MATHEMATICS,

TITLE: HAZARDOUS MATERIALS SAFETY, SAFETY AND HEALTH MODULE SH-29
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., WACO, TX 76710
DATE: ? FORMAT: MODULE COST: P
SUMMARY: DISCUSSION BASED ON D.O.T. CLASSIFICATION SCHEME

TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., STANTON, N.J., 08085
DATE: 1979 FORMAT: TEXT COST: 7
SUMMARY: CLASSIFICATION OF HAZARDOUS MATERIALS, LABELING, EMPLOYEE TRAINING, INSIDIOUS HAZARDS, 50 COMMON HAZARDOUS CHEMICAL REACTIONS
TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., STANTON, N.J., 08885
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: WORKING AREAS, VENTILATION, CHEMICAL STORAGE, DISPENSARY, REFERENCES

TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., STANTON, N.J., 08885
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: CORROSIVE CHEMICALS, PROTECTIVE EQUIPMENT FOR THEM, FIRST AID PROCEDURES, SAFE HANDLING PROCEDURES, REFERENCES

TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., STANTON, N.J., 08885
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: CHEMICAL WASTE DISPOSAL
TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE; STARSON CORP.; STANTON, N.J., 08885
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: HANDLING HAZARDOUS CHEMICALS

TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE; STARSON CORP.; STANTON, N.J., 08885
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: DANGERS OF HAZARDOUS MATERIALS FIRES, FIRE CHEMISTRY, FIRE DETECTION,
FIRE CLASSIFICATION, EXTINGUISHING AGENTS

TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE; STARSON CORP.; STANTON, N.J., 08885
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: HOW TO DEVELOP HAZARDOUS MATERIALS POLICY
TITLE: HAZARDOUS MATERIALS CONTROL SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE; STARSON CORP; STANTON, N.J. 08885
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: SAFETY AND HEALTH PROGRAM; CONDUCTING A HAZARDOUS MATERIALS SURVEY;
DEVELOPMENT OF DATA SHEETS; LOCATING PROBLEM AREAS; DEVELOPMENT OF TRAINING
PROGRAMS

TITLE: HAZARDS IN THE CHEMISTRY LABORATORY - STUDENT MANUAL
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1979 FORMAT: TEXT COST:
SUMMARY: SAFETY ORIENTATION, SAFE PRACTICES, LABORATORY BENCH EQUIPMENT, SAFE
LABELING PRACTICES, HANDLING AND STORAGE OF REAGENTS, ELECTRICAL HAZARDS

TITLE: HEALTH RISKS OF FARM WORKERS
SOURCE: NIOSH, DTMD, (513)694-8231
DATE: ? FORMAT: VIDEO TAPE COST: $40-50
SUMMARY: OVERVIEW OF HEALTH RISKS ON THE FARM
TITLE: INDUSTRIAL ENVIRONMENTAL HEALTH
SOURCE: EDITED BY LESTER V. CRALLEY PATRICK R. ATKINS
DATE: FORMAT: BOOK, ACADEMIC PRESS COST:
SUMMARY: EPIDEMIOLOGIC STUDIES OF OCCUPATIONAL DISEASE, TOXICOLOGY, NOISE, NONIONIZING RADIATION, IONIZING RADIATION, WORK IN HOT ENVIRONMENTS: TLV'S AND PROPOSED STANDARDS, EVALUATION OF CHEMICAL HAZARDS IN THE ENVIRONMENT, HAZARD EVALUATION AND CONTROL, PERSONAL PROTECTIVE DEVICES, OFF-JOB ENVIRONMENTAL HEALTH STRESS AS RELATED TO THE WORKPLACE, IMPACT OF GOVERNMENTAL ENVIRONMENTAL REGULATIONS UPON INDUSTRIAL ACTIVITIES

TITLE: MAINTAINING FACILITIES AND OPERATIONS - INSTRUCTORS RESOURCE GUIDE
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1979 FORMAT: COST: P
SUMMARY: IMPACT OF ACCIDENTS ON FACILITY OPERATION, ELEMENTS OF A HAZARD CONTROL PROGRAM, OCCUPATIONAL HEALTH, HAZARDOUS MATERIAL USE AND CONTROL, FIRE PROTECTION AND CONTROL, MACHINE GUARDING, BOILERS AND UNFIRED PRESSURE VESSELS, WELDING AND CUTTING

TITLE: NATIONAL HAZARDS CONTROL INSTITUTE
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., STANTON, N.J., 08885
DATE: 1979 FORMAT: TEXT COST: P
SUMMARY: OVERVIEW OF FIRE AND EXPLOSION HAZARDS, PROPERTIES OF FLAMABLE SOLIDS, LIQUIDS AND GASES, FLASH POINT, AUTOIGNITION TEMP., FLAMMABLE LIMITS, FIRE EXTINGUISHERS, FACILITY DESIGN, NFPA NATIONAL FIRE CODES, SOLVENT STORAGE, REFERENCES
TITLE: NATIONAL MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., P.O. BOX 133, STANTON N.J., 08610
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: REGULATIONS, INTERNAL POLICIES, GUIDELINES FOR DISPOSAL

TITLE: POLYCHLORINATED BIPHENYL IN THE WORKPLACE- A SPECIAL COURSE
SOURCE: NIOSH DTMD
DATE: AUGUST, 1980 FORMAT: COST:
SUMMARY: CHEMICAL HEALTH HAZARDS, TLV’S AND PCB’S EFFECT ON MAN, CHEMICAL HAZARDS CONTROL, RESPIRATORY PROTECTION, PERSONAL PROTECTION WEAR, RECORD KEEPING, MEDICAL MONITORING, MATERIAL HANDLING, AIR SAMPLING

TITLE: PRECAUTIONS FOR EXPLOSIVE MATERIALS
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO TX 76710
DATE: ? FORMAT: MODULE COST: P
SUMMARY: TYPES AND CLASSIFICATION OF EXPLOSIVES, PROCEDURES FOR TRANSPORT, LOADING AND STORAGE.
TITLE: RECOGNITION OF HEALTH HAZARDS IN INDUSTRY
SOURCE: WILLIAM A. BURGESS
DATE: FORMAT: BOOK COST: 
SUMMARY: INDUSTRIAL UNIT OPERATIONS, ABRASIVE BLASTING, ACID/ALKALI METAL CLEANING, DEGREASING, ELECTROPLATING, FORGING, FOUNDRYS, GRINDING, POLISHING, BUFFING, HEAT TREATING, RADIOGRAPHY, MACHINING, METAL THERMAL SPRAYING, NONDESTRUCTIVE TESTING, PAINTING, SOLDERING, BRAZING, WELDING, PRODUCTION FACILITIES, ABRASIVES, ACIDS, ALUMINUM, AMMONIA, ARTWORK, ASBESTOS, ASPHALT, BATTERIES, BERYLLIUM, BRICK AND TILE, CEMENT, CHLORINE, COTTON, FERTILIZERS, FOOD, GARAGES, GLASS, IRON AND STEEL, LEATHER, LIME, PAINT, PERTROLEUM, PLASTICS, POTTERY, PULP AND PAPER, RAYON, RENDERING PLANTS, RUBBER, SHIPBUILDING AND REPAIR, SMELTING, STONE QUARRYING, UNDERGROUND MINING

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS #510, VOL I
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980 FORMAT: COST: 
SUMMARY: BIOMODES OF ENTRY, TOXICITY OF CHEMICAL AGENTS, PATHOLOGY OF OCC DISEASES, INDUSTRIAL HYGIENE SURVEYS, SURVEY PROCEDURES, EPIDEMIOLOGICAL FACTORS, EVALUATION OF TOXICITY, DEVELOPMENT AND APPLICATION OF STANDARDS, PNEUMOCONIOSIS, CHEMICAL HAZARDS/WORKSHOP, PREVENTION, OCCUPATIONAL SKIN DISEASES, PHYSICAL AGENTS - ELECTROMAGNETIC SPECTRUM, IONIZING RADIATION, NOISE, NOISE WORKSHOP, CHEMICAL TREATMENT, CHEMICAL TREATMENT WORKSHOP

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS
SOURCE: 510 COURSE MANUAL, VOL 1, DTMD, NIOSH
DATE: 12/31/74 FORMAT: TEXT COST: 
SUMMARY: MODULE 14. CHEM HAZARDS, 15. CHEM HAZARDS WORKSHOP, 22. CHEM. TREATMENT, 23. CHEM TREATMENT WORKSHOP
TITLE: SAFETY IN THE LABORATORY #580
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: LABORATORY OPERATIONS, FACILITIES, FIRE SUPPRESSION AND CONTROL, PHYSICAL AGENTS, WORKER CONSIDERATIONS

TITLE: THE INDUSTRIAL ENVIRONMENT—ITS EVALUATION AND CONTROL
SOURCE: NIOSH
DATE: FORMAT: BOOK COST:
SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY, PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS, GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING, DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS CHROMATOGRAPHY, QUALITY CONTROL IN LABORATORY ANALYSIS, PHYSICS OF SOUND, EAR PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS, RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL,
FIRE AND LIFE SAFETY
TITLE: ACCIDENT PREVENTION MANUAL FOR INDUSTRIAL OPERATIONS
SOURCE: NATIONAL SAFETY COUNCIL
DATE: 
FORMAT: NSC BOOK  
COST: 
SUMMARY: HISTORY, OSH ACT, PROGRAM ORGANIZATION, INSPECTION AND CONTROL PROCEDURES, REMOVAL OF JOB HAZARDS, ACCIDENT RECORDS AND INJURY RATES, INVESTIGATION, ANALYSIS, AND COSTS, WORKMAN'S COMPENSATION, SAFETY TRAINING, HUMAN FACTORS, HUMAN BEHAVIOR, OFFICE SAFETY, PUBLICIZING AND MAINTAINING SAFETY, PLANT LAYOUT, EMERGENCY PLANNING, PERSONAL PROTECTIVE EQUIPMENT, INDUSTRIAL SANITATION, HEALTH SERVICES, SOURCES OF HELP, MATERIALS HANDLING AND STORAGE, TOOLS AND EQUIPMENT SAFETY TECHNIQUES, METALS, EXHAUST AND VENTILATION, TOXICOLOGY, NOISE, ELECTRICAL HAZARDS, FIRE PROTECTION, SAFETY ENGINEERING TABLES

TITLE: AND THEN THERE WERE TWO
SOURCE: INTERNATIONAL FILM BUREAU, 332 S. MICHIGAN AVE., CHICAGO, IL 60604
DATE: 
FORMAT: 16 MM FILM AND VIDEO CASSETTE  
COST: $375 OR 45 RENTAL
SUMMARY: ROLE OF HUMAN FACTORS AND SUPERVISORY PRESSURE IN ACCIDENTS

TITLE: COST OF CHAOS
SOURCE: DNA COMMUNICATIONS, INC., 9401 DECOVERLY HALL RD., ROCKVILLE, MD 20850
DATE:  
FORMAT: 16 MM FILM OR 3/4 IN VIDEO CASSETTE
COST: $200 PURCHASE OR $80 RENTAL
SUMMARY: CONSTRUCTION SITE MAINTENANCE, PLANNING, ACCESS, ETC. (12 MIN.)
TITLE: FLAMMABLE ENGINEERING  
SOURCE: PROTECT-O-SEAL CO., 225 W. FOSTER AVE., BENSENVILLE, IL 60106  
DATE: ?  FORMAT: 16 MM FILM  COST: $195 OR LOAN  
SUMMARY: DESIGN OF CONTAINERS FOR TRANSPORT AND STORAGE, PHYSICAL AND MIGRATION CHARACTERISTICS OF VAPORS  

TITLE: FLAMMABLE LIQUIDS, PART 2  
SOURCE: OHIO STATE UNIV., LABOR EDUCATION AND RESEARCH SERVICE, 156 W. 19TH ST., COLUMBUS, OH 43210  
DATE: ?  FORMAT: 16 MM FILM  COST: $90 OR 30 RENTAL  
SUMMARY: INDUSTRIAL TRANSPORTATION AND STORAGE OF FLAMMABLES, REQUIREMENTS FOR CONTAINERS AND STORAGE AREAS, VENTILATION AND STATIC CONTROL
TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS,
PARTICULATES, DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION,
TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION,
AIR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL
METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF
PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVS, PELS,
CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS,
REVIEW OF MATHEMATICS,

TITLE: HANDBOOK OF OCCUPATIONAL SAFETY AND HEALTH
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: BOOK COST: P
SUMMARY: SAFETY AND GOOD BUSINESS, OSHA CONSIDERATIONS, SAFE & HEALTHFUL WORKING
CONDITIONS, SAFETY INSPECTIONS, ACCIDENT RECORDS AND REPORTS, TRAINING,
PROMOTION, MOTIVATION OF EMPLOYEES, SAFEGUARDING MACHINES, MATERIALS HANDLING AND
STORAGE, PERSONAL PROTECTIVE EQUIPMENT, FIRE PROTECTION, INDUSTRIAL HYGIENE AND
HEALTH

TITLE: HAZARDOUS MATERIALS SAFETY, SAFETY AND HEALTH MODULE SH-29
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., WACO
TX 76710
DATE: FORMAT: MODULE COST: P
SUMMARY: DISCUSSION BASED ON D.O.T. CLASSIFICATION SCHEME
TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR  
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., STANTON, N.J., 08885  
DATE: 1979  FORMAT: TEXT  COST: P  
SUMMARY: NATIONAL FIRE PROTECTION AGENCY-IDENTIFICATION OF FIRE HAZARDS OF MATERIALS

TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR  
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., STANTON, N.J., 08885  
DATE: 1979  FORMAT: TEXT  COST: P  
SUMMARY: DANGERS OF HAZARDOUS MATERIALS FIRES, FIRE CHEMISTRY, FIRE DETECTION, FIRE CLASSIFICATION, EXTINGUISHING AGENTS

TITLE: HAZARDS IN THE CHEMISTRY LABORATORY - STUDENT MANUAL  
SOURCE: NIOSH DTMD  
DATE: SEPTEMBER, 1979  FORMAT:  COST:  
SUMMARY: SAFETY ORIENTATION, SAFE PRACTICES, LABORATORY BENCH EQUIPMENT, SAFE LABELING PRACTICES, HANDLING AND STORAGE OF REAGENTS, ELECTRICAL HAZARDS
TITLE: HEALTH RISKS OF FARM WORKERS
SOURCE: NIOSH, DTMD, (513) 684-8231
DATE: ? FORMAT: VIDEO TAPE COST: $40-50
SUMMARY: OVERVIEW OF HEALTH RISKS ON THE FARM

TITLE: HUMAN FACTORS AND SYSTEMS PRINCIPLES FOR OCCUPATIONAL SAFETY AND HEALTH
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1979 FORMAT: COST:
SUMMARY: HISTORY OF HUMAN FACTORS THEORY AND ITS EXTENSION TO OCCUPATIONAL
SAFETY AND HEALTH, CYBERNETIC RESEARCH FOUNDATIONS OF HUMAN FACTORS PRACTICES,
HUMAN FACTORS IN DESIGN AND OPERATION OF TOOLS, MACHINES AND EQUIPMENT FOR
SAFETY AND HEALTH, INTEGRATION OF HUMAN FACTORS WITH HAZARD MANAGEMENT,
HUMAN-FACTORS DESIGN OF ACCIDENT ANALYSIS AND RESEARCH

TITLE: INDUSTRIAL HYGIENE REVIEW MANUAL
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1982 FORMAT: COST:
SUMMARY: CHEMISTRY, BIOCHEMISTRY AND PHYSICS, TOXICOLOGY, RESPIRATORY DISEASE,
OCUPATIONAL DERMATOSES, EXPOSURE CRITERIA, MEDICAL MONITORING, HEAT STRESS,
ISE: EFFECTS AND PROTECTION, OXYGEN LIMITED ENVIRONMENTS, INDUSTRIAL
NTILATION, ECONOMICS, HEALTH PHYSICS, NON-IONIZING RADIATION, ILLUMINATION,
ATISTICS IN I.H., SAFETY, OSHA
TITLE: LEGAL ASPECTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 #599
STUDENT MANUAL
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:

TITLE: MAINTAINING FACILITIES AND OPERATIONS - INSTRUCTORS RESOURCE GUIDE
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1979 FORMAT: COST: P
SUMMARY: IMPACT OF ACCIDENTS ON FACILITY OPERATION, ELEMENTS OF A HAZARD CONTROL PROGRAM, OCCUPATIONAL HEALTH, HAZARDOUS MATERIAL USE AND CONTROL, FIRE PROTECTION AND CONTROL, MACHINE GUARDING, BOILERS AND UNFIRED PRESSURE VESSELS, WELDING AND CUTTING

TITLE: NATIONAL HAZARDS CONTROL INSTITUTE
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., STANTON, N.J., 08950
DATE: 1979 FORMAT: TEXT COST: P
SUMMARY: OVERVIEW OF FIRE AND EXPLOSION HAZARDS, PROPERTIES OF FLAMABLE SOLIDS, LIQUIDS AND GASES, FLASH POINT, AUTOIGNITION TEMP., FLAMMABLE LIMITS, FIRE EXTINGUISHERS, FACILITY DESIGN, NFPA NATIONAL FIRE CODES, SOLVENT STORAGE, REFERENCES
TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME I
SOURCE: EDITED BY GEORGE D. CLAYTON FLORENCE E. CLAYTON
DATE: FORMAT: BOOK COST:
SUMMARY: IH-RETRROSPECT AND PROSPECT, LEGISLATION AND LEGISLATIVE TRENDS, IH RECORDS AND REPORTS, SURVEYS AND PERSONNEL, EPIDEMIOLOGY, MODE OF ENTRY AND ACTION OF TOXIC MATERIALS, PULMONARY EFFECTS OF INHALED INORGANIC DUSTS, OCC DERMATOSES, PHYSIOLOGICAL EFFECTS OF ABNORMAL ATMOSPHERIC PressURES, NOISE AND HEARING CONSERVATION, NONIONIZING, IONIZING RADIATION, LIGHTING, AIR POLLUTION, AGRICULTURAL HAZARDS, ODOR MEASUREMENT AND CONTROL, SAMPLING AND ANALYSIS, ENGINEERING CONTROLS, AIR POLLUTION CONTROLS, HEAT STRESS, RESPIRATORY PROTECTION, ERGONOMICS, QUALITY CONTROL, CALIBRATION, SANITATION, FIRE AND EXPLOSION HAZARDS

TITLE: PRECAUTIONS FOR EXPLOSIVE MATERIALS
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO TX 76710
DATE: FORMAT: MODULE COST: P
SUMMARY: TYPES AND CLASSIFICATION OF EXPLOSIVES, PROCEDURES FOR TRANSPORT, UNLOADING AND STORAGE

TITLE: RECOGNIZING JOB SAFETY HAZARDS
SOURCE: SAFETY AND HEALTH MODULE SH-09, CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DRIVE, SUITE C, WACO, TEXAS 76710
DATE: FORMAT: MODULE COST: ?
SUMMARY: ACCIDENTS, JOB SAFETY HAZARDS, FIRE HAZARDS, MACHINE HAZARDS, GOOD HOUSE KEEPING, LIFTING HAZARDS, ELECTRICAL HAZARDS
TITLE: SAFE HANDLING AND USE OF FLAMMABLE AND COMBUSTIBLE MATERIALS, SAFETY AND
HEALTH MODULE SH-30
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR.,
SUITE C, WACO, TX 76710
DATE: ? FORMAT: MODULE COST: P
SUMMARY: TERMS, CLASSIFICATIONS, IGNITION SOURCES, STORAGE PROCEDURES AND
FACILITIES, FIRE FIGHTING EQUIPMENT

TITLE: SAFETY FEATURES FOR FLOOR AND WALL OPENINGS AND STAIRWAYS, SAFETY AND
HEALTH MODULE SH-36
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, SUITE C, 601 LAKE AIR
DR., WACO, TX 76710
DATE: ? FORMAT: MODULE COST: P
SUMMARY: FALLING / TRIPPING, FALLING MATERIALS, STAIRWAY STRENGTH, RAILINGS

TITLE: SAFETY FEATURES OF MATERIAL AND PERSONNEL MOVEMENT DEVICES, SAFETY AND
HEALTH MODULE SH-25
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, SUITE C, 601 LAKE AIR
DR., WACO, TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: CONVEYORS, ELEVATORS, ESCALATORS, MOVING WALLS, FORKLIFTS, MANLIFTS,
POWERED HAND TRUCKS, AND AERIAL BUCKETS
TITLE: SAFETY IN ACADEMIC CHEMISTRY LABORATORIES
SOURCE: AMERICAN CHEMICAL SOCIETY
DATE: FORMAT: COST: BOOKLET
SUMMARY: THE BOOKLET GIVES GENERAL RECOMMENDATIONS ON LABORATORY SAFETY AND ALSO GIVES SPECIFIC INFORMATION ON CERTAIN HAZARDS. THERE IS SOME DISCUSSION OF PERSONAL PROTECTIVE EQUIPMENT AND ALSO OF EMERGENCY PROCEDURES.

TITLE: SAFETY IN THE SCHOOL SCIENCE LABORATORY #25
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: SCOPE, NEEDS ASSESSMENT, LEGAL ASPECTS, STUDENT INVOLVEMENT, EYE & FACE PROTECTION, HANDLING CHEMICALS, STORAGE/DISPOSAL OF CHEMICALS, LABELING, HANDLING GLASSWARE, BIOLOGICAL AND ANIMAL HAZARDS, VENTILATION, FIRE CONTROL, LABORATORY HARDWARE AND RECORDS

TITLE: SAFETY IN THE LABORATORY #580
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: LABORATORY OPERATIONS, FACILITIES, FIRE SUPPRESSION AND CONTROL, PHYSICAL AGENTS, WORKER CONSIDERATIONS
TITLE: SAFETY WITH HAND AND PORTABLE POWER TOOLS, SAFETY AND HEALTH MODULE
SH-19
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR.,
SUITE C, WACO, TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: USE, MAINTENANCE AND PROTECTIVE EQUIPMENT

TITLE: SCAFFOLD AND LADDER QUIZ
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE COMPUTER COST: NONE
SUMMARY: MULTIPLE CHOICE QUIZ

TITLE: STRUCTURAL EGRESS AND EMERGENCY PROCEDURES, SAFETY AND HEALTH MODULE
H-10
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, SUITE C, 601 LAKE AIR
DR., WACO, TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: PROVIDING EMERGENCY EVACUATION EXITS, EMERGENCY ACTION PLANS,
EMERGENCY PREPAREDNESS
THE INDUSTRIAL ENVIRONMENT_ ITS EVALUATION AND CONTROL
SOURCE: NIOSH
DATE: FORMAT: BOOK COST:
SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY, PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS, GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING, DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS CHROMATOGRAPHY, QUALITY CONTROL IN LABORATORY ANALYSIS, PHYSICS OF SOUND, EAR PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS, RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL.

THEY CAN BE GUARDED
SOURCE: INTERNATIONAL FILM BUREAU, 322 S. MICHIGAN BLVD., CHICAGO, IL 60604
DATE: FORMAT: 16MM FILM OR VIDEO CASSETTE COST: $275 OR 27 RENTAL
SUMMARY: PRESS BRAKES, HOLD BACK AND PULL BACK GUARDS, HAND AND FEED CONTROLS, LOCKOUTS, PHOTO BEAMS, EYE AND EAR PROTECTION

WALKING AND WORKING SURFACES, SAFETY AND HEALTH MODULE SH-06
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., WACO TX 76710
DATE: FORMAT: MODULE COST: ?
SUMMARY: FLOORS, STAIRWAYS, LADDERS, SCAFFOLDS, EXIT REQUIREMENTS
TITLE: WHEN THE FIRE STARTS
SOURCE: INTERNATIONAL FILM BUREAU, 332 S. MICHIGAN AVE., CHICAGO, IL 60604
DATE: ? FORMAT: 16 MM FILM AND VIDEO CASSETTE COST: $375 OR 45 RENTAL P
SUMMARY: VARIOUS INDUSTRIAL FIRE DETECTION AND CONTROL SYSTEMS, FIRE EVACUATION PROCEDURES
IONIZING RADIATIONS
TITLE: APPLIED INDUSTRIAL HYGIENE #549
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980 FORMAT: COST:
SUMMARY: GAS AND VAPOR SAMPLING, AIR FLOW MEASUREMENTS, PARTICULATE SAMPLING, INDUSTRIAL VENTILATION, HEAT STRESSES, RADIATION, NOISE

TITLE: BASIC INDUSTRIAL HYGIENE
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION' BY RICHARD S. BRIEF
DATE: FORMAT: A TRAINING MANUAL, AIHA COST:
SUMMARY: REFERENCE LIST, GENERAL PRINCIPLES, MATHEMATICS, INDUSTRIAL PHYSICIAN, TOXICOLOGIST, SAMPLING FOR GASES AND VAPORS, ANALYTICAL CHEMISTRY, PARTICULATE SAMPLING, CALIBRATION OF AIR SAMPLING INSTRUMENTS, NOISE, EM SPECTRUM, IONIZING RADIATION, ULTRAVIOLET, VISIBLE LIGHT, MICROWAVES, LASERS, HEAT AND COLD STRESS, INDUSTRIAL VENTILATION, RESPIRATORY PROTECTIVE DEVICES, LABORATORY EXERCISES

TITLE: CASARETT AND DOULL’S TOXICOLOGY
SOURCE: EDITED BY JOHN DOULL CURTIS D. KLAASSEN MARY O. AMDUR
DATE: FORMAT: MACMILLAN BOOK COST:
SUMMARY: ORIGIN AND SCOPE OF TOXICOLOGY, TOX SAFETY EVALUATIONS, ABSORPTION, DISTRIBUTION, EXCRETION, METABOLISM OF TOXIC SUBSTANCES, INFLUENCING ACTORS, CHEMICAL CARCINOGENS, GENETIC TOX, TERATOGENS, CENTRAL NERVOUS SYSTEM RESPONSES, LIVER, KIDNEY, RESPIRATORY SYSTEM, EYE, BLOOD, REPRODUCTIVE SYSTEM RESPONSES, PESTICIDES, METALS, SOLVENTS, RADIOACTIVE MATERIALS, PLASTICS, TOXINS FROM ANIMAL ORIGIN, PHYTOTOXICOLOGY, FOOD ADDITIVES, AIR POLLUTANTS, WATER/SOIL POLLUTANTS, FORENSIC TOXICOLOGY, CLINICAL, OCCUPATIONAL TOX, REGULATORY TOX, TOXICOLOGY AND THE LAW
CONTROL OF THE OCCUPATIONAL ENVIRONMENT—INSTRUCTORS MANUAL
SOURCE: NIOSH-DTMD
DATE: SEPTEMBER, 1980 FORMAT: COST:
SUMMARY: GENERAL CONCEPTS OF HAZARDS CONTROL, CONTROL OF AIRBORNE CONTAMINANTS, CONTROL OF RADIATION, CONTROL OF THERMAL STRESS, CONTROL OF NOISE

FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS, PARTICULATES, DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION, TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION, AIR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVs, PELs, CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS, REVIEW OF MATHEMATICS.

HAZARDOUS MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., P.O. BOX 133, TANTON, N.J., 08885
DATE: 1979 FORMAT: TEXT COST:
SUMMARY: RADIOACTIVE EFFECTS AND HAZARDS, CLASSIFICATION OF RADIOACTIVE MATERIALS, POLICIES AND PROCEDURES FOR ISOTOPES, MONITORING PROGRAMS, PROTECTIVE EQUIPMENT
TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE; STARSON CORP; STANTON N.J. 08885
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: RADIOACTIVE MATERIALS SAFETY CONCEPT

TITLE: INDUSTRIAL ENVIRONMENTAL HEALTH
SOURCE: EDITED BY LESTER V. CRALLEY PATRICK R. ATKINS
DATE: FORMAT: BOOK, ACADEMIC PRESS COST:
SUMMARY: EPIDEMIOLOGIC STUDIES OF OCCUPATIONAL DISEASE, TOXICOLOGY, NOISE,
NONIONIZING RADIATION, IONIZING RADIATION, WORK IN HOT ENVIRONMENTS: TLV’S AND
PROPOSED STANDARDS, EVALUATION OF CHEMICAL HAZARDS IN THE ENVIRONMENT, HAZARD
EVALUATION AND CONTROL, PERSONAL PROTECTIVE DEVICES, OFF-JOB ENVIRONMENTAL
HEALTH STRESS AS RELATED TO THE WORKPLACE, IMPACT OF GOVERNMENTAL ENVIRONMENTAL
REGULATIONS UPON INDUSTRIAL ACTIVITIES

TITLE: INDUSTRIAL HEALTH
SOURCE: BY JACK PETERSON
DATE: FORMAT: BOOK COST:
SUMMARY: ENTRY & TOXIC ACTIONS OF CHEMICAL SUBSTANCES, LABORATORY DETERMINATION
OF TOXICITY, GASES, METALS AND METALLOIDS, PNEUMOCONIOSES, ORGANIC SOLVENTS,
MONOMERS AND POLYMERS, PESTICIDES, SENSITIZATION & DERMATITIS, CARCINOGENESIS,
ABNORMAL PRESSURE, NOISE, BIOHEMATHERMAL STRESS, NONIONIZING RADIATION, IONIZING
RADIATION, HAZARD EVALUATION AND CONTROL, REVIEW OF ORGANIC CHEMISTRY
NOMENCLATURE
TITLE: INDUSTRIAL HYGIENE REVIEW MANUAL
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1982  FORMAT:  COST:
SUMMARY:  CHEMISTRY, BIOCHEMISTRY AND PHYSICS, TOXICOLOGY, RESPIRATORY DISEASE,
OCCUPATIONAL DERMATOSES, EXPOSURE CRITERIA, MEDICAL MONITORING, HEAT STRESS,
NOISE: EFFECTS AND PROTECTION, OXYGEN LIMITED ENVIRONMENTS, INDUSTRIAL
VENTILATION, ECONOMICS, HEALTH PHYSICS, NON-IONIZING RADIATION, ILLUMINATION,
STATISTICS IN I.H., SAFETY, OSHA

TITLE: INDUSTRIAL HYGIENE MEASUREMENTS # 550
SOURCE: NIOSH DTMD
DATE: MAY, 1982  FORMAT:  COST:
SUMMARY:  GAS AND VAPOR SAMPLING, AIR FLOC MEASUREMENTS, PARTICULATE SAMPLING,
INDUSTRIAL VENTILATION, HEAT STRESS, RADIATION, NOISE

TITLE: INDUSTRIAL HYGIENE ENGINEERING # 551
SOURCE: NIOSH DTMD
DATE: JANUARY, 1980  FORMAT:  COST:
SUMMARY:  ENGINEERING CONTROL, HEAT STRESS, INDUSTRIAL VENTILATION, ERGONOMICS,
NOISE AND VIBRATION CONTROLS, RADIATION, ILLUMINATION
TITLE: IONIZING AND NONIONIZING RADIATION PROTECTION, SAFETY AND HEALTH MODULE SH-35
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO, TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: ILLUSTRATES WHERE RADIATION EXPOSURES CAN OCCUR IN INDUSTRY AND THE POTENTIAL EXPOSURE ASSOCIATED WITH EACH, GUIDE FOR AVOIDING EXPOSURE

TITLE: IONIZING RADIATION #584 LAB MANUAL
SOURCE: NIOSH DTMD
DATE: JULY, 1981 FORMAT: COST:
SUMMARY: RADIATION FUNDAMENTALS, CHARACTERISTICS OF IONIZATION CHAMBERS AND GEIGER COUNTERS, RADIATION SURVEY, RADIOGRAPHY SURVEY

TITLE: IONIZING RADIATION #584
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY:
TITLE: OCC HEALTH TRAINING COURSE FOR COMPLIANCE, SAFETY, AND HEALTH OFFICERS
VOLUME I, II - INSTRUCTORS' MANUAL

SOURCE: NATIONAL AUDIOVISUAL CENTER, NATIONAL ARCHIVES AND REPORTS SERVICE, GENERAL SERVICES ADMINISTRATION, ORDER SECTION RO, WASHINGTON, DC 20409

DATE: ? FORMAT: SLIDES 523 @ 2X2 COST: SLIDES 208.50, INST. MAN. 69.25, STUD MAN. 36.25

SUMMARY: COVERS RECOGNITION AND CONTROL OF OCCUPATIONAL HEALTH HAZARDS

TITLE: OCCUPATIONAL HEALTH TRAINING COURSE FOR COMPLIANCE SAFETY AND HEALTH OFFICERS

SOURCE: NATIONAL AUDIOVISUAL CENTER, NATIONAL ARCHIVES AND REPORTS SERVICE, GENERAL SERVICES ADMINISTRATION, ORDER SECTION RO, WASHINGTON, DC 20409

DATE: ? FORMAT: SLIDES 523 @ 2X2 COST: SLIDES 208.50, INST. MAN. 69.25, STUD MAN. 36.25

SUMMARY: COVERS RECOGNITION AND CONTROL OF OCCUPATIONAL HEALTH HAZARDS

TITLE: OCCUPATIONAL EXPOSURE LIMITS

SOURCE: PRINCIPLES OF OSH ENGINEERING, ZIMMERMAN, PURDUE

DATE: 7/83 FORMAT: OUTLINE COST: NONE

SUMMARY: RATIONALE FOR LIMITS, TYPES OF LIMITS, RADIATION, LIMITS ON PROTECTION PROVIDED, OTHER COUNTRIES, NOVEL WORKSHIFTS, AGENCIES INVOLVED IN DEVELOPMENT
TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME III
SOURCE: EDITED BY LEWIS J. CRALLEY LESTER V. CRALLEY
DATE: FORMAT: BOOK COST:
SUMMARY: RATIONALE, EMISSION INVENTORY, STATISTICAL DESIGN AND DATA ANALYSIS
REQUIREMENTS, DATA AUTOMATION, ANALYTICAL MEASUREMENTS, MEASUREMENT OF WORKER
EXPOSURE, BIOLOGICAL INDICATORS OF CHEMICAL DOSAGE AND BURDEN, EXPOSURE
EVALUATION (TO CHEMICALS, IONIZING AND NONIONIZING RADIATIONS, NOISE, HOT AND
COLD ENVIRONMENTS, VIBRATIONS, ABNORMAL PressURES, BIOLOGICAL AGENTS),
TOXICOLOGICAL DATA EXTRAPOLATION, HEALTH SURVEILLANCE PROGRAMS IN INDUSTRY,
PHILOSOPHY AND MANAGEMENT OF ENGINEERING CONTROLS, PERSONAL PROTECTION, JOB
SAFETY AND HEALTH LAW, COMPLIANCE AND PROJECTION

TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME I
SOURCE: EDITED BY GEORGE D. CLAYTON FLORENCE E. CLAYTON
DATE: FORMAT: BOOK COST:
SUMMARY: IH-RETRSoSPECT AND PROSPECT, LEGISLATION AND LEGISLATIVE TRENDS, IH
RECORDS AND REPORTS, SURVEYS AND PERSONNEL, EPIDEMIOLOGY, MODE OF ENTRY AND
ACTION OF TOXIC MATERIALS, PULMONARY EFFECTS OF INHALED INORGANIC DUSTS, OCC
DERMATOSES, PHYSIOLOGICAL EFFECTS OF ABNORMAL ATMOSPHERIC PressURES, NOISE AND
HEARING CONSERVATION, NONIONIZING, IONIZING RADIATION, LIGHTING, AIR POLLUTION,
AGRICULTURAL HAZARDS, ODOR MEASUREMENT AND CONTROL, SAMPLING AND ANALYSIS,
ENGINEERING CONTROLS, AIR POLLUTION CONTROLS, HEAT STRESS, RESPIRATORY
PROTECTION, ERGONOMICS, QUALITY CONTROL, CALIBRATION, SANITATION, FIRE AND
EXPLOSION HAZARDS

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS #510, VOL I
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980 FORMAT: COST:
SUMMARY: BIOMODES OF ENTRY, TOXICITY OF CHEMICAL AGENTS, PATHOLOGY OF OCC
DISEASES, INDUSTRIAL HYGIENE SURVEYS, SURVEY PROCEDURES, EPIDEMIOLOGICAL
FACTORS, EVALUATION OF TOXICITY, DEVELOPMENT AND APPLICATION OF STANDARDS,
NEUMOCONIOSIS, CHEMICAL HAZARDS/WORKSHOP, PREVENTION, OCCUPATIONAL SKIN
DISEASES, PHYSICAL AGENTS - ELECTROMAGNETIC SPECTRUM, IONIZING RADIATION, NOISE,
DISE WORKSHOP, CHEMICAL TREATMENT, CHEMICAL TREATMENT WORKSHOP
TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS
SOURCE: 510 COURSE MANUAL VOL 1, DTMD, NIOSH
DATE: 12/31/74 FORMAT: TEXT COST: ?
SUMMARY: MODULE 19

TITLE: RECOGNIZING JOB HEALTH HAZARDS, SAFETY AND HEALTH MODULE SH-08
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR.,
SUITE C., WACO TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: DISCUSSES 4 GENERAL CLASSES OF ENVIRONMENTAL STRESSES INC CHEMICAL,
PHYSICAL, BIOLOGIC, AND ERGONOMIC. ALSO MODES OF ENTRY, SOURCES, PROTECTIVE
MEASURES, HOW TO RECOGNIZE HEALTH HAZARDS

TITLE: STANDARDS INTERPRETATIONS AND AUDIT CRITERIA FOR PERFORMANCE OF
OCUPATIONAL HEALTH PROGRAMS
SOURCE:
DATE: NO DATE FORMAT: COST:
SUMMARY: ADMINISTRATION, MEDICAL, NURSING, INDUSTRIAL HYGIENE, HEALTH PHYSICS
TITLE: THE INDUSTRIAL ENVIRONMENT—ITS EVALUATION AND CONTROL

SOURCE: NIOSH

DATE: FORMAT BOOK COST:

SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY, PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS, GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING, DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS CHROMATOGRAPHY, QUALITY CONTROL IN LABORATORY ANALYSIS, PHYSICS OF SOUND, EAR PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS, RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL,
LAWS, REGULATIONS AND AGENCIES
TITLE: ACCIDENT PREVENTION MANUAL FOR INDUSTRIAL OPERATIONS
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST: P
SUMMARY: HISTORY, OSH ACT, PROGRAM ORGANIZATION, INSPECTION AND CONTROL PROCEDURES, REMOVAL OF JOB HAZARDS, ACCIDENT RECORDS AND INJURY RATES, INVESTIGATION, ANALYSIS, AND COSTS, WORKMAN'S COMPENSATION, SAFETY TRAINING, HUMAN FACTORS, HUMAN BEHAVIOR, OFFICE SAFETY, PUBLICIZING AND MAINTAINING SAFETY, PLANT LAYOUT, EMERGENCY PLANNING, PERSONAL PROTECTIVE EQUIPMENT, INDUSTRIAL SANITATION, HEALTH SERVICES, SOURCES OF HELP, MATERIALS HANDLING AND STORAGE, TOOLS AND EQUIPMENT SAFETY TECHNIQUES, METALS, EXHAUST AND VENTILATION, TOXICOLOGY, NOISE, ELECTRICAL HAZARDS, FIRE PROTECTION, SAFETY ENGINEERING TABLES

TITLE: ASBESTOS SAMPLING (107)
SOURCE: NIOSH DTMD (513)694-8231
DATE: ? FORMAT: VIDEO TAPE COST: $40-50
SUMMARY: DESCRIBES OSHA ASBESTOS SAMPLING PROGRAM

TITLE: CASARETT AND DOULL'S TOXICOLOGY
SOURCE: EDITED BY JOHN DOULL CURTIS D. KLAASSEN MARY O. AMDUR
DATE: FORMAT: MACMILLAN BOOK COST:
SUMMARY: ORIGIN AND SCOPE OF TOXICOLOGY, TOX SAFETY EVALUATIONS, ABSORPTION, DISTRIBUTION, EXCRETION, METABOLISM OF TOXIC SUBSTANCES, INFLUENCING FACTORS, CHEMICAL CARCINOGENS, GENETIC TOX, TERATOGENS, CENTRAL NERVOUS SYSTEM RESPONSES, LIVER, KIDNEY, RESPIRATORY SYSTEM, EYE, BLOOD, REPRODUCTIVE SYSTEM RESPONSES, PESTICIDES, METALS, SOLVENTS, RADIOACTIVE MATERIALS, PLASTICS, TOXINS - ANIMAL ORIGIN, PHYTOTOXICOLOGY, FOOD ADDITIVES, AIR POLLUTANTS, WATER/SOIL POLLUTANTS, FORENSIC TOXICOLOGY, CLINICAL, OCCUPATIONAL TOX, REGULATORY TOX, EXICOLOGY AND THE LAW
TITLE: COMPRENDIUM OF MATERIALS FOR NOISE CONTROL NIOSH PUB # 75-165
SOURCE: NIOSH DTMD
DATE: MAY, 1981 FORMAT: COST:
SUMMARY: THRESHOLD LIMITS: THEIR USE AND MISUSE, VALID REPRESENTATIVE AIR
SAMPLES, MEASUREMENT OF GASES, DUST, DETECTOR TUBES, PROBLEM SET: DETERMINATION
OF NON-COMPLIANCE, OXYGEN DEFICIENCY AND COMBUSTIBLE GAS METERS, PREPARATION OF
CONTROLLED GAS AND VAPOR CONCENTRATIONS, COMBUSTIBLE GAS METER CALIBRATION
APPARATUS, LEGAL ASPECTS OF OCCUPATIONAL SAFETY AND HEALTH ACT, LABORATORY
SECTION

TITLE: FINDING THE HIDDEN KILLERS
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS, SEE 82-102
DATE: ? FORMAT: 3/4 IN VIDEO CASSETTE COST: ?
SUMMARY: NON-TECHNICAL, CONTROL OF INDUSTRIAL ENVIRONMENT, ROLE OF OSHA, NIOSH,
OTHER AGENCIES

TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS,
ARTICULATES, DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION,
TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION,
OR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL
THODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF
PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVS, PELS,
ATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS,
VIEW OF MATHEMATICS,
TITLE: FUNDAMENTALS OF INDUSTRIAL TOXICOLOGY
SOURCE: BY KIM ANDERSON AND RONALD SCOTT
DATE: FORMAT: BOOK COST: 
SUMMARY: DEFINITION/SCOPE OF TOXICOLOGY, HISTORY, ROLE OF TOXICOLOGY, PHYSIOLOGY, MODE OF ACTION, DOSE-RESPONSE RELATIONSHIP, TYPES OF EXPOSURES, IDENTIFICATION OF CONTAMINANTS, BASIS OF AGENCIES, SOURCES OF INFORMATION

TITLE: GAS, VAPOR AND PARTICULATE SAMPLING #592
SOURCE: NIOSH DTMD
DATE: MARCH, 1981 FORMAT: COST: 
SUMMARY: THRESHOLD LIMITS: THEIR USE AND MISUSE, VALID REPRESENTATIVE AIR SAMPLES, MEASUREMENT OF GASES, DUST, DETECTOR TUBES, PROBLEM SET: DETERMINATIONS OF NON-COMPLIANCE, OXYGEN DEFICIENCY AND COMBUSTIBLE GAS METERS, PREPARATION OF CONTROLLED GAS AND VAPOR CONCENTRATIONS, COMBUSTIBLE GAS METER CALIBRATION APPARATUS, LEGAL ASPECTS OF OCCUPATIONAL SAFETY AND HEALTH ACT, LABORATORY SECTION

TITLE: HANDBOOK OF OCCUPATIONAL SAFETY AND HEALTH
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: BOOK COST: 
SUMMARY: SAFETY AND GOOD BUSINESS, OSHA CONSIDERATIONS, SAFE & HEALTHFUL WORKING CONDITIONS, SAFETY INSPECTIONS, ACCIDENT RECORDS AND REPORTS, TRAINING, PROMOTION, MOTIVATION OF EMPLOYEES, SAFEGUARDING MACHINES, MATERIALS HANDLING AND STORAGE, PERSONAL PROTECTIVE EQUIPMENT, FIRE PROTECTION, INDUSTRIAL HYGIENE AND EALTH
TITLE: HAZARDOUS MATERIALS SAFETY, SAFETY AND HEALTH MODULE SH-29
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., WACO, TX 76710
DATE: ? FORMAT: MODULE COST: P
SUMMARY: DISCUSSION BASED ON D.O.T. CLASSIFICATION SCHEME

TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., P.O. BOX 133, STANTON, N.J., 08085
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: RADIOACTIVE EFFECTS AND HAZARDS, CLASSIFICATION OF RADIOACTIVE MATERIALS, POLICIES AND PROCEDURES FOR ISOTOPES, MONITORING PROGRAMS, PROTECTIVE EQUIPMENT

TITLE: HEALTH HAZARDS IN THE ARTS AND CRAFTS
SOURCE: PROCEEDINGS OF THE SOCIETY FOR OCCUPATIONAL SAFETY AND HEALTH CONFERENCE ON HEALTH HAZARDS IN THE ARTS AND CRAFTS, 1980
DATE: FORMAT: BOOK COST: 
SUMMARY: CASE STUDIES OF HEALTH PROBLEMS (CADMIUM POISONING, PERFORMING ARTS, STAINED GLASS WORKERS), SURVEYS AND MONITORING STUDIES IN THE WORKPLACES (COLLEGE ARTS DEPARTMENTS, SMALL FURNITURE STRIPPING SHOPS, CONSUMER BENZENE EXPOSURES DUE TO STRIPPING OF FURNITURE, POTTING STUDIO AND CLASSROOM, LEAD EXPOSURE IN STAINED GLASS INDUSTRY, ROCK DUST EXPOSURE TO SCULPTORS), EVALUATION OF INGREDIENTS IN ARTS AND CRAFTS MATERIALS TO MAKE THEM SAFER, LEGAL, REGULATORY, AND POLICY ISSUES
TITLE: HEAT STRESS
SOURCE: PRINCIPLES OF OS&H ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: BACKGROUND, HEAT EXCHANGE MECHANISMS, PHYSIOLOGIC RESPONSE, HEALTH HAZARDS, VARIABILITY, MEASUREMENT, HEAT STRESS ALGORITHMS, CONTROL

TITLE: INDUSTRIAL ENVIRONMENTAL HEALTH
SOURCE: EDITED BY LESTER V. CRALLEY PATRICK R. ATKINS
DATE: FORMAT: BOOK, ACADEMIC PRESS COST:
SUMMARY: EPIDEMIOLOGIC STUDIES OF OCCUPATIONAL DISEASE, TOXICOLOGY, NOISE, NONIONIZING RADIATION, IONIZING RADIATION, WORK IN HOT ENVIRONMENTS: TLV'S AND PROPOSED STANDARDS, EVALUATION OF CHEMICAL HAZARDS IN THE ENVIRONMENT, HAZARD EVALUATION AND CONTROL, PERSONAL PROTECTIVE DEVICES, OFF-JOB ENVIRONMENTAL HEALTH STRESS AS RELATED TO THE WORKPLACE, IMPACT OF GOVERNMENTAL ENVIRONMENTAL REGULATIONS UPON INDUSTRIAL ACTIVITIES

TITLE: INDUSTRIAL NOISE AND HEARING CONSERVATION
SOURCE: NATIONAL SAFETY COUNCIL EDITED BY JULIAN OLSHIFSKI EARL HARFORD
DATE: FORMAT: BOOK COST:
SUMMARY: INTRODUCTION, MEASUREMENT OF SOUND, EFFECTS OF NOISE ON MAN, CONTROL OF NOISE, INDUSTRIAL AUDIOMETRY, INDUSTRIAL HEARING CONSERVATION PROGRAMS, THIS DOCUMENT CONTAINS OVER ONE THOUSAND PAGES OF DETAILED DISCUSSION ABOUT ALL ASPECTS OF OCCUPATIONAL EXPOSURES TO NOISE.
TITLE: INDUSTRIAL NOISE MANUAL
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION
DATE: 
FORMAT: AIHA BOOK COST:
SUMMARY: PHYSICS OF SOUND, INSTRUMENTS FOR SOUND MEASUREMENTS, TECHNIQUE FOR SOUND MEASUREMENT, NOISE SURVEYS, VIBRATION, ANATOMY/PHYSIOLOGY OF THE EAR, EFFECTS OF NOISE ON MAN, HEARING MEASUREMENT, MEDICAL ASPECTS OF HEARING CONSERVATION, PERSONAL PROTECTIVE DEVICES, HEARING CONSERVATION PROGRAMS, ENGINEERING CONTROL, LEGAL ASPECTS

TITLE: INDUSTRIAL HYGIENE REVIEW MANUAL
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1982 FORMAT: COST:
SUMMARY: CHEMISTRY, BIOCHEMISTRY AND PHYSICS, TOXICOLOGY, RESPIRATORY DISEASE, OCCUPATIONAL DERMATOSES, EXPOSURE CRITERIA, MEDICAL MONITORING, HEAT STRESS, NOISE: EFFECTS AND PROTECTION, OXYGEN LIMITED ENVIRONMENTS, INDUSTRIAL VENTILATION, ECONOMICS, HEALTH PHYSICS, NON-IONIZING RADIATION, ILLUMINATION, STATISTICS IN I.H., SAFETY, OSHA

TITLE: INDUSTRIAL HYGIENE ENGINEERING
SOURCE: 551 COURSE SECTION 2, DTMD, NIOSH
DATE: 1/80 FORMAT: TEXT COST: 
SUMMARY: EFFECTS ON HEALTH AND PERFORMANCE, CONTROL, HEAT STRESS INDICES, PROBLEMS
TITLE: LASER SAFETY HANDBOOK
SOURCE: BY ALEX MALLOW & LEON CHABOT
DATE: FORMAT: BOOK COST:
SUMMARY: INTRODUCTION TO LASER SAFETY, BASICS OF LASERS, BIOLOGICAL EFFECTS OF LASER RADIATION, ASSOCIATED LASER HAZARDS, LASER MEASUREMENTS, PROTECTIVE STANDARDS, LASER BEAM HAZARD EVALUATION, CONTROL OF LASER RADIATION HAZARD, CONTROL OF ASSOCIATED LASER HAZARDS, PUBLIC LAWS, LASER SAFETY PROGRAM, SAFETY IN THE CLASSROOM, MEDICAL SURVEILLANCE, LASER PROTECTIVE EYEWEAR, ATMOSPHERIC EFFECTS

TITLE: LEGAL ASPECTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 #599
STUDENT MANUAL
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:

TITLE: LEGAL ASPECTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 #599
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1978 FORMAT: COST:
TITLE: NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
SOURCE: UNIT 2B, DEVELOPMENT OF AN INTERDISCIPLINARY COURSE IN OCCUPATIONAL
HEALTH ENGINEERING, SMITH, OHIO STATE
DATE: 10/82 FORMAT: OUTLINE COST: NONE
SUMMARY: ORGANIZATION, TYPES OF ACTIVITY

TITLE: NATIONAL MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., P.O. BOX 133, STANTON
W.I., 08805
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: REGULATIONS, INTERNAL POLICIES, GUIDELINES FOR DISPOSAL

TITLE: NONIONIZING RADIATION #583
SOURCE: NIOSH DTMD
DATE: MAY, 1983 FORMAT: COST:
SUMMARY: WAVE AND PARTICLE CONCEPTS OF RADIATION, PRODUCTION OF
ELECTROMAGNETIC RADIATIONS IN ATOMS AND MOLECULES, EM RADIATION INTERACTIONS AND
ROCESSES, EM QUANTITIES AND UNITS, INTRO TO MICROWAVES, BIOLOGICAL EFFECTS OF
MICROWAVE RADIATION, MICROWAVE MONITORING AND CONTROL OF ITS HAZARDS, CODE OF
FEDERAL REGULATIONS, FUNDAMENTALS OF ULTRAVIOLET, VISIBLE, & INFRARED, BIOLOGICAL
EFFECTS AND HAZARDS, STANDARDS, LAWS AND REGULATIONS, EVALUATION OF HAZARDS,
PROTECTION AND CONTROL, THEORY OF OPERATION OF LASERS, CHARACTERISTICS OF
LASERS, LASER HAZARDS, CONTROL OF LASER HAZARDS, INDUSTRIAL USES OF LASERS
TITLE: NOW HEAR THIS
SOURCE: MINE SAFETY APPLIANCES, INC., MARKET DEVELOPMENT GROUP, 600 PENN CENTER BLVD., PITTSBURGH, PA 15235
DATE: ? FORMAT: 2X2 SLIDES WITH AUDIO CASSETTE COST: LOAN
SUMMARY: ANATOMY OF EAR, HOW HEARING LOSS OCCURS, STANDARDS, INSTRUMENTATION FOR MEASURING NOISE LEVEL, PROTECTIVE EQUIPMENT

TITLE: OCC HEALTH TRAINING COURSE FOR COMPLIANCE, SAFETY, AND HEALTH OFFICERS VOLUME I, II - INSTRUCTORS' MANUAL
SOURCE:
DATE: FORMAT: COST:
SUMMARY: BODY RESPONSES TO CHEMICALS, ROUTES OF ENTRY, DOSE RESPONSE, DERMATITIS, CARCINOGENS, AIRBORNE CONTAMINANTS, RESPIRATORY SYSTEM, PERMISSIBLE AIRBORNE CONCENTRATIONS CONTROL OF AIRBORNE HAZARDS, RESPIRATORY PROTECTION DEVICES, PHYSICAL STRESSES, NOISE, HEAT STRESS, IONIZING RADIATION, PRACTICAL FIELD APPLICATIONS, STATISTICS, RECOGNITION OF HEALTH HAZARDS, ROLE OF THE SAFETY SPECIALIST, BRIEFING ON THE IHFOM, TOTAL DUST AND FUME SAMPLING, WEIGHING AND DESSICATION, RESPIRABLE DUST SAMPLING, DUST SAMPLING LABORATORY, CALCULATION OSHA ANALYTICAL LABORATORY, DETECTOR TUBE SAMPLING, NOISE MEASUREMENT AND SAMPLING

TITLE: OCCUPATIONAL EPIDEMIOLOGY
SOURCE: BY RICHARD R. MONSON, MD, DSC
DATE: FORMAT: CRC BOOK COST:
SUMMARY: HISTORY, NATURE OF EPI. DATA, COLLECTION OF EPI. DATA, ANALYSIS OF DATA, INTERPRETATION OF EPI. DATA, OCCUPATIONAL EPIDEMIOLOGY, STUDIES OF MORTALITY, STUDIES OF MORBIDITY, SURVEYS OF HEALTH STATUS OF EMPLOYEES, CURRENT PROBLEMS IN OCCUPATIONAL EPI., RESPIRATORY CANCER, CARDIOVASCULAR DISEASES OCCUPATIONAL)
TITLE: OCCUPATIONAL SAFETY AND HEALTH - AN OVERVIEW
SOURCE: NIOSH DTMD
DATE: OCTOBER, 1978 FORMAT: COST:
SUMMARY: HISTORICAL DEVELOPMENT, THE OSH ACT, THE OCCUPATIONAL SAFETY AND HEALTH ORGANIZATION

TITLE: OCCUPATIONAL RESPIRATORY PROTECTION #593
SOURCE: NIOSH DTMD
DATE: AUGUST, 1990 FORMAT: COST:
SUMMARY: TRAINING, STANDARDS/REGULATIONS, NIOSH/BUREAU OF MINES, SAMPLE FORMS (FITTING, TRAINING, MAINTENANCE, INSPECTION), FITTING, QUALITY ASSURANCE, MAINTENANCE EQUIPMENT

TITLE: OCCUPATIONAL EXPOSURE LIMITS
SOURCE: PRINCIPLES OF OSH ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: RATIONALE FOR LIMITS, TYPES OF LIMITS, RADIATION, LIMITS ON PROTECTION PROVIDED, OTHER COUNTRIES, NOVEL WORKSHIFTS, AGENCIES INVOLVED IN DEVELOPMENT
TITLE: OCCUPATIONAL SAFETY AND HEALTH ACT
SOURCE: UNIT 2, PRINCIPLES OF OS&H ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: HISTORICAL BASIS FOR AND INTENT OF OS&H ACT, KEY PROVISIONS, DUTIES AND STANDARDS, INSPECTIONS, VARIANCES, ROLE OF STATES, EXERCISES

TITLE: OSHA, WORKERS COMPENSATION
SOURCE: UNIT 2A, DEVELOPMENT OF AN INTERDISCIPLINARY COURSE IN OCCUPATIONAL HEALTH ENGINEERING, SMITH, OHIO STATE
DATE: 10/92 FORMAT: OUTLINE COST: NONE
SUMMARY: OHIO WORKERS COMP LAW, INTRODUCTION TO OSH ACT

TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME III
SOURCE: EDITED BY LEWIS J. CRALLEY LESTER V. CRALLEY
DATE: FORMAT: BOOK COST:
SUMMARY: RATIONALE, EMISSION INVENTORY, STATISTICAL DESIGN AND DATA ANALYSIS, REQUIREMENTS, DATA AUTOMATION, ANALYTICAL MEASUREMENTS, MEASUREMENT OF WORK EXPOSURE, BIOLOGICAL INDICATORS OF CHEMICAL DOSAGE AND BURDEN, EXPOSURE VALUATION (TO CHEMICALS, IONIZING AND NONIONIZING RADIATIONS, NOISE, HOT AND HOT ENVIRONMENTS, VIBRATIONS, ABNORMAL PRESSURES, BIOLOGICAL AGENTS), TOXICOLOGICAL DATA EXTRAPOLATION, HEALTH SURVEILLANCE PROGRAMS IN INDUSTRY, PHILOSOPHY AND MANAGEMENT OF ENGINEERING CONTROLS, PERSONAL PROTECTION, JOB SAFETY AND HEALTH LAW, COMPLIANCE AND PROJECTION
TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME I
SOURCE: EDITED BY GEORGE D. CLAYTON FLORENCE E. CLAYTON
DATE: FORMAT: BOOK COST:
SUMMARY: IH-RETRORSPECT AND PROSPECT, LEGISLATION AND LEGISLATIVE TRENDS, IH RECORDS AND REPORTS, SURVEYS AND PERSONNEL, EPIDEMIOLOGY, MODE OF ENTRY AND ACTION OF TOXIC MATERIALS, PULMONARY EFFECTS OF INHALED INORGANIC DUSTS, OCC DERMATOSES, PHYSIOLOGICAL EFFECTS OF ABNORMAL ATMOSPHERIC PRESSURES, NOISE AND HEARING CONSERVATION, NONIONIZING, IONIZING RADIATION, LIGHTING, AIR POLLUTION, AGRICULTURAL HAZARDS, ODOR MEASUREMENT AND CONTROL, SAMPLING AND ANALYSIS, ENGINEERING CONTROLS, AIR POLLUTION CONTROLS, HEAT STRESS, RESPIRATORY PROTECTION, ERGONOMICS, QUALITY CONTROL, CALIBRATION, SANITATION, FIRE AND EXPLOSION HAZARDS

TITLE: POLYCHLORINATED BIPHENYL IN THE WORKPLACE- A SPECIAL COURSE
SOURCE: NIOSH DTMD
DATE: AUGUST, 1980 FORMAT: COST:
SUMMARY: CHEMICAL HEALTH HAZARDS, TLV'S AND PCB'S EFFECT ON MAN, CHEMICAL HAZARDS CONTROL, RESPIRATORY PROTECTION, PERSONAL PROTECTION WEAR, RECORD KEEPING, MEDICAL MONITORING, MATERIAL HANDLING, AIR SAMPLING

TITLE: PUTTING THE RESPIRATORY PROTECTION QUESTION IN PERSPECTIVE
SOURCE: MINE SAFETY APPLIANCES INC., MARKET DEVELOPMENT GROUP, 600 PENN CENTER LD., PITTSBURGH, PA 15235
DATE: FORMAT: SLIDES AND AUDIO CASSETTE COST: $125 OR LOAN
SUMMARY: CHOICE, FIT TESTING, RECOMMENDED STANDARDS
TITLE: SAFETY IN THE SCHOOL SCIENCE LABORATORY #25
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: SCOPE, NEEDS ASSESSMENT, LEGAL ASPECTS, STUDENT INVOLVEMENT, EYE & FACE PROTECTION, HANDLING CHEMICALS, STORAGE/DISPOSAL OF CHEMICALS, LABELING, HANDLING GLASSWARE, BIOLOGICAL AND ANIMAL HAZARDS, VENTILATION, FIRE CONTROL, LABORATORY HARDWARE AND RECORDS

TITLE: SELF EVALUATION OF OCCUPATIONAL SAFETY AND HEALTH PROGRAMS NIOSH PUBLICATION 73-187
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: EMPLOYEE CENTERED PROGRAM, RECOGNIZING AND CONTROLLING HAZARDS, EMPLOYEE SELECTION AND TRAINING FOR SPECIFIC TASKS, MEASURING PROGRAM EFFICACY, SOURCES OF INFO AND CONSULTATION, CHEMICAL, BIOLOGICAL, PHYSICAL & PSYCHOLOGICAL AGENTS, PLANT SAFETY AND HEALTH

TITLE: THE HEAT STRESS MONSTER
SOURCE: NATIONAL NAVAL MEDICAL CENTER, EDUCATION AND TRAINING COMMAND, AUDIOVISUAL RESOURCES BRANCH, CODE 221, BETHESDA, MD 20014
DATE: FORMAT: 16 MM FILM COST: 
SUMMARY: PHYSIOLOGIC STRESS, THERMAL REGULATION MECHANISMS, PHYSIOLOGIC MANIFESTATIONS, EMERGENCY CARE, WET BULB GLOBE TEMPERATURE, SAFE LIMITS OF EXPOSURE
TITLE: THE INDUSTRIAL ENVIRONMENT—ITS EVALUATION AND CONTROL
SOURCE: NIOSH
DATE: FORMAT: BOOK COST:
SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY, PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS, GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING, DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS CHROMATOGRAPHY, QUALITY CONTROL INLABORATORY ANALYSIS, PHYSICS OF SOUND, EAR PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS, RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL.

TITLE: THE ROLE OF OSHA IN SAFETY AND HEALTH, SAFETY AND HEALTH MODULE SH-02
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO, TX 76710
DATE: 1981 FORMAT: MODULE COST: ?
SUMMARY: OSH ACT AND INTRO TO OSHA
LIGHTING AND ILLUMINATION
TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS,
PARTICULATES, DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION,
TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION,
AIR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL
METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF
PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVS, PELS,
CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS,
REVIEW OF MATHEMATICS.

TITLE: INDUSTRIAL HYGIENE REVIEW MANUAL
SOURCE: NIOSH DTM
DATE: SEPTEMBER, 1982 FORMAT: COST:
SUMMARY: CHEMISTRY, BIOCHEMISTRY AND PHYSICS, TOXICOLOGY, RESPIRATORY DISEASE,
OCCUPATIONAL DERMATOSES, EXPOSURE CRITERIA, MEDICAL MONITORING, HEAT STRESS,
NOISE: EFFECTS AND PROTECTION, OXYGEN LIMITED ENVIRONMENTS, INDUSTRIAL
VENTILATION, ECONOMICS, HEALTH PHYSICS, NON-IONIZING RADIATION, ILLUMINATION,
STATISTICS IN I.H., SAFETY, OSHA

TITLE: INDUSTRIAL HYGIENE ENGINEERING # 551
SOURCE: NIOSH DTM
DATE: JANUARY, 1980 FORMAT: COST:
SUMMARY: ENGINEERING CONTROL, HEAT STRESS, INDUSTRIAL VENTILATION, ERGONOMICS,
DISE AND VIBRATION CONTROLS, RADIATION, ILLUMINATION
TITLE: INDUSTRIAL HYGIENE ENGINEERING
SOURCE: 551 COURSE SECTION 7, DTMD, NIOSH
DATE: 1/80 FORMAT: TEXT COST: ?
SUMMARY: INDUSTRIAL CRITERIA, FIXTURE EVALUATION AND SELECTION, GLOSSARY,
ECONOMIC ANALYSIS, REFRESHER

TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME I
SOURCE: EDITED BY GEORGE D. CLAYTON FLORENCE E. CLAYTON
DATE: FORMAT: BOOK COST:
SUMMARY: IH-RETSOSPECT AND PROSPECT, LEGISLATION AND LEGISLATIVE TRENDS, IH
RECORDS AND REPORTS, SURVEYS AND PERSONNEL, EPIDEMIOLOGY, MODE OF ENTRY AND
ACTION OF TOXIC MATERIALS, PULMONARY EFFECTS OF INHALED ORGANIC DUSTS, OCC
DERMATOSES, PHYSIOLOGICAL EFFECTS OF ABNORMAL ATMOSPHERIC PRESSURES, NOISE AND
HEARING CONSERVATION, NONIONIZING, IONIZING RADIATION, LIGHTING, AIR POLLUTION,
AGRICULTURAL HAZARDS, ODOR MEASUREMENT AND CONTROL, SAMPLING AND ANALYSIS,
ENGINEERING CONTROLS, AIR POLLUTION CONTROLS, HEAT STRESS, RESPIRATORY
PROTECTION, ERGONOMICS, QUALITY CONTROL, CALIBRATION, SANITATION, FIRE AND
EXPLOSION HAZARDS

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS #510, VOL II
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980 FORMAT: COST:
SUMMARY: ILLUMINATION, HEAT STRESS, OCCUPATIONAL CANCER, ECONOMICS, WELDING,
METAL PROCESSING AND CONTROLS, WELDING AND METAL WORKSHOP, INSTRUMENTATION,
PHYSICAL HAZARDS, PHYSICAL HAZARDS WORKSHOP, VIBRATION, BACK ON THE JOB,
ERGONOMICS, MORE ABOUT ILLUMINATION, MONITORING, INSTRUMENTATION,
SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY, PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS, GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING, DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS CHROMATOGRAPHY, QUALITY CONTROL INLABORATORY ANALYSIS, PHYSICS OF SOUND, EAR PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS, RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL,
NOISE, HEARING CONSERVATION AND VIBRATION
Title: Accident Prevention Manual for Industrial Operations
Source: National Safety Council
Date: Format: NSC Book
Cost: P

Title: Applied Industrial Hygiene #549
Source: NIOSH DTMD
Date: December, 1980
Format: Cost:
Summary: Gas and Vapor Sampling, Air Flow Measurements, Particulate Sampling, Industrial Ventilation, Heat Stresss, Radiation, Noise

Title: Basic Industrial Hygiene
Source: American Industrial Hygiene Association' by Richard S. Brief
Date: Format: A Training Manual, AIHA
Cost:
TITLE: CONTROL OF THE OCCUPATIONAL ENVIRONMENT-INSTRUCTORS MANUAL
SOURCE: NIOSH-DTMD
DATE: SEPTEMBER, 1990
FORMAT: 
COST: 
SUMMARY: GENERAL CONCEPTS OF HAZARDS CONTROL, CONTROL OF AIRBORNE CONTAMINANTS, CONTROL OF RADIATION, CONTROL OF THERMAL STRESS, CONTROL OF NOISE

TITLE: DANGEROUS NOISE - HEARING CONSERVATION
SOURCE: INTERNATIONAL FILM BUREAU, 332 S. MICHIGAN AVE., CHICAGO, IL 60604
DATE: 
FORMAT: 16 MM FILM OR VIDEO CASSETTE
COST: $375 OR 37.50 RENTAL
SUMMARY: ENGINEERING DESIGN, PERSONAL PROTECTIVE EQUIPMENT, AUDIOMETRIC TESTING, HEARING CONSERVATION

TITLE: DB & DB
SOURCE: DTMD, NIOSH
DATE: 
FORMAT: PROGRAM FOR APPLE 2
COST: NONE
SUMMARY: ADDING DECIBELS
TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK  COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS,
PARTICULATES, DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION,
TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION,
AIR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL
METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF
PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVS, PELS,
CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS,
REVIEW OF MATHEMATICS.

TITLE: HEALTH RISKS OF FARM WORKERS
SOURCE: NIOSH, DTMD, (513) 634-8231
DATE: FORMAT: VIDEO TAPE  COST: $40-50
SUMMARY: OVERVIEW OF HEALTH RISKS ON THE FARM

TITLE: INDUSTRIAL ENVIRONMENTAL HEALTH
SOURCE: EDITED BY LESTER V. CRALLEY PATRICK R. ATKINS
DATE: FORMAT: BOOK, ACADEMIC PRESS  COST:
SUMMARY: EPIDEMIOLOGIC STUDIES OF OCCUPATIONAL DISEASE, TOXICOLOGY, NOISE,
NONIONIZING RADIATION, IONIZING RADIATION, WORK IN HOT ENVIRONMENTS: TLV'S AND
PROPOSED STANDARDS, EVALUATION OF CHEMICAL HAZARDS IN THE ENVIRONMENT, HAZARD
EVALUATION AND CONTROL, PERSONAL PROTECTIVE DEVICES, OFF-JOB ENVIRONMENTAL
HEALTH STRESS AS RELATED TO THE WORKPLACE, IMPACT OF GOVERNMENTAL ENVIRONMENTAL
REGULATIONS UPON INDUSTRIAL ACTIVITIES
TITLE: INDUSTRIAL NOISE AND HEARING CONSERVATION
SOURCE: NATIONAL SAFETY COUNCIL EDITED BY JULIAN OLSHIFSKY EARL HARFORD
DATE: FORMAT: BOOK COST:
SUMMARY: INTRODUCTION, MEASUREMENT OF SOUND, EFFECTS OF NOISE ON MAN, CONTROL OF NOISE, INDUSTRIAL AUDIOMETRY, INDUSTRIAL HEARING CONSERVATION PROGRAMS, THIS DOCUMENT CONTAINS OVER ONE THOUSAND PAGES OF DETAILED DISCUSSION ABOUT ALL ASPECTS OF OCCUPATIONAL EXPOSURES TO NOISE.

TITLE: INDUSTRIAL HEALTH
SOURCE: BY JACK PETERSON
DATE: FORMAT: BOOK COST:
SUMMARY: ENTRY & TOXIC ACTIONS OF CHEMICAL SUBSTANCES, LABORATORY DETERMINATION OF TOXICITY, GASES, METALS AND METALLOIDS, PNEUMOCONIOSES, ORGANIC SOLVENTS, MONOMERS AND POLYMERS, PESTICIDES, SENSITIZATION & DERMATITIS, CARCINOGENESIS, ABNORMAL PRESSURE, NOISE, BIOETHERMAL STRESS, NONIONIZING RADIATION, IONIZING RADIATION, HAZARD EVALUATION AND CONTROL, REVIEW OF ORGANIC CHEMISTRY NOMENCLATURE

TITLE: INDUSTRIAL NOISE MANUAL
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION
DATE: FORMAT: AIHA BOOK COST:
SUMMARY: PHYSICS OF SOUND, INSTRUMENTS FOR SOUND MEASUREMENTS, TECHNIQUE FOR SOUND MEASUREMENT, NOISE SURVEYS, VIBRATION, ANATOMY/PHYSIOLOGY OF THE EAR, EFFECTS OF NOISE ON MAN, HEARING MEASUREMENT, MEDICAL ASPECTS OF HEARING CONSERVATION, PERSONAL PROTECTIVE DEVICES, HEARING CONSERVATION PROGRAMS, ENGINEERING CONTROL, LEGAL ASPECTS
TITLE: INDUSTRIAL NOISE MANUAL
SOURCE: NIOSH DTMD
DATE: 1975 FORMAT: COST:
SUMMARY: AIHA, PHYSICS OF SOUND, INSTRUMENTS FOR SOUND MEASUREMENTS, TECHNIQUE OF SOUND MEASUREMENT, NOISE SURVEYS, VIBRATION, ANATOMY AND PHYSIOLOGY OF THE EAR, EFFECTS OF NOISE ON MAN, HEARING MEASUREMENT, MEDICAL ASPECTS OF INDUSTRIAL HEARING CONSERVATION, PERSONAL PROTECTIVE DEVICES AND HEARING CONSERVATION PROGRAMS, ENGINEERING CONTROL, LEGAL ASPECTS OF THE INDUSTRIAL NOISE PROBLEM

TITLE: INDUSTRIAL NOISE
SOURCE: NIOSH DTMD
DATE: MARCH, 1981 FORMAT: COST:
SUMMARY: PHYSICS OF SOUND, OCCUPATIONAL HEARING LOSS, EFFECTS OF NOISE ON MAN, NOISE MEASURING INSTRUMENTS, NOISE SURVEY, AUDIOMETRY, NOISE CRITERIA, THEORY AND TECHNIQUES OF NOISE CONTROL, CURVE OF LEGAL ASPECTS OF NOISE CONTROL

TITLE: INDUSTRIAL HYGIENE REVIEW MANUAL
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1982 FORMAT: COST:
SUMMARY: CHEMISTRY, BIOCHEMISTRY AND PHYSICS, TOXICOLOGY, RESPIRATORY DISEASE, OCCUPATIONAL DERMATOSES, EXPOSURE CRITERIA, MEDICAL MONITORING, HEAT STRESS, DISE: EFFECTS AND PROTECTION, OXYGEN LIMITED ENVIRONMENTS, INDUSTRIAL VENTILATION, ECONOMICS, HEALTH PHYSICS, NON-IONIZING RADIATION, ILLUMINATION, STATISTICS IN I.H., SAFETY, OSHA
TITLE: INDUSTRIAL HYGIENE MEASUREMENTS # 550
SOURCE: NIOSH DTMD
DATE: MAY, 1982 FORMAT: COST:
SUMMARY: GAS AND VAPOR SAMPLING, AIR FLOE MEASUREMENTS, PARTICULATE SAMPLING, INDUSTRIAL VENTILATION, HEAT STRESS, RADIATION, NOISE

TITLE: INDUSTRIAL HYGIENE ENGINEERING # 551
SOURCE: NIOSH DTMD
DATE: JANUARY, 1980 FORMAT: COST:
SUMMARY: ENGINEERING CONTROL, HEAT STRESS, INDUSTRIAL VENTILATION, ERGONOMICS, NOISE AND VIBRATION CONTROLS, RADIATION, ILLUMINATION

TITLE: INDUSTRIAL NOISE (#158)
SOURCE: NIOSH, DTMD, (513)684-8231
DATE: ? FORMAT: VIDEO TAPE COST: FREE FOR SHORT PERIOD
SUMMARY: SCOPES HAZARD, EFFECTIVE CONTROL TECHNOLOGIES, FOR ENGINEERS AND OTHERS
TITLE: INDUSTRIAL HYGIENE ENGINEERING
SOURCE: 551 COURSE, DTMD, NIOSH
DATE: 1/80 FORMAT: TEXT COST: ?
SUMMARY: PHYSICS OF SOUND, PARAMETERS, CONTROL, VIBRATION ISOLATION, PROBLEMS

TITLE: NDCS 3
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE COMPUTER COST: NONE
SUMMARY: STATISTICAL CALCULATION OF NOISE DOSE

TITLE: NOISE
SOURCE: PRINCIPLES OF OS&H ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: BACKGROUND, FUNDAMENTALS OF SOUND, PHYSIOLOGY OF HEARING, SOUND MEASUREMENT, EXPOSURE STANDARDS, CONTROL, HEARING PROTECTORS, REQUIRED HEARING PROTECTION PROGRAM.
TITLE: NOISE DOSE 2
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE COMPUTER COST: NONE
SUMMARY: DOSE CALCULATED FROM SPL AND EXPOSURE TIME

TITLE: NOW HEAR THIS
SOURCE: MINE SAFETY APPLIANCES, INC., MARKET DEVELOPMENT GROUP, 600 PENN CENTER BLVD., PITTSBURGH, PA 15225
DATE: ? FORMAT: 2X2 SLIDES WITH AUDIO CASSETTE COST: LOAN
SUMMARY: ANATOMY OF EAR, HOW HEARING LOSS OCCURS, STANDARDS, INSTRUMENTATION FOR MEASURING NOISE LEVEL, PROTECTIVE EQUIPMENT

TITLE: OBA TO DBA
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE COMPUTER COST: NONE
SUMMARY: CONVERTS OCTAVE BAND SPL TO DBA VALUE
TITLE: OCC OCCUPATIONAL HEALTH TRAINING COURSE FOR COMPLIANCE, SAFETY, AND HEALTH OFFICERS
VOLUME I, II - INSTRUCTORS' MANUAL
SOURCE:
DATE: FORMAT: COST:
SUMMARY: BODY RESPONSES TO CHEMICALS, ROUTES OF ENTRY, DOSE RESPONSE, DERMATITIS, CARCINOGENS, AIRBORNE CONTAMINANTS, RESPIRATORY SYSTEM, PERMISSIBLE AIRBORNE CONCENTRATIONS CONTROL OF AIRBORNE HAZARDS, RESPIRATORY PROTECTION DEVICES, PHYSICAL STRESSES, NOISE, HEAT STRESS, IONIZING RADIATION, PRACTICAL FIELD APPLICATIONS, STATISTICS, RECOGNITION OF HEALTH HAZARDS, ROLE OF THE SAFETY SPECIALIST, BRIEFING ON THE IHFOM, TOTAL DUST AND FUME SAMPLING, WEIGHING AND DESSICATION, RESPIRABLE DUST SAMPLING, DUST SAMPLING LABORATORY, CALCULATION S, OSHA ANALYTICAL LABORATORY, DETECTOR TUBE SAMPLING, NOISE MEASUREMENT AND SAMPLING.
TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME I
SOURCE: EDITED BY GEORGE D. CLAYTON FLORENCE E. CLAYTON
DATE: FORMAT: BOOK COST:
SUMMARY: IH-RETROSPECT AND PROSPECT, LEGISLATION AND LEGISLATIVE TRENDS, IH RECORDS AND REPORTS, SURVEYS AND PERSONNEL, EPIDEMIOLOGY, MODE OF ENTRY AND ACTION OF TOXIC MATERIALS, PULMONARY EFFECTS OF INHALED INORGANIC DUSTS, OCC DERMATOSSES, PHYSIOLOGICAL EFFECTS OF ABNORMAL ATMOSPHERIC PRESSURES, NOISE AND HEARING CONSERVATION, NONIONIZING, IONIZING RADIATION, LIGHTING, AIR POLLUTION, AGRICULTURAL HAZARDS, ODOR MEASUREMENT AND CONTROL, SAMPLING AND ANALYSIS, ENGINEERING CONTROLS, AIR POLLUTION CONTROLS, HEAT STRESS, RESPIRATORY PROTECTION, ERGONOMICS, QUALITY CONTROL, CALIBRATION, SANITATION, FIRE AND EXPLOSION HAZARDS

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS #510, VOL I
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980 FORMAT: COST:
SUMMARY: BIOMODES OF ENTRY, TOXICITY OF CHEMICAL AGENTS, PATHOLOGY OF OCC DISEASES, INDUSTRIAL HYGIENE SURVEYS, SURVEY PROCEDURES, EPIDEMIOLOGICAL FACTORS, EVALUATION OF TOXICITY, DEVELOPMENT AND APPLICATION OF STANDARDS, PNEUMOCONIOSIS, CHEMICAL HAZARDS/WORKSHOP, PREVENTION, OCCUPATIONAL SKIN DISEASES, PHYSICAL AGENTS - ELECTROMAGNETIC SPECTRUM, IONIZING RADIATION, NOISE, NOISE WORKSHOP, CHEMICAL TREATMENT, CHEMICAL TREATMENT WORKSHOP

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS
SOURCE: 510 COURSE MANUAL VOL 2, DTMD, NIOSH
DATE: 12/31/74 FORMAT: TEXT COST: ?
SUMMARY: MODULES 36, 43
TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS
SOURCE: 510 COURSE MANUAL VOL I, DTMD, NIOSH
DATE: 12/31/74 FORMAT: TEXT COST: ?
SUMMARY: MODULES 20,21

TITLE: RECOGNIZING JOB HEALTH HAZARDS, SAFETY AND HEALTH MODULE SH-OS
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR.,
SUITE C., WACO TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: DISCUSSES 4 GENERAL CLASSES OF ENVIRONMENTAL STRESSES INC CHEMICAL,
PHYSICAL, BIOLOGIC, AND ERGONOMIC. ALSO MODES OF ENTRY, SOURCES, PROTECTIVE
MEASURES, HOW TO RECOGNIZE HEALTH HAZARDS

TITLE: ROOM CONSTANT 24
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE COMPUTER COST: NONE
SUMMARY: CALCULATES ROOM CONSTANT OR SPL AT A GIVEN DISTANCE FROM SOURCE WHEN
APPROPRIATE DATA ARE SPECIFIED.
TITLE: SELF EVALUATION OF OCCUPATIONAL SAFETY AND HEALTH PROGRAMS NIOSH
PUBLICATION 73-187
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: EMPLOYEE CENTERED PROGRAM, RECOGNIZING AND CONTROLLING HAZARDS. EMPLOYEE
SELECTION AND TRAINING FOR SPECIFIC TASKS, MEASURING PROGRAM EFFICACY, SOURCES OF
INFO AND CONSULTATION, CHEMICAL, BIOLOGICAL, PHYSICAL & PSYCHOLOGICAL AGENTS,
PLANT SAFETY AND HEALTH

TITLE: SOUND LEVEL METER CALIBRATION
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: ACCURACY DETERMINATION UNDER FIELD CONDITIONS

TITLE: STAT NOISE DOSE 1
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE COMPUTER COST: NONE
SUMMARY:
TITLE: THE INDUSTRIAL ENVIRONMENT—ITS EVALUATION AND CONTROL
SOURCE: NIOSH
DATE: FORMAT: BOOK COST:
SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY, PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS, GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING, DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS CHROMATOGRAPHY, QUALITY CONTROL IN LABORATORY ANALYSIS, PHYSICS OF SOUND, EAR PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS, RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL.

TITLE: VIBRATION
SOURCE: PRINCIPLES OF OSH ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: BACKGROUND, TERMINOLOGY, WHOLE BODY, SEGMENTAL

TITLE: VIBRATION AND NOISE CONTROL, SAFETY AND HEALTH MODULE SH-33
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SITE C, WACO TX 76710
DATE: FORMAT: MODULE COST:
SUMMARY: WORKER INFO ON NOISE AND ITS CONTROL
NONIONIZING RADIATIONS
Title: Basic Industrial Hygiene
Source: American Industrial Hygiene Association, by Richard S. Brief
Date: Format: A Training Manual, AIHA Cost:

Title: Engineering Control of Occupational Health Hazards in the Foundry Industry
Source: NIOSH DTD
Date: August, 1980 Format: Cost:
Summary: Potential Hazards, Control Methods: Substitution and Isolation, Control Methods: Introduction to Ventilation, Enclosing, and Exterior Hoods, Control Methods: Non-Receiving Hoods and General Ventilation, Microwave Monitoring, House Keeping and the Search for New and Improved Control Methods

Title: Fundamentals of Industrial Hygiene
Source: National Safety Council
Date: Format: NSC Book Cost:
Summary: Fundamental Concepts, Lungs, Skin, Ears, Eyes, Solvents, Articulates, Dermatoses, Noise, Ionizing Radiation, Nonionizing Radiation, Temperature Extremes, Ergonomics, Biological Hazards, Toxicology, Evaluation, IR Sampling Instruments, Direct Reading Gas and Vapor Monitors, Control Methods, Ventilation, Protective Equipment, Regulations, Descriptions of Professionals in the Occupational Health Field, Sources of Help, TLVs, PELS, Catalog of Toxic Substances, Chemical Hazards, Glossary, Conversion of Units, Review of Mathematics,
TITLE: INDUSTRIAL ENVIRONMENTAL HEALTH
SOURCE: EDITED BY LESTER V. CRALLEY PATRICK R. ATKINS
DATE: FORMAT: BOOK, ACADEMIC PRESS COST:
SUMMARY: EPIDEMIOLOGIC STUDIES OF OCCUPATIONAL DISEASE, TOXICOLOGY, NOISE, NONIONIZING RADIATION, IONIZING RADIATION, WORK IN HOT ENVIRONMENTS: TLV’S AND PROPOSED STANDARDS, EVALUATION OF CHEMICAL HAZARDS IN THE ENVIRONMENT, HAZARD EVALUATION AND CONTROL, PERSONAL PROTECTIVE DEVICES, OFF-JOB ENVIRONMENTAL HEALTH STRESS AS RELATED TO THE WORKPLACE, IMPACT OF GOVERNMENTAL ENVIRONMENTAL REGULATIONS UPON INDUSTRIAL ACTIVITIES

TITLE: INDUSTRIAL HEALTH
SOURCE: BY JACK PETERSON
DATE: FORMAT: BOOK COST:
SUMMARY: ENTRY & TOXIC ACTIONS OF CHEMICAL SUBSTANCES, LABORATORY DETERMINATION OF TOXICITY, BASES, METALS AND METALLOIDS, PNEUMOCONIOSES, ORGANIC SOLVENTS, MONOMERS AND POLYMERS, PESTICIDES, SENSITIZATION & DERMATITIS, CARCINOGENESIS, ABNORMAL PRESSURE, NOISE, BIOThermal STRESS, NONIONIZING RADIATION, IONIZING RADIATION, HAZARD EVALUATION AND CONTROL, REVIEW OF ORGANIC CHEMISTRY NOMENCLATURE

TITLE: INDUSTRIAL HYGIENE REVIEW MANUAL
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1982 FORMAT: COST:
SUMMARY: CHEMISTRY, BIOCHEMISTRY AND PHYSICS, TOXICOLOGY, RESPIRATORY DISEASE, OCCUPATIONAL DERMATOSES, EXPOSURE CRITERIA, MEDICAL MONITORING, HEAT STRESS, NOISE: EFFECTS AND PROTECTION, OXYGEN LIMITED ENVIRONMENTS, INDUSTRIAL VENTILATION, ECONOMICS, HEALTH PHYSICS, NON-IONIZING RADIATION, ILLUMINATION, STATISTICS IN I.H., SAFETY, OSHA
TITLE: INDUSTRIAL HYGIENE ENGINEERING
SOURCE: 551 COURSE SECTION 6, DTMD, NIOSH
DATE: 1/80 FORMAT: TEXT COST: ?
SUMMARY: CONTROL MEASURES

TITLE: IONIZING AND NONIONIZING RADIATION PROTECTION, SAFETY AND HEALTH MODULE SH-35
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO, TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: ILLUSTRATES WHERE RADIATION EXPOSURES CAN OCCUR IN INDUSTRY AND THE POTENTIAL EXPOSURE ASSOCIATED WITH EACH, GUIDE FOR AVOIDING EXPOSURE

TITLE: LASER SAFETY HANDBOOK
SOURCE: BY ALEX MALLOW & LEON CHABOT
DATE: FORMAT: BOOK COST:
SUMMARY: INTRODUCTION TO LASER SAFETY, BASICS OF LASERS, BIOLOGICAL EFFECTS OF LASER RADIATION, ASSOCIATED LASER HAZARDS, LASER MEASUREMENTS, PROTECTIVE STANDARDS, LASER BEAM HAZARD EVALUATION, CONTROL OF LASER RADIATION HAZARD, CONTROL OF ASSOCIATED LASER HAZARDS, PUBLIC LAWS, LASER SAFETY PROGRAM, SAFETY IN THE CLASSROOM, MEDICAL SURVEILLANCE, LASER PROTECTIVE EYEWEAR, ATMOSPHERIC EFFECTS
TITLE: NONIONIZING RADIATION #537
SOURCE: NIOSH DTMD
DATE: MAY, 1983
FORMAT: COST:
SUMMARY: WAVE AND PARTICLE CONCEPTS OF RADIATION, PRODUCTION OF ELECTROMAGNETIC RADIATIONS IN ATOMS AND MOLECULES, EM RADIATION INTERACTIONS AND PROCESSES, EM QUANTITIES AND UNITS, INTRO TO MICROWAVES, BIOLOGICAL EFFECTS OF MICROWAVE RADIATION, MICROWAVE MONITORING AND CONTROL OF ITS HAZARDS, CODE OF FEDERAL REGULATIONS, FUNDAMENTALS OF ULTRAVIOLET, VISIBLE, & INFRARED, BIOLOGICAL EFFECTS AND HAZARDS, STANDARDS, LAWS AND REGULATIONS, EVALUATION OF HAZARDS, PROTECTION AND CONTROL, THEORY OF OPERATION OF LASERS, CHARACTERISTICS OF LASERS, LASER HAZARDS, CONTROL OF LASER HAZARDS, INDUSTRIAL USES OF LASERS

TITLE: OCC HEALTH TRAINING COURSE FOR COMPLIANCE, SAFETY, AND HEALTH OFFICERS VOLUME I, II - INSTRUCTORS' MANUAL
SOURCE: DATE: FORMAT: COST:
SUMMARY: BODY RESPONSES TO CHEMICALS, ROUTES OF ENTRY, DOSE RESPONSE, DERMATITIS, CARCINOGENS, AIRBORNE CONTAMINANTS, RESPIRATORY SYSTEM, PERMISSIBLE AIRBORNE CONCENTRATIONS CONTROL OF AIRBORNE HAZARDS, RESPIRATORY PROTECTION DEVICES, PHYSICAL STRESSES, NOISE, HEAT STRESS, IONIZING RADIATION, PRACTICAL FIELD APPLICATIONS, STATISTICS, RECOGNITION OF HEALTH HAZARDS, ROLE OF THE SAFETY SPECIALIST, BRIEFING ON THE IHFOM, TOTAL DUST AND FUME SAMPLING, WEIGHING AND DESSICATION, RESPIRABLE DUST sampling, DUST SAMPLING LABORATORY, CALCULATION S, OSHA ANALYTICAL LABORATORY, DETECTOR TUBE SAMPLING, NOISE MEASUREMENT AND SAMPLING

TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME III
SOURCE: EDITED BY LEWIS J. CRALLEY LESTER V. CRALLEY
DATE: FORMAT: BOOK COST:
SUMMARY: RATIONALE, EMISSION INVENTORY, STATISTICAL DESIGN AND DATA ANALYSIS REQUIREMENTS, DATA AUTOMATION, ANALYTICAL MEASUREMENTS, MEASUREMENT OF WORKER EXPOSURE, BIOLOGICAL INDICATORS OF CHEMICAL DOSAGE AND BURDEN, EXPOSURE EVALUATION (TO CHEMICALS, IONIZING AND NONIONIZING RADIATIONS, NOISE, HOT AND OLD ENVIRONMENTS, VIBRATIONS, ABNORMAL PressURES, BIOLOGICAL AGENTS), TOXICOLOGICAL DATA EXTRAPOLATION, HEALTH SURVEILLANCE PROGRAMS IN INDUSTRY, PHILOSOPHY AND MANAGEMENT OF ENGINEERING CONTROLS, PERSONAL PROTECTION, JOB SAFETY AND HEALTH LAW, COMPLIANCE AND PROJECTION
TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS #510, VOL I
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980 FORMAT: COST:
SUMMARY: MODES OF ENTRY, TOXICITY OF CHEMICAL AGENTS, PATHOLOGY OF OCC DISEASES, INDUSTRIAL HYGIENE SURVEYS, SURVEY PROCEDURES, EPIDEMIOLOGICAL FACTORS, EVALUATION OF TOXICITY, DEVELOPMENT AND APPLICATION OF STANDARDS, PNEUMOCONIOSIS, CHEMICAL HAZARDS/WORKSHOP, PREVENTION, OCCUPATIONAL SKIN DISEASES, PHYSICAL AGENTS - ELECTROMAGNETIC SPECTRUM, IONIZING RADIATION, NOISE, NOISE WORKSHOP, CHEMICAL TREATMENT, CHEMICAL TREATMENT WORKSHOP

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS
SOURCE: 510 COURSE MANUAL, VOL 1, DTMD, NIOSH
DATE: 12/31/74 FORMAT: TEXT COST:
SUMMARY: MODULE 18. PHYSICAL AGENTS, ELECTROMAGNETIC SPECTRUM

TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME I
SOURCE: EDITED BY GEORGE D. CLAYTON FLORENCE E. CLAYTON
DATE: FORMAT: BOOK COST:
SUMMARY: IH-RETRoSPECT AND PROSPECT, LEGISLATION AND LEGISLATIVE TRENDS, IH RECORDS AND REPORTS, SURVEYS AND PERSONNEL, EPIDEMIOLOGY, MODE OF ENTRY AND ACTION OF TOXIC MATERIALS, PULMONARY EFFECTS OF INHALED INORGANIC DUSTS, OCC DERMATOSES, PHYSIOLOGICAL EFFECTS OF ABNORMAL ATMOSPHERIC PRESSURES, NOISE AND HEARING CONSERVATION, NONIONIZING, IONIZING RADIATION, LIGHTING, AIR POLLUTION, AGRICULTURAL HAZARDS, ODOR MEASUREMENT AND CONTROL, SAMPLING AND ANALYSIS, ENGINEERING CONTROLS, AIR POLLUTION CONTROLS, HEAT STRESS, RESPIRATORY PROTECTION, ERGONOMICS, QUALITY CONTROL, CALIBRATION, SANITATION, FIRE AND EXPLOSION HAZARDS
TITLE: RECOGNIZING JOB HEALTH HAZARDS, SAFETY AND HEALTH MODULE SH-08
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR.,
SUITE C., WACO TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: DISCUSSES 4 GENERAL CLASSES OF ENVIRONMENTAL STRESSES INC CHEMICAL,
PHYSICAL, BIOLOGIC, AND ERGONOMIC. ALSO MODES OF ENTRY, SOURCES, PROTECTIVE
MEASURES, HOW TO RECOGNIZE HEALTH HAZARDS

TITLE: THE INDUSTRIAL ENVIRONMENT__ ITS EVALUATION AND CONTROL
SOURCE: NIOSH
DATE: FORMAT: BOOK COST:
SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY,
PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS,
GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN
CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING,
DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL
CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS
CHROMATOGRAPHY, QUALITY CONTROL INLABORATORY ANALYSIS, PHYSICS OF SOUND, EAR
PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING
RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS,
RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL,
OCCUPATIONAL SAFETY AND HEALTH PROGRAMS
TITLE: ACCIDENT PREVENTION MANUAL FOR INDUSTRIAL OPERATIONS
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST: P
SUMMARY: HISTORY, OSH ACT, PROGRAM ORGANIZATION, INSPECTION AND CONTROL PROCEDURES, REMOVAL OF JOB HAZARDS, ACCIDENT RECORDS AND INJURY RATES, INVESTIGATION, ANALYSIS, AND COSTS, WORKMAN'S COMPENSATION, SAFETY TRAINING, HUMAN FACTORS, HUMAN BEHAVIOR, OFFICE SAFETY, PUBLICIZING AND MAINTAINING SAFETY, PLANT LAYOUT, EMERGENCY PLANNING, PERSONAL PROTECTIVE EQUIPMENT, INDUSTRIAL SANITATION, HEALTH SERVICES, SOURCES OF HELP, MATERIALS HANDLING AND STORAGE, TOOLS AND EQUIPMENT SAFETY TECHNIQUES, METALS, EXHAUST AND VENTILATION, TOXICOLOGY, NOISE, ELECTRICAL HAZARDS, FIRE PROTECTION, SAFETY ENGINEERING TABLES

TITLE: AND THEN THERE WERE TWO
SOURCE: INTERNATIONAL FILM BUREAU, 332 S. MICHIGAN AVE., CHICAGO, IL 60604
DATE: FORMAT: 16 MM FILM AND VIDEO CASSETTE COST: $375 OR 45 RENTAL
SUMMARY: ROLE OF HUMAN FACTORS AND SUPERVISORY PRESSURE IN ACCIDENTS

TITLE: ASBESTOS SAMPLING (107)
SOURCE: NIOSH DTMD (513) 684-8231
DATE: FORMAT: VIDEO TAPE COST: $40-50
SUMMARY: DESCRIBES OSHA ASBESTOS SAMPLING PROGRAM
TITLE: BEHAVIOR MANAGEMENT FOR OCCUPATIONAL SAFETY AND HEALTH
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1979 FORMAT: COST:
SUMMARY: GOALS AND TARGETS, DATA SYSTEMS, HAZARD CONTROL: WRITTEN FEEDBACK,
EXPOSURE CONTROL: TRAINING AND FOLLOW-UP, SAFETY PERFORMANCE CONTROL: GRAPHIC
FEEDBACK, SAFETY AND HEALTH LOSS CONTROL: INCENTIVE PROGRAMS

TITLE: CASARETT AND DOULL'S TOXICOLOGY
SOURCE: EDITED BY JOHN DOULL CURTIS D. KLAASSEN MARY O. AMDUR
DATE: FORMAT: MACMILLAN BOOK COST:
SUMMARY: ORIGIN AND SCOPE OF TOXICOLOGY, TOX SAFETY EVALUATIONS,
ABSORPTION, DISTRIBUTION, EXCRETION, METABOLISM OF TOXIC SUBSTANCES, INFLUENCING
FACTORS, CHEMICAL CARCINOGENS, GENETIC TOX, TERATOGENS, CENTRAL NERVOUS SYSTEM
RESPONSES, LIVER, KIDNEY, RESPIRATORY SYSTEM, EYE, BLOOD, REPRODUCTIVE SYSTEM
RESPONSES, PESTICIDES, METALS, SOLVENTS, RADIOACTIVE MATERIALS, PLASTICS, TOXINS
OF ANIMAL ORIGIN, PHYTOTOXICOLOGY, FOOD ADDITIVES, AIR POLLUTANTS, WATER/SOIL
POLLUTANTS, FORENSIC TOXICOLOGY, CLINICAL, OCCUPATIONAL TOX, REGULATORY TOX,
TOXICOLOGY AND THE LAW

TITLE: CHEMICAL HAZARDS AND WASTE DISPOSAL SAFETY AND HEALTH, SAFETY AND HEALTH
MODULE SH-46
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR.,
SUITE 6, WACO TX 76710
DATE: FORMAT: MODULE COST: ?
SUMMARY: OVERVIEW OF HAZARDS AND HANDLING PROCEDURES
TITLE: DANGEROUS NOISE - HEARING CONSERVATION
SOURCE: INTERNATIONAL FILM BUREAU, 332 S. MICHIGAN AVE., CHICAGO, IL 60604
DATE: ? FORMAT: 16 MM FILM OR VIDEO CASSETTE COST: $375 OR 37.50 RENTAL
SUMMARY: ENGINEERING DESIGN, PERSONAL PROTECTIVE EQUIPMENT, AUDIOMETRIC TESTING, HEARING CONSERVATION

TITLE: DEALING WITH OUTLYING OBSERVATIONS # 556
SOURCE: NIOSH DTMD
DATE:  FORMAT:  COST:
SUMMARY:

TITLE: DIRECT READING COLORIMETRIC INDICATOR TUBES MANUAL
SOURCE:
DATE: 1976 FORMAT:  COST:
SUMMARY: OPERATING PRINCIPLE, METHODS USED / COLORIMETRIC INDICATOR SYSTEMS, APPLICATIONS, INTERCHANGEABILITY OF INDICATOR TUBES AND PUMPS, PUMP TESTING MAINTENANCE, VERIFICATION OF TESTING OF COLORIMETRIC TUBES, READING DETECTOR TUBES, FIELD MEASUREMENTS, INSTRUMENTATION, SUMMARY OF LIMITATIONS, CERTIFICATION PROGRAM, STATISTICS OF SAMPLING
TITLE: ESTABLISHING A COMPANY SAFETY AND HEALTH PROGRAM, SAFETY AND HEALTH MODULE SH-49
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO, TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: 

TITLE: EVALUATION AND CONTROL OF WORKPLACE ACCIDENTS POTENTIAL #513
SOURCE: NIOSH DTMD
DATE: ? FORMAT: COST: ?
SUMMARY: PRINCIPLES OF HAZARD CONTROL MANAGEMENT, HAZARD IDENTIFICATION AND ASSESSMENT, CONTROL OF UNDESIRED ENERGY RELEASE, MONITORING AND INSPECTION, EVALUATION OF PROGRAMS

TITLE: EXHAUST, DUST CONTROL AND VENTILATION SYSTEMS, SAFETY AND HEALTH MODULE SH-44
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: CONTAMINANTS THAT CAN BE CONTROLED BY EX VENTILATION, TYPES OF SYSTEMS, COMPONENTS
TITLE: EYE AND FACE PROTECTION IN CHEMICAL LABORATORIES
SOURCE: NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS, PUBLIC INFORMATION DEPT., 79 MADISON AVE., NEW YORK, N.Y. 10016
DATE: ? FORMAT: 16 MM FILM, SOUND, COLOR COST: ?
SUMMARY:

TITLE: FLAMMABLE LIQUIDS, PART 2
SOURCE: OHIO STATE UNIV., LABOR EDUCATION AND RESEARCH SERVICE, 156 W. 19TH ST., COLUMBUS, OH 43210
DATE: ? FORMAT: 16 MM FILM COST: $90 OR 30 RENTAL P
SUMMARY: INDUSTRIAL TRANSPORTATION AND STORAGE OF FLAMMABLES, REQUIREMENTS FOR CONTAINERS AND STORAGE AREAS, VENTILATION AND STATIC CONTROL

TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS, ARTIFICIALS, DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION, TEMPERATURE EXTREMES, ECONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION, AIR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVS, PELS, CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS, REVIEW OF MATHEMATICS,
TITLE: GAS AND VAPOR SAMPLING
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: FIELD INSTRUMENTATION AND SAMPLING ARE DISCUSSED

TITLE: HANDBOOK OF OCCUPATIONAL SAFETY AND HEALTH
SOURCE: NATIONAL SAFETY COUNCIL
DATE: ? FORMAT: BOOK COST: P
SUMMARY: SAFETY AND GOOD BUSINESS, OSHA CONSIDERATIONS, SAFE & HEALTHFUL WORKING CONDITIONS, SAFETY INSPECTIONS, ACCIDENT RECORDS AND REPORTS, TRAINING, PROMOTION, MOTIVATION OF EMPLOYEES, SAFEGUARDING MACHINES, MATERIALS HANDLING AND STORAGE, PERSONAL PROTECTIVE EQUIPMENT, FIRE PROTECTION, INDUSTRIAL HYGIENE AND HEALTH

TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE; STARSON CORP; STANTON, N.J. 08885
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: HOW TO DEVELOP HAZARDOUS MATERIALS POLICY
TITLE: HAZARDOUS MATERIALS CONTROL SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE; STARSON CORP; STANTON, N.J. 08085
DATE: 1979 FORMAT: TEXT COST: 
SUMMARY: SAFETY AND HEALTH PROGRAM; CONDUCTING A HAZARDOUS MATERIALS SURVEY; DEVELOPMENT OF DATA SHEETS; LOCATING PROBLEM AREAS; DEVELOPMENT OF TRAINING PROGRAMS

TITLE: HEALTH HAZARDS IN THE ARTS AND CRAFTS
SOURCE: PROCEEDINGS OF THE SOCIETY FOR OCCUPATIONAL SAFETY AND HEALTH CONFERENCE ON HEALTH HAZARDS IN THE ARTSAND CRAFTS, 1980
DATE: FORMAT: SOEM BOOK COST: 
SUMMARY: CASE STUDIES OF HEALTH PROBLEMS (CADMIUM POISONING, PERFORMING ARTS, STAINED GLASS WORKERS); SURVEYS AND MONITORING STUDIES IN THE WORKPLACES (COLLEGE ARTS DEPARTMENTS, SMALL FURNITURE STRIPPING SHOPS, CONSUMER BENZENE EXPOSURES DUE TO STRIPPING OF FURNITURE, POTTING STUDIO AND CLASSROOM, LEAD EXPOSURE IN STAINED GLASS INDUSTRY, ROCK DUST EXPOSURE TO SCULPTORS), EVALUATION OF INGREDIENTS IN ARTS AND CRAFTS MATERIALS TO MAKE THEM SAFER, LEGAL, REGULATORY, AND POLICY ISSUES

TITLE: INDUSTRIAL ENVIRONMENTAL HEALTH
SOURCE: EDITED BY LESTER V. CRALLEY PATRICK R. ATKINS
DATE: FORMAT: BOOK; ACADEMIC PRESS COST: 
SUMMARY: EPIDEMIOLOGIC STUDIES OF OCCUPATIONAL DISEASE, TOXICOLOGY, NOISE, NONIONIZING RADIATION, IONIZING RADIATION, WORK IN HOT ENVIRONMENTS: TLV'S AND PROPOSED STANDARDS, EVALUATION OF CHEMICAL HAZARDS IN THE ENVIRONMENT, HAZARD EVALUATION AND CONTROL, PERSONAL PROTECTIVE DEVICES, OFF-JOB ENVIRONMENTAL HEALTH STRESS AS RELATED TO THE WORKPLACE, IMPACT OF GOVERNMENTAL ENVIRONMENTAL REGULATIONS UPON INDUSTRIAL ACTIVITIES
TITLE: INDUSTRIAL NOISE AND HEARING CONSERVATION
SOURCE: NATIONAL SAFETY COUNCIL EDITED BY JULIAN OLI SHIFSKI EARL HARFORD
DATE: FORMAT: BOOK COST:
SUMMARY: INTRODUCTION, MEASUREMENT OF SOUND, EFFECTS OF NOISE ON MAN, CONTROL OF
NOISE, INDUSTRIAL AUDIOMETRY, INDUSTRIAL HEARING CONSERVATION PROGRAMS, THIS
DOCUMENT CONTAINS OVER ONE THOUSAND PAGES OF DETAILED DISCUSSION ABOUT ALL
ASPECTS OF OCCUPATIONAL EXPOSURES TO NOISE.

TITLE: INDUSTRIAL NOISE MANUAL
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION
DATE: FORMAT: AIHA BOOK COST:
SUMMARY: PHYSICS OF SOUND, INSTRUMENTS FOR SOUND MEASUREMENTS, TECHNIQUE FOR
SOUND MEASUREMENT, NOISE SURVEYS, VIBRATION, ANATOMY/PHYSIOLOGY OF THE EAR,
EFFECTS OF NOISE ON MAN, HEARING MEASUREMENT, MEDICAL ASPECTS OF HEARING
CONSERVATION, PERSONAL PROTECTIVE DEVICES, HEARING CONSERVATION PROGRAMS,
ENGINEERING CONTROL, LEGAL ASPECTS.

TITLE: INDUSTRIAL NOISE
SOURCE: NIOSH DTMD
DATE: MARCH, 1981 FORMAT: COST:
SUMMARY: PHYSICS OF SOUND, OCCUPATIONAL HEARING LOSS, EFFECTS OF NOISE ON MAN,
NOISE MEASURING INSTRUMENTS, NOISE SURVEY, AUDIOMETRY, NOISE CRITERIA, THEORY
AND TECHNIQUES OF NOISE CONTROL, CURVE OF LEGAL ASPECTS OF NOISE CONTROL.
TITLE: INDUSTRIAL HYGIENE SAMPLING - ADMINISTERING A SAMPLING PROGRAM 
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY:

TITLE: INDUSTRIAL HYGIENE SAMPLING - SAMPLING METHODS
SOURCE: NIOSH DTMD
DATE: JULY, 1978 FORMAT: COST:
SUMMARY: INDUSTRIAL HYGIENE BACKGROUND FOR SAMPLING METHODOLOGY, PHYSICAL
SAMPLING, STATISTICS, FUNDAMENTALS AND QUALITY CONTROL.

TITLE: INDUSTRIAL HYGIENE REVIEW MANUAL
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1982 FORMAT: COST:
SUMMARY: CHEMISTRY, BIOCHEMISTRY AND PHYSICS, TOXICOLOGY, RESPIRATORY DISEASE,
OCUPATIONAL DERMATOSES, EXPOSURE CRITERIA, MEDICAL MONITORING, HEAT STRESS,
SE: EFFECTS AND PROTECTION, OXYGEN LIMITED ENVIRONMENTS, INDUSTRIAL
VENTILATION, ECONOMICS, HEALTH PHYSICS, NON-IONIZING RADIATION, ILLUMINATION,
ATUS IN I.H., SAFETY, OSHA
TITLE: INTRODUCTION TO OCCUPATIONAL SAFETY #509
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY:

TITLE: INVISIBLE DANGER
SOURCE: INTERNATIONAL FILM BUREAU, 332 S. MICHIGAN AVE., CHICAGO, IL 60604
DATE: FORMAT: 16 MM FILM OR CASSETTE COST: $375 OR 45 RENTAL
SUMMARY: RESPIRATORY PROTECTIVE EQUIPMENT
TITLE: LEGAL ASPECTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 #599
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1978 FORMAT: COST:

TITLE: NATIONAL MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., P.O. BOX 133, STANTON H.D., 08885
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: REGULATIONS, INTERNAL POLICIES, GUIDELINES FOR DISPOSAL

TITLE: NOISE
SOURCE: PRINCIPLES OF OSH ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: BACKGROUND, FUNDAMENTALS OF SOUND, PHYSIOLOGY OF HEARING, SOUND MEASUREMENT, EXPOSURE STANDARDS, CONTROL, HEARING PROTECTORS, REQUIRED HEARING PROTECTION PROGRAM.
TITLE: OCCUPATIONAL SAFETY AND HEALTH - PROGRAM ADMINISTRATION  MODULE 25
SOURCE: NIOSH DTMD
DATE: OCTOBER, 1978  FORMAT:  COST:
SUMMARY: INTRO TO LOSS CONTROL, PLANNING THE PROGRAM, PERSONNEL ADMINISTRATION

TITLE: OCCUPATIONAL RESPIRATORY RESPIRATORY PROTECTION #593
SOURCE: NIOSH DTMD
DATE: AUGUST, 1980  FORMAT:  COST:
SUMMARY: TRAINING, STANDARDS/REGULATIONS ,NIOSH/BUREAU OF MINES,SAMPLE FORMS
FITTING, TRAINING,MAINTENENCE, INSPECTION), FITTING, QUALITY ASSURANCE,
MAINTENANCE EQUIPMENT

TITLE: OCCUPATIONAL SAFETY AND HEALTH ACT
SOURCE: UNIT 2, PRINCIPLES OF OSMH ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83  FORMAT: OUTLINE  COST: NONE
SUMMARY: HISTORICAL BASIS FOR AND INTENT OF OSMH ACT, KEY PROVISIONS, DUTIES AND
STANDARDS, INSPECTIONS, VARIANCES, ROLE OF STATES, EXERCISES
TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME III
SOURCE: EDITED BY LEWIS J. CRALLEY LESTER V. CRALLEY
DATE: FORMAT BOOK COST:
SUMMARY: RATIONALE, EMISSION INVENTORY, STATISTICAL DESIGN AND DATA ANALYSIS REQUIREMENTS, DATA AUTOMATION, ANALYTICAL MEASUREMENTS, MEASUREMENT OF WORKER EXPOSURE, BIOLOGICAL INDICATORS OF CHEMICAL DOSAGE AND BURDEN, EXPOSURE EVALUATION (TO CHEMICALS, IONIZING AND NONIONIZING RADIATIONS, NOISE, HOT AND COLD ENVIRONMENTS, VIBRATIONS, ABNORMAL PRESSURES, BIOLOGICAL AGENTS), TOXICOLOGICAL DATA EXTRAPOLATION, HEALTH SURVEILLANCE PROGRAMS IN INDUSTRY, PHILOSOPHY AND MANAGEMENT OF ENGINEERING CONTROLS, PERSONAL PROTECTION, JOB SAFETY AND HEALTH LAW, COMPLIANCE AND PROJECTION

TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME I
SOURCE: EDITED BY GEORGE D. CLAYTON FLORENCE E. CLAYTON
DATE: FORMAT: BOOK COST:
SUMMARY: IH-RETROSPECT AND PROSPECT, LEGISLATION AND LEGISLATIVE TRENDS, IH RECORDS AND REPORTS, SURVEYS AND PERSONNEL, EPIDEMIOLOGY, MODE OF ENTRY AND ACTION OF TOXIC MATERIALS, PULMONARY EFFECTS OF INHALED INORGANIC DUSTS, OCC DERMATозES, PHYSIOLOGICAL EFFECTS OF ABNORMAL ATMOSPHERIC PRESSURES, NOISE AND HEARING CONSERVATION, NONIONIZING, IONIZING RADIATION, LIGHTING, AIR POLLUTION, AGRICULTURAL HAZARDS, ODOR MEASUREMENT AND CONTROL, SAMPLING AND ANALYSIS, ENGINEERING CONTROLS, AIR POLLUTION CONTROLS, HEAT STRESS, RESPIRATORY PROTECTION, ERGONOMICS, QUALITY CONTROL, CALIBRATION, SANITATION, FIRE AND EXPLOSION HAZARDS

TITLE: PERSONAL PROTECTION
SOURCE: OHIO STATE UNIV., LABOR EDUCATION AND RESEARCH SERVICE, 156 W. 19TH ST., COLUMBUS, OH 43210
DATE: FORMAT: 16 MM FILM COST: $105 SALE OR 30 RENTAL
SUMMARY: BRIEFLY COVERS HEAD, EYE, FACE, HEARING, RESPIRATORY, BODY PROTECTION
TITLE: PERSONAL PROTECTIVE EQUIPMENT, SAFETY AND HEALTH MODULE SH-12
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, LAKE AIR DR., SUITE C, WACO, TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: HEARING, EYE, RESPIRATORY, SAFETY BELTS, HANDS, CLOTHING

TITLE: PERSONAL SAMPLER PUMPS
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: VARIOUS TYPES OF PUMPS DEMONSTRATED AND CALIBRATION PROCEDURES SHOWN

TITLE: PERSONAL SAMPLER CALIBRATION
SOURCE: EDUCATIONAL RESOURCE CENTERS, NIOSH
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: CALIBRATION OF FLOW RATE WITH BURETTE AND WET TEST METER.
TITLE: POLYCHLORINATED BIPHENYL IN THE WORKPLACE- A SPECIAL COURSE  
SOURCE: NIOSH DTMD  
DATE: AUGUST, 1980  
FORMAT: COST:  
SUMMARY: CHEMICAL HEALTH HAZARDS, TLV'S AND PCB'S EFFECT ON MAN, CHEMICAL HAZARDS CONTROL, RESPIRATORY PROTECTION, PERSONAL PROTECTION WEAR, RECORD KEEPING, MEDICAL MONITORING, MATERIAL HANDLING, AIR SAMPLING

TITLE: PRECAUTIONS FOR EXPLOSIVE MATERIALS  
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO TX 76710  
DATE: ?  
FORMAT: MODULE  
COST: P  
SUMMARY: TYPES AND CLASSIFICATION OF EXPLOSIVES, PROCEDURES FOR TRANSPORT, UNLOADING AND STORAGE

TITLE: PROCEEDINGS OF A SYMPOSIUM ON OCCUPATIONAL SAFETY RESEARCH AND EDUCATION  
SOURCE: NIOSH DTMD  
DATE:  
FORMAT:  
COST: 
TITLE: PUMP CALIBRATION Y
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE COMPUTER COST: NONE
SUMMARY: CALIBRATION OF PERSONAL AIR SAMPLING PUMPS

TITLE: PUTTING THE RESPIRATORY PROTECTION QUESTION IN PERSPECTIVE
SOURCE: MINE SAFETY APPLIANCES INC., MARKET DEVELOPMENT GROUP, 600 PENN CENTER BLVD., PITTSBURGH, PA 15235
DATE: ? FORMAT: SLIDES AND AUDIO CASSETTE COST: $125 OR LOAN
SUMMARY: CHOICE, FIT TESTING, RECOMMENDED STANDARDS

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS #510, APPENDICES F-L
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980 FORMAT: COST:
SUMMARY: PROGRAM OF INSTRUCTION, INSTRUCTOR DIRECTIONS, COURSE SAMPLER, TESTING ANSWER KEY
TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS, VOL I
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980
FORMAT: COST:
SUMMARY: BIOMODES OF ENTRY, TOXICITY OF CHEMICAL AGENTS, PATHOLOGY OF OCC DISEASES, INDUSTRIAL HYGIENE SURVEYS, SURVEY PROCEDURES, EPIDEMIOLOGICAL FACTORS, EVALUATION OF TOXICITY, DEVELOPMENT AND APPLICATION OF STANDARDS, PNEUMOCONIOSIS, CHEMICAL HAZARDS/WORKSHOP, PREVENTION, OCCUPATIONAL SKIN DISEASES, PHYSICAL AGENTS - ELECTROMAGNETIC SPECTRUM, IONIZING RADIATION, NOISE, NOISE WORKSHOP, CHEMICAL TREATMENT, CHEMICAL TREATMENT WORKSHOP

TITLE: RECOGNITION OF ACCIDENT POTENTIAL IN THE WORKPLACE DUE TO HUMAN FACTORS
SOURCE: NIOSH DTMD
DATE: MAY, 1977
FORMAT: COST:
SUMMARY: MEASURING COST OF ACCIDENTS, WHERE, HOW, WHY DO ACCIDENTS OCCUR, THE BEHAVIORAL SCIENCE METHOD TO RECOGNIZE ACCIDENT POTENTIAL, DECISION MAKERS, INSIDE THE SUPERVISOR-WORKER TEAM, THE ORGANIZATIONAL FACTORS, GROUP INFLUENCES ON BEHAVIOR, INDIVIDUAL FACTORS, USING CLUES TO DETERMINE SOCIO-PSYCHOLOGICAL PROBLEMS, PSYCHOLOGICAL FACTORS THAT INCREASE ACCIDENT SUSCEPTIBILITY, FUNDAMENTALS OF THE MAN-MACHINE SYSTEM, CLUES TO ACCIDENT POTENTIAL, JOB SAFETY ANALYSIS, HOW TO CONDUCT AN ACCIDENT PROBE, WORKER SAFETY TRAINING AND SUPERVISOR TRAINING

TITLE: RECOGNIZING JOB HEALTH HAZARDS, SAFETY AND HEALTH MODULE SH-08
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., WITE C., WACO TX 76710
DATE: ?
FORMAT: MODULE COST: ?
SUMMARY: DISCUSSES 4 GENERAL CLASSES OF ENVIRONMENTAL STRESSES INC CHEMICAL, PHYSICAL, BIOLOGIC, AND ERGONOMIC, ALSO MODES OF ENTRY, SOURCES, PROTECTIVE MEASURES, HOW TO RECOGNIZE HEALTH HAZARDS
TITLE: RESPIRATORY PROTECTION: A MANUAL AND GUIDELINE
SOURCE:
DATE: 1980 FORMAT: COST:
SUMMARY: PROGRAM ADMINISTRATION OF RECORD KEEPING, WORK AREA SURVEILLANCE AND INDUSTRIAL HYGIENE, MEDICAL SURVEILLANCE, PROGRAM AUDIT/EVALUATION, SELECTION AND USE, MECHANICAL FILTER RESPIRATORS, CHEMICAL CORRIDOR RESPIRATORS, GAS MASKS, AIR LINE RESPIRATORS, SELF CONTAINED BREATHING APPARATUS, POWERED AIR PURIFYING RESPIRATORS, SUPPLIED AIR SUITS, EMERGENCY SELECTION, FIRE FIGHTING RESPIRATORS, USE PROBLEMS OF SPECIAL RESPIRATORS, TRAINING, QUALITATIVE FITTING, QUANTITATIVE FITTING, SCBA TRAINING, INSPECTION, CLEANING, STORAGE, AND MAINTENANCE, PROGRAM SELF EVALUATION

TITLE: RESPIRATORS: 2 POINT PROGRAM
SOURCE: NORTON SAFETY PRODUCTS DIVISION, 200 PLAINFIELD PIKE, CRANSTON, RI 20920
DATE: ? FORMAT: 16 MM FILM OR VIDEO CASSETTE COST: $100 OR LOAN
SUMMARY: SETTING UP A RESPIRATORY PROTECTION PROGRAM

TITLE: ROTAMETER CALIBRATION
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: CALIBRATION OF PERSONAL AIR SAMPLING PUMP ROTAMETERS
TITLE: SAFETY IN THE SCHOOL SCIENCE LABORATORY #25
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: SCOPE, NEEDS ASSESSMENT, LEGAL ASPECTS, STUDENT INVOLVEMENT, EYE & FACE PROTECTION, HANDLING CHEMICALS, STORAGE/DISPOSAL OF CHEMICALS, LABELING, HANDLING GLASSWARE, BIOLOGICAL AND ANIMAL HAZARDS, VENTILATION, FIRE CONTROL, LABORATORY HARDWARE AND RECORDS

TITLE: SAFETY IN THE LABORATORY #580
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: LABORATORY OPERATIONS, FACILITIES, FIRE SUPPRESSION AND CONTROL, PHYSICAL AGENTS, WORKER CONSIDERATIONS

TITLE: SAFETY PROGRAM DESIGN AND MANAGEMENT - PEOPLE, MOTIVATION, AND TRAINING
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: MOTIVATION IN OCCUPATIONAL ENVIRONMENTS, SUPERVISOR AND EMPLOYEE INVOLVEMENT, GUIDELINES FOR BEHAVIOR CHANGE, STRUCTURE, INTERACTION, AND TRACKING, SAFETY TRAINING, DEVELOPMENT & EVALUATION OF PROGRAMS
TITLE: SAFETY WITH HAND AND PORTABLE POWER TOOLS, SAFETY AND HEALTH MODULE SH-19
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO, TX 76710
DATE: ?  FORMAT: MODULE  COST: ?
SUMMARY: USE, MAINTENANCE AND PROTECTIVE EQUIPMENT

TITLE: SELF EVALUATION OF OCCUPATIONAL SAFETY AND HEALTH PROGRAMS NIOSH PUBLICATION 73-187
SOURCE: NIOSH DTMD
DATE:  FORMAT:  COST:
SUMMARY: EMPLOYEE CENTERED PROGRAM, RECOGNIZING AND CONTROLLING HAZARDS, EMPLOYEE SELECTION AND TRAINING FOR SPECIFIC TASKS, MEASURING PROGRAM EFFICACY, SOURCES OF INFO AND CONSULTATION, CHEMICAL, BIOLOGICAL, PHYSICAL & PSYCHOLOGICAL AGENTS, PLANT SAFETY AND HEALTH

TITLE: SPIROMETRY STUDENT MANUAL
SOURCE: NIOSH DTMD
DATE:  FORMAT:  COST:
SUMMARY:
TITLE: SPIROMETRY INSTRUCTORS GUIDE
SOURCE: NIOSH DTMD
DATE: APRIL, 81
SUMMARY: SUGGESTIONS FOR TEACHING, EVALUATION MATERIALS, CERTIFICATION GUIDES

TITLE: SPIROMETRY WORKBOOK
SOURCE: NIOSH DTMD
DATE: 
SUMMARY: PULMONARY ANATOMY/PHYSIOLOGY, TECHNIQUES, CALCULATIONS, INSTRUMENT SPECIFICATIONS SURVEILLANCE

TITLE: STANDARDS INTERPRETATIONS AND AUDIT CRITERIA FOR PERFORMANCE OF OCCUPATIONAL HEALTH PROGRAMS
SOURCE: 
DATE: NO DATE
SUMMARY: ADMINISTRATION, MEDICAL, NURSING, INDUSTRIAL HYGIENE, HEALTH PHYSICS
TITLE: THE INDUSTRIAL ENVIRONMENT—ITS EVALUATION AND CONTROL
SOURCE: NIOSH
DATE: FORMAT: BOOK COST:
SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY, PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS, GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING, DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS CHROMATOGRAPHY, QUALITY CONTROL IN LABORATORY ANALYSIS, PHYSICS OF SOUND, EAR PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS, RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL.

TITLE: THE ROLE OF OSHA IN SAFETY AND HEALTH, SAFETY AND HEALTH MODULE SH-02
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO, TX 76710
DATE: 1981 FORMAT: MODULE COST: ?
SUMMARY: OSH ACT AND INTRO TO OSHA

TITLE: VIBRATION AND NOISE CONTROL, SAFETY AND HEALTH MODULE SH-33
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO TX 76710
DATE: FORMAT: MODULE COST: ?
SUMMARY: WORKER INFO ON NOISE AND ITS CONTROL
TITLE: WORK PRACTICE GUIDE FOR MANUAL LIFTING
SOURCE: 
DATE: 1983  FORMAT: 
COST: 
SUMMARY: BASIS FOR GUIDE: EPIDEMIOLOGICAL, BIOMEDICAL, PHYSIOLOGICAL, AND PSYCHOLOGICAL APPROACHES, ADMINISTRATIVE CONTROLS, ENGINEERING CONTROLS, RECOMMENDATIONS
PERSONAL PROTECTIVE EQUIPMENT
ACCIDENT PREVENTION MANUAL FOR INDUSTRIAL OPERATIONS

SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST: P
SUMMARY: HISTORY, OSH ACT, PROGRAM ORGANIZATION, INSPECTION AND CONTROL PROCEDURES, REMOVAL OF JOB HAZARDS, ACCIDENT RECORDS AND INJURY RATES, INVESTIGATION, ANALYSIS, AND COSTS, WORKMAN'S COMPENSATION, SAFETY TRAINING, HUMAN FACTORS, HUMAN BEHAVIOR, OFFICE SAFETY, PUBLICIZING AND MAINTAINING SAFETY, PLANT LAYOUT, EMERGENCY PLANNING, PERSONAL PROTECTIVE EQUIPMENT, INDUSTRIAL SANITATION, HEALTH SERVICES, SOURCES OF HELP, MATERIALS HANDLING AND STORAGE, TOOLS AND EQUIPMENT SAFETY TECHNIQUES, METALS, EXHAUST AND VENTILATION, TOXICOLOGY, NOISE, ELECTRICAL HAZARDS, FIRE PROTECTION, SAFETY ENGINEERING TABLES

BASIC INDUSTRIAL HYGIENE

SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION BY RICHARD S. BRIEF
DATE: FORMAT: A TRAINING MANUAL, AIHA COST:
SUMMARY: REFERENCE LIST, GENERAL PRINCIPLES, MATHEMATICS, INDUSTRIAL PHYSICIAN, TOXICOLOGIST, SAMPLING FOR GASES AND VAPORS, ANALYTICAL CHEMISTRY, PARTICULATE SAMPLING, CALIBRATION OF AIR SAMPLING INSTRUMENTS, NOISE, EM SPECTRUM, IONIZING RADIATION, ULTRAVIOLET, VISIBLE LIGHT, MICROWAVES, LASERS, HEAT AND COLD STRESS, INDUSTRIAL VENTILATION, RESPIRATORY PROTECTIVE DEVICES, LABORATORY EXERCISES

DANGEROUS NOISE - HEARING CONSERVATION

SOURCE: INTERNATIONAL FILM BUREAU, 332 S. MICHIGAN AVE., CHICAGO, IL 60604
DATE: FORMAT: 16 MM FILM OR VIDEO CASSETTE COST: $375 OR 37.50 RENTAL
SUMMARY: ENGINEERING DESIGN, PERSONAL PROTECTIVE EQUIPMENT, AUDIOMETRIC TESTING, HEARING CONSERVATION
TITLE: EYE AND FACE PROTECTION IN CHEMICAL LABORATORIES
SOURCE: NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS, PUBLIC INFORMATION
DEPT., 79 MADISON AVE., NEW YORK, N.Y. 10016
DATE: ? FORMAT: 16 MM FILM, SOUND, COLOR COST: ?
SUMMARY:

TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS,
PARTICULATES,DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION,
TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION,
AIR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL
METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF
PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVS, PELS,
CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS,
REVIEW OF MATHEMATICS.

TITLE: HANDBOOK OF OCCUPATIONAL SAFETY AND HEALTH
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: BOOK COST: P
SUMMARY: SAFETY AND GOOD BUSINESS, OSHA CONSIDERATIONS, SAFE & HEALTHFUL WORKING
CONDITIONS, SAFETY INSPECTIONS, ACCIDENT RECORDS AND REPORTS, TRAINING,
PROROTION, MOTIVATION OF EMPLOYEES, SAFEGUARDING MACHINES, MATERIALS HANDLING AND
TOORAGE, PERSONAL PROTECTIVE EQUIPMENT , FIRE PROTECTION, INDUSTRIAL HYGIENE AND
HEALTH.
TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., P.O. BOX 133,
STANTON, N.J., 08885
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: RADIOACTIVE EFFECTS AND HAZARDS, CLASSIFICATION OF RADIOACTIVE
MATERIALS, POLICIES AND PROCEDURES FOR ISOTOPES, MONITORING PROGRAMS, PROTECTIVE
EQUIPMENT

TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., STANTON, N.J., 08885
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: CORROSIVE CHEMICALS, PROTECTIVE EQUIPMENT FOR THEM, FIRST AID
PROCEDURES, SAFE HANDLING PROCEDURES, REFERENCES

TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., STANTON, N.J., 08885
DATE: 1979 FORMAT: TEXT COST: ?
SUMMARY: RESPIRATORY, EYE, BODY AND SHIELDING
TITLE: HEALTH HAZARDS IN THE ARTS AND CRAFTS
SOURCE: PROCEEDINGS OF THE SOCIETY FOR OCCUPATIONAL SAFETY AND HEALTH CONFERENCE ON HEALTH HAZARDS IN THE ARTS AND CRAFTS, 1980
DATE: 
FORMAT: BOOK
COST:
SUMMARY: CASE STUDIES OF HEALTH PROBLEMS (CADMIUM POISONING, PERFORMING ARTS, STAINED GLASS WORKERS), SURVEYS AND MONITORING STUDIES IN THE WORKPLACES (COLLEGE ARTS DEPARTMENTS, SMALL FURNITURE STRIPPING SHOPS, CONSUMER BENZENE EXPOSURES DUE TO STRIPPING OF FURNITURE, POTTING STUDIO AND CLASSROOM, LEAD EXPOSURE IN STAINED GLASS INDUSTRY, ROCK DUST EXPOSURE TO SCULPTORS), EVALUATION OF INGREDIENTS IN ARTS AND CRAFTS MATERIALS TO MAKE THEM SAFER, LEGAL, REGULATORY, AND POLICY ISSUES

TITLE: INDUSTRIAL ENVIRONMENTAL HEALTH
SOURCE: EDITED BY LESTER V. CRALLEY PATRICK R. ATKINS
DATE: 
FORMAT: BOOK
ACADEMIC PRESS
COST:
SUMMARY: EPIDEMIOLOGIC STUDIES OF OCCUPATIONAL DISEASE, TOXICOLOGY, NOISE, NONIONIZING RADIATION, IONIZING RADIATION, WORK IN HOT ENVIRONMENTS: TLV'S AND PROPOSED STANDARDS, EVALUATION OF CHEMICAL HAZARDS IN THE ENVIRONMENT, HAZARD EVALUATION AND CONTROL, PERSONAL PROTECTIVE DEVICES, OFF-JOB ENVIRONMENTAL HEALTH STRESS AS RELATED TO THE WORKPLACE, IMPACT OF GOVERNMENTAL ENVIRONMENTAL REGULATIONS UPON INDUSTRIAL ACTIVITIES

TITLE: INDUSTRIAL NOISE AND HEARING CONSERVATION
SOURCE: NATIONAL SAFETY COUNCIL EDITED BY JULIAN OLSHIFSKI EARL HARFORD
DATE: 
FORMAT: BOOK
COST:
SUMMARY: INTRODUCTION, MEASUREMENT OF SOUND, EFFECTS OF NOISE ON MAN, CONTROL OF NOISE, INDUSTRIAL AUDIOMETRY, INDUSTRIAL HEARING CONSERVATION PROGRAMS, THIS DOCUMENT CONTAINS OVER ONE THOUSAND PAGES OF DETAILED DISCUSSION ABOUT ALL ASPECTS OF OCCUPATIONAL EXPOSURES TO NOISE.
TITLE: INDUSTRIAL NOISE MANUAL
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION
DATE: FORMAT: AIHA BOOK COST:
SUMMARY: PHYSICS OF SOUND, INSTRUMENTS FOR SOUND MEASUREMENTS, TECHNIQUE FOR
SOUND MEASUREMENT, NOISE SURVEYS, VIBRATION, ANATOMY/PHYSIOLOGY OF THE EAR,
EFFECTS OF NOISE ON MAN, HEARING MEASUREMENT, MEDICAL ASPECTS OF HEARING
CONSERVATION, PERSONAL PROTECTIVE DEVICES, HEARING CONSERVATION PROGRAMS,
ENGINEERING CONTROL, LEGAL ASPECTS

TITLE: INDUSTRIAL HYGIENE ENGINEERING
SOURCE: 551 COURSE SECTION 1, DTMD, NIOSH
DATE: 1/80 FORMAT: TEXT COST: ?
SUMMARY: EXTREMITIES, RESPIRATORY, REFERENCES

TITLE: INVISIBLE DANGER
SOURCE: INTERNATIONAL FILM BUREAU, 332 S. MICHIGAN AVE., CHICAGO, IL 60604
DATE: ? FORMAT: 16 MM FILM OR CASSETTE COST: $375 OR 45 RENTAL
SUMMARY: RESPIRATORY PROTECTIVE EQUIPMENT
TITLE: LASER SAFETY HANDBOOK
SOURCE: BY ALEX MALLOW & LEON CHABOT
DATE: FORMAT: BOOK COST:
SUMMARY: INTRODUCTION TO LASER SAFETY, BASICS OF LASERS, BIOLOGICAL EFFECTS OF LASER RADIATION, ASSOCIATED LASER HAZARDS, LASER MEASUREMENTS, PROTECTIVE STANDARDS, LASER BEAM HAZARD EVALUATION, CONTROL OF LASER RADIATION HAZARD, CONTROL OF ASSOCIATED LASER HAZARDS, PUBLIC LAWS, LASER SAFETY PROGRAM, SAFETY IN THE CLASSROOM, MEDICAL SURVEILLANCE, LASER PROTECTIVE EYEWEAR, ATMOSPHERIC EFFECTS

TITLE: NOISE
SOURCE: PRINCIPLES OF OSH ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: BACKGROUND, FUNDAMENTALS OF SOUND, PHYSIOLOGY OF HEARING, SOUND MEASUREMENT, EXPOSURE STANDARDS, CONTROL, HEARING PROTECTORS, REQUIRED HEARING PROTECTION PROGRAM

TITLE: NOW HEAR THIS
SOURCE: MINE SAFETY APPLIANCES, INC., MARKET DEVELOPMENT GROUP, 600 PENN CENTER LVD., PITTSBURGH, PA 15235
DATE: ? FORMAT: 2X2 SLIDES WITH AUDIO CASSETTE COST: LOAN
SUMMARY: ANATOMY OF EAR, HOW HEARING LOSS OCCURS, STANDARDS, INSTRUMENTATION FOR MEASURING NOISE LEVEL, PROTECTIVE EQUIPMENT
Title: OCC Health Training Course for Compliance, Safety, and Health Officers
Volume I, II - Instructors' Manual
Source:
Date: Format: Cost:
Summary: Body responses to chemicals, routes of entry, dose response, dermatitis, carcinogens, airborne contaminants, respiratory system, permissible airborne concentrations control of airborne hazards, respiratory protection devices, physical stresses, noise, heat stress, ionizing radiation, practical field applications, statistics, recognition of health hazards, role of the safety specialist, briefing on the IHFOM, total dust and fume sampling, weighing and desiccation, respirable dust sampling, dust sampling laboratory, calculation, OSHA analytical laboratory, detector tube sampling, noise measurement and sampling.

Title: Occupational Respiratory Protection
Source: NIOSH DTMD
Date: August, 1980 Format: Cost:
Summary: Training, standards/regulations, NIOSH/Bureau of Mines, sample forms (fitting, training, maintenance, inspection), fitting, quality assurance, maintenance equipment.

Title: Occupational Dermatoses
Source: Principles of OSH Engineering, Zimmerman, Purdue
Date: 7/83 Format: Outline Cost: None
Summary: Background, skin physiology, predisposing factors, direct causes, chemical and physical agents, biologic agents, methods of control, workers at risk.
TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME III
SOURCE: EDITED BY LEWIS J. CRALLEY LESTER V. CRALLEY
DATE: FORMAT: BOOK COST:
SUMMARY: RATIONALE, EMISSION INVENTORY, STATISTICAL DESIGN AND DATA ANALYSIS
REQUIREMENTS, DATA AUTOMATION, ANALYTICAL MEASUREMENTS, MEASUREMENT OF WORKER
EXPOSURE, BIOLOGICAL INDICATORS OF CHEMICAL DOSAGE AND BURDEN, EXPOSURE
EVALUATION (TO CHEMICALS, IONIZING AND NONIONIZING RADIATIONS, NOISE, HOT AND
COLD ENVIRONMENTS, VIBRATIONS, ABNORMAL PRESSURES, BIOLOGICAL AGENTS),
TOXICOLOGICAL DATA EXTRAPOLATION, HEALTH SURVEILLANCE PROGRAMS IN INDUSTRY,
PHILOSOPHY AND MANAGEMENT OF ENGINEERING CONTROLS, PERSONAL PROTECTION, JOB
SAFETY AND HEALTH LAW, COMPLIANCE AND PROJECTION

TITLE: PATTY’S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME I
SOURCE: EDITED BY GEORGE D. CLAYTON FLORENCE E. CLAYTON
DATE: FORMAT: 16 MM FILM COST:
SUMMARY: IH-RETROSPECT AND PROSPECT, LEGISLATION AND LEGISLATIVE TRENDS, IH
RECORDS AND REPORTS, SURVEYS AND PERSONNEL, EPIDEMIOLOGY, MODE OF ENTRY AND
ACTION OF TOXIC MATERIALS, PULMONARY EFFECTS OF INHALED INORGANIC DUSTS, OCC
DERMATOSES, PHYSIOLOGICAL EFFECTS OF ABNORMAL ATMOSPHERIC PRESSURES, NOISE AND
HEARING CONSERVATION, NONIONIZING, IONIZING RADIATION, LIGHTING, AIR POLLUTION,
AGRICULTURAL HAZARDS, ODOR MEASUREMENT AND CONTROL, SAMPLING AND ANALYSIS,
ENGINEERING CONTROLS, AIR POLLUTION CONTROLS, HEAT STRESS, RESPIRATORY
PROTECTION, ERGONOMICS, QUALITY CONTROL, CALIBRATION, SANITATION, FIRE AND
EXPLOSION HAZARDS

TITLE: PERSONAL PROTECTION
SOURCE: OHIO STATE UNIV., LABOR EDUCATION AND RESEARCH SERVICE, 156 W. 19TH ST.,
COLUMBUS, OH 43210
DATE: FORMAT: 16 MM FILM COST: $105 SALE OR 30 RENTAL
SUMMARY: BRIEFLY COVERS HEAD, EYE, FACE, HEARING, RESPIRATORY, BODY PROTECTION
TITLE: PERSONAL PROTECTIVE EQUIPMENT, SAFETY AND HEALTH MODULE SH-12
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, LAKE AIR DR., SUITE C, WACO, TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: HEARING, EYE, RESPIRATORY, SAFETY BELTS, HANDS, CLOTHING

TITLE: PERSONAL SAMPLER PUMPS
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: VARIOUS TYPES OF PUMPS DEMONSTRATED AND CALIBRATION PROCEDURES SHOWN

TITLE: PERSONAL SAMPLER CALIBRATION
SOURCE: EDUCATIONAL RESOURCE CENTERS, NIOSH
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: CALIBRATION OF FLOW RATE WITH BURETTE AND WET TEST METER.
TITLE: POLYCHLORINATED BIPHENYL IN THE WORKPLACE- A SPECIAL COURSE
SOURCE: NIOSH DTMD
DATE: AUGUST, 1980 FORMAT: COST:
SUMMARY: CHEMICAL HEALTH HAZARDS, TLV'S AND PCB'S EFFECT ON MAN, CHEMICAL HAZARDS CONTROL, RESPIRATORY PROTECTION, PERSONAL PROTECTION WEAR, RECORD KEEPING, MEDICAL MONITORING, MATERIAL HANDLING, AIR SAMPLING

TITLE: PUMP CALIBRATION Y
SOURCE: DTMD, NIOSH
DATE: ? FORMAT: PROGRAM FOR APPLE COMPUTER COST: NONE
SUMMARY: CALIBRATION OF PERSONAL AIR SAMPLING PUMPS

TITLE: PUTTING THE RESPIRATORY PROTECTION QUESTION IN PERSPECTIVE
SOURCE: MINE SAFETY APPLIANCES INC., MARKET DEVELOPMENT GROUP, 600 PENN CENTER LVD., PITTSBURGH, PA 15235
DATE: ? FORMAT: SLIDES AND AUDIO CASSETTE COST: $125 OR LOAN
SUMMARY: CHOICE, FIT TESTING, RECOMMENDED STANDARDS
TITLE: RESPIRATORY PROTECTION: A MANUAL AND GUIDELINE

SOURCE:  

DATE: 1980  
FORMAT:  
COST:  

SUMMARY: PROGRAM ADMINISTRATION OF RECORD KEEPING, WORK AREA SURVEILLANCE AND INDUSTRIAL HYGIENE, MEDICAL SURVEILLANCE, PROGRAM AUDIT/EVALUATION, SELECTION AND USE, MECHANICAL FILTER RESPIRATORS, CHEMICAL CORRIDOR RESPIRATORS, GAS MASKS, AIR LINE RESPIRATORS, SELF CONTAINED BREATHING APPARATUS, POWERED AIR PURIFYING RESPIRATORS, SUPPLIED AIR SUITS, EMERGENCY SELECTION, FIRE FIGHTING RESPIRATORS, USE PROBLEMS OF SPECIAL RESPIRATORS, TRAINING, QUALITATIVE FITTING, QUANTITATIVE FITTING, SCBA TRAINING, INSPECTION, CLEANING, STORAGE, AND MAINTENANCE, PROGRAM SELF EVALUATION

TITLE: RESPIRATORS: 2 POINT PROGRAM

SOURCE: NORTON SAFETY PRODUCTS DIVISION, 200 PLAINFIELD PIKE, CRANSTON, RI  20920

DATE: ?  
FORMAT: 16 MM FILM OR VIDEO CASSETTE  
COST: $100 OR LOAN

SUMMARY: SETTING UP A RESPIRATORY PROTECTION PROGRAM

TITLE: ROTAMETER CALIBRATION

SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS

DATE: ?  
FORMAT: VIDEO CASSETTE  
COST: ?

SUMMARY: CALIBRATION OF PERSONAL AIR SAMPLING PUMP ROTAMETERS
TITLE: SAFE HANDLING AND USE OF FLAMMABLE AND COMBUSTIBLE MATERIALS, SAFETY AND
HEALTH MODULE SH-30
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR.,
SUITE C, WACO TX 76710
DATE: ? FORMAT: MODULE COST: P
SUMMARY: TERMS, CLASSIFICATIONS, IGNITION SOURCES, STORAGE PROCEDURES AND
FACILITIES, FIRE FIGHTING EQUIPMENT

TITLE: SAFETY IN ACADEMIC CHEMISTRY LABORATORIES
SOURCE: AMERICAN CHEMICAL SOCIETY
DATE: FORMAT: COST: BOOKLET
SUMMARY: THE BOOKLET GIVES GENERAL RECOMMENDATIONS ON LABORATORY SAFETY AND ALSO
GIVES SPECIFIC INFORMATION ON CERTAIN HAZARDS. THERE IS SOME DISCUSSION OF
PERSONAL PROTECTIVE EQUIPMENT AND ALSO OF EMERGENCY PROCEDURES.

TITLE: SAFETY IN THE SCHOOL SCIENCE LABORATORY #25
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: SCOPE, NEEDS ASSESSMENT, LEGAL ASPECTS, STUDENT INVOLVEMENT, EYE & FACE
PROTECTION, HANDLING CHEMICALS, STORAGE/DISPOSAL OF CHEMICALS, LABELING, HANDLING
LASSWARE, BIOLOGICAL AND ANIMAL HAZARDS, VENTILATION, FIRE CONTROL, LABORATORY
SOFTWARE AND RECORDS
PSYCHOLOGY OF WORKING SAFELY
TITLE: ACCIDENT PREVENTION MANUAL FOR INDUSTRIAL OPERATIONS
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST: P
SUMMARY: HISTORY, OSH ACT, PROGRAM ORGANIZATION, INSPECTION AND CONTROL
PROCEDURES, REMOVAL OF JOB HAZARDS, ACCIDENT RECORDS AND INJURY RATES,
INVESTIGATION, ANALYSIS, AND COSTS, WORKMAN'S COMPENSATION, SAFETY TRAINING,
HUMAN FACTORS, HUMAN BEHAVIOR, OFFICE SAFETY, PUBLICIZING AND MAINTAINING
SAFETY, PLANT LAYOUT, EMERGENCY PLANNING, PERSONAL PROTECTIVE EQUIPMENT,
INDUSTRIAL SANITATION, HEALTH SERVICES, SOURCES OF HELP, MATERIALS HANDLING AND
STORAGE, TOOLS AND EQUIPMENT SAFETY TECHNIQUES, METALS, EXHAUST AND
VENTILATION, TOXICOLOGY, NOISE, ELECTRICAL HAZARDS, FIRE PROTECTION, SAFETY
ENGINEERING TABLES

TITLE: AND THEN THERE WERE TWO
SOURCE: INTERNATIONAL FILM BUREAU, 332 S. MICHIGAN AVE., CHICAGO, IL 60604
DATE: ? FORMAT: 16 MM FILM AND VIDEO CASSETTE COST: $375 OR 45 RENTAL
SUMMARY: ROLE OF HUMAN FACTORS AND SUPERVISORY PRESSURE IN ACCIDENTS

TITLE: BEHAVIOR MANAGEMENT FOR OCCUPATIONAL SAFETY AND HEALTH
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1979 FORMAT: COST:
SUMMARY: GOALS AND TARGETS, DATA SYSTEMS, HAZARD CONTROL: WRITTEN FEEDBACK,
EXPOSURE CONTROL: TRAINING AND FOLLOW-UP, SAFETY PERFORMANCE CONTROL: GRAPHIC
FEEDBACK, SAFETY AND HEALTH LOSS CONTROL: INCENTIVE PROGRAMS
TITLE: HANDBOOK OF OCCUPATIONAL SAFETY AND HEALTH
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: BOOK COST: P
SUMMARY: SAFETY AND GOOD BUSINESS, OSHA CONSIDERATIONS, SAFE & HEALTHFUL WORKING CONDITIONS, SAFETY INSPECTIONS, ACCIDENT RECORDS AND REPORTS, TRAINING, PROMOTION, MOTIVATION OF EMPLOYEES, SAFEGUARDING MACHINES, MATERIALS HANDLING AND STORAGE, PERSONAL PROTECTIVE EQUIPMENT, FIRE PROTECTION, INDUSTRIAL HYGIENE AND HEALTH

TITLE: RECOGNITION OF ACCIDENT POTENTIAL IN THE WORKPLACE DUE TO HUMAN FACTORS
SOURCE: NIOSH DTMD
DATE: MAY, 1977 FORMAT: COST:
SUMMARY: MEASURING COST OF ACCIDENTS, WHERE, HOW, WHY DO ACCIDENTS OCCUR, THE BEHAVIORAL SCIENCE METHOD TO RECOGNIZE ACCIDENT POTENTIAL, DECISION MAKERS, INSIDE THE SUPERVISOR-WORKER TEAM, THE ORGANIZATIONAL FACTORS, GROUP INFLUENCES ON BEHAVIOR, INDIVIDUAL FACTORS, USING CLUES TO DETERMINE SOCIO-PSYCHOLOGICAL PROBLEMS, PSYCHOLOGICAL FACTORS THAT INCREASE ACCIDENT SUSCEPTIBILITY, FUNDAMENTALS OF THE MAN-MACHINE SYSTEM, CLUES TO ACCIDENT POTENTIAL, JOB SAFETY ANALYSIS, HOW TO CONDUCT AN ACCIDENT PROBE, WORKER SAFETY TRAINING AND SUPERVISOR TRAINING

TITLE: SAFETY PROGRAM DESIGN AND MANAGEMENT - PEOPLE, MOTIVATION, AND TRAINING
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: MOTIVATION IN OCCUPATIONAL ENVIRONMENTS, SUPERVISOR AND EMPLOYEE INVOLVEMENT, GUIDELINES FOR BEHAVIOR CHANGE, STRUCTURE, INTERACTION, AND TROUBLES, SAFETY TRAINING, DEVELOPMENT & EVALUATION OF PROGRAMS
TITLE: SELF EVALUATION OF OCCUPATIONAL SAFETY AND HEALTH PROGRAMS NIOSH
PUBLICATION 77-107
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: EMPLOYEE CENTERED PROGRAM, RECOGNIZING AND CONTROLLING HAZARDS, EMPLOYEE
SELECTION AND TRAINING FOR SPECIFIC TASKS, MEASURING PROGRAM EFFICACY, SOURCES OF
INFO AND CONSULTATION, CHEMICAL, BIOLOGICAL, PHYSICAL & PSYCHOLOGICAL AGENTS,
PLANT SAFETY AND HEALTH

TITLE: WORK PRACTICE GUIDE FOR MANUAL LIFTING
SOURCE:
DATE: 1983 FORMAT: COST:
SUMMARY: BASIS FOR GUIDE: EPIDEMIOLOGICAL, BIOMEDICAL, PHYSIOLOGICAL, AND
PSYCHOLOGICAL APPROACHES, ADMINISTRATIVE CONTROLS, ENGINEERING CONTROLS,
RECOMMENDATIONS
TEMPERATURE EXTREMES
TITLE: ACCIDENT PREVENTION MANUAL FOR INDUSTRIAL OPERATIONS
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST: P
SUMMARY: HISTORY, OSH ACT, PROGRAM ORGANIZATION, INSPECTION AND CONTROL
PROCEDURES, REMOVAL OF JOB HAZARDS, ACCIDENT RECORDS AND INJURY RATES,
INVESTIGATION, ANALYSIS, AND COSTS, WORKMAN'S COMPENSATION, SAFETY TRAINING,
HUMAN FACTORS, HUMAN BEHAVIOR, OFFICE SAFETY, PUBLICIZING AND MAINTAINING
SAFETY, PLANT LAYOUT, EMERGENCY PLANNING, PERSONAL PROTECTIVE EQUIPMENT,
INDUSTRIAL SANITATION, HEALTH SERVICES, SOURCES OF HELP, MATERIALS HANDLING AND
STORAGE, TOOLS AND EQUIPMENT SAFETY TECHNIQUES, METALS, EXHAUST AND
VENTILATION, TOXICOLOGY, NOISE, ELECTRICAL HAZARDS, FIRE PROTECTION, SAFETY
ENGINEERING TABLES

TITLE: APPLIED INDUSTRIAL HYGIENE #549
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980 FORMAT: COST:
SUMMARY: GAS AND VAPOR SAMPLING, AIR FLOW MEASUREMENTS, PARTICULATE SAMPLING,
INDUSTRIAL VENTILATION, HEAT STRESS, RADIATION, NOISE

TITLE: BASIC INDUSTRIAL HYGIENE
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION' BY RICHARD S. BRIEF
DATE: FORMAT: A TRAINING MANUAL, AIHA COST:
SUMMARY: REFERENCE LIST, GENERAL PRINCIPLES, MATHEMATICS, INDUSTRIAL PHYSICIAN,
TOXICOLOGIST, SAMPLING FOR GASES AND VAPORS, ANALYTICAL CHEMISTRY, PARTICULATE
SAMPLING, CALIBRATION OF AIR SAMPLING INSTRUMENTS, NOISE, EM SPECTRUM, IONIZING
RADIATION, ULTRAVIOLET, VISIBLE LIGHT, MICROWAVES, LASERS, HEAT AND COLD STRESS,
INDUSTRIAL VENTILATION, RESPIRATORY PROTECTIVE DEVICES, LABORATORY EXERCISES
TITLE: COLD CAN KILL
SOURCE: INTERNATIONAL FILM BUREAU, 332 S. MICHIGAN AVE., CHICAGO, IL 60604
DATE: ? FORMAT: 16 MM FILM OR VIDEO CASSETTE COST: $475 OR 45 RENTAL
SUMMARY: SYMPTOMS AND EFFECTS OF HYPOTHERMIA, CLOTHING, SUPPORTIVE TREATMENT

TITLE: CONTROL OF THE OCCUPATIONAL ENVIRONMENT-INSTRUCTORS MANUAL
SOURCE: NIOSH-DTMD
DATE: SEPTEMBER, 1980 FORMAT: COST:
SUMMARY: GENERAL CONCEPTS OF HAZARDS CONTROL, CONTROL OF AIRBORNE CONTAMINANTS,
CONTROL OF RADIATION, CONTROL OF THERMAL STRESS, CONTROL OF NOISE

TITLE: ESTIMATING METABOLIC RATES
SOURCE: NIOSH, DTMD (513)694-8231
DATE: ? FORMAT: VIDEO TAPE COST: $50-60
SUMMARY: WORK OBSERVATION TECHNIQUE DEMONSTRATED WITH OXYGEN CONSUMPTION
VERIFICATION, USE OF TIME-LOCATION CHARTS, USEFUL FOR LOCATING WORK LOCATIONS
THAT POSE HEAT STRESS HAZARD
TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS, PARTICULATES, DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION, TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION, AIR SAMPLING, INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVs, PELS, CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS, REVIEW OF MATHEMATICS;

TITLE: HEAT STRESS
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: HEALTH HAZARDS, WHERE LIKELY TO OCCUR, CONTROL

TITLE: HEAT STRESS
SOURCE: PRINCIPLES OF OS&H ENGINEERING, ZIMMERMANN, PURDUE
DATE: 7/85 FORMAT: OUTLINE COST: NONE
SUMMARY: BACKGROUND, HEAT EXCHANGE MECHANISMS, PHYSIOLOGIC RESPONSE, HEALTH HAZARDS, VARIABILITY, MEASUREMENT, HEAT STRESS ALGORITHMS, CONTROL
TITLE: HEATING AND COOLING FOR MAN IN INDUSTRY
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION
DATE: FORMAT: AIHA BOOK COST:
SUMMARY: PLANNING OF A TEMPERATE INDUSTRIAL ENVIRONMENT, HEAT EXCHANGE AND HUMAN TOLERANCE LIMITS, CONTROL OF RADIANT HEAT, TYPES OF VENTILATION SYSTEMS, ADDING HEAT TO SPACE, REMOVING HEAT FROM SPACE, MOISTURE CONTROL, MAKE-UP AIR AND HEAT CONSERVATION AND RECOVERY, AIR DISTRIBUTION, SELECTION AND APPLICATION OF AIR FILTERS, TESTING OF AIR FLOW SYSTEMS, INSTRUMENTS USED TO ASSESS THE THERMAL ENVIRONMENT, AIR FLOW AROUND BUILDINGS, BUILDING AIR FLOW AND PRESSURIZATION, SUPPLY & EXHAUST SYSTEM DESIGN

TITLE: IF YOU CAN'T STAND THE HEAT
SOURCE: NIOSH, DTMD
DATE: FORMAT: VIDEO TAPE COST: $40-50
SUMMARY: EVALUATE AND CONTROL HEAT EXPOSURE USING SHIPBOARD EXAMPLE

TITLE: INDUSTRIAL ENVIRONMENTAL HEALTH
SOURCE: EDITED BY LESTER V. CRALLEY PATRICK R. ATKINS
DATE: FORMAT: BOOK, ACADEMIC PRESS COST:
SUMMARY: EPIDEMIOLOGIC STUDIES OF OCCUPATIONAL DISEASE, TOXICOLOGY, NOISE, IONIZING RADIATION, IONIZING RADIATION, WORK IN HOT ENVIRONMENTS: TLV’S AND PROPOSED STANDARDS, EVALUATION OF CHEMICAL HAZARDS IN THE ENVIRONMENT, HAZARD EVALUATION AND CONTROL, PERSONAL PROTECTIVE DEVICES, OFF-JOB ENVIRONMENTAL HEALTH STRESS AS RELATED TO THE WORKPLACE, IMPACT OF GONVERNMENTAL ENVIRONMENTAL REGULATIONS UPON INDUSTRIAL ACTIVITIES
TITLE: INDUSTRIAL HEALTH
SOURCE: BY JACK PETERSON
DATE: FORMAT: BOOK COST:
SUMMARY: ENTRY & TOXIC ACTIONS OF CHEMICAL SUBSTANCES, LABORATORY DETERMINATION OF TOXICITY, BASES, METALS AND METALLOIDS, PNEUMOCONIOSES, ORGANIC SOLVENTS, MONOMERS AND POLYMERS, PESTICIDES, SENSITIZATION & DERMATITIS, CARCINOGENESIS, ABNORMAL PRESSURE, NOISE, BIOThERMAL STRESS, NONIONIZING RADIATION, IONIZING RADIATION, HAZARD EVALUATION AND CONTROL, REVIEW OF ORGANIC CHEMISTRY NOMENCLATURE.

TITLE: INDUSTRIAL VENTILATION
SOURCE: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
DATE: FORMAT: ACIH BOOK COST:
SUMMARY: GENERAL PRINCIPLES OF VENTILATION, DILUTION VENTILATION, VENTILATION FOR HEAT CONTROL, HOOD DESIGN, SPECIFIC OPERATIONS, DESIGN PROCEDURE, MAKE-UP AND RECIRC AIR, CONSTRUCTION SPECIFICATIONS, TESTING OF VENTILATION SYSTEMS, FANS, AIR CLEANING DEVICES

TITLE: INDUSTRIAL HYGIENE REVIEW MANUAL
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1982 FORMAT: COST:
SUMMARY: CHEMISTRY, BIOCHEMISTRY AND PHYSICS, TOXICOLOGY, RESPIRATORY DISEASE, OCCUPATIONAL DERMATOSES, EXPOSURE CRITERIA, MEDICAL MONITORING, HEAT STRESS, NOISE EFFECTS AND PROTECTION, OXYGEN LIMITED ENVIRONMENTS, INDUSTRIAL VENTILATION, ECONOMICS, HEALTH PHYSICS, NON-IONIZING RADIATION, ILLUMINATION, STATISTICS IN I.H., SAFETY, OSHA
TITLE: INDUSTRIAL HYGIENE MEASUREMENTS # 550
SOURCE: NIOSH DTMD
DATE: MAY, 1982 FORMAT: COST:
SUMMARY: GAS AND VAPOR SAMPLING, AIR FLOC MEASUREMENTS, PARTICULATE SAMPLING, INDUSTRIAL VENTILATION, HEAT STRESS, RADIATION, NOISE

TITLE: INDUSTRIAL HYGIENE ENGINEERING # 551
SOURCE: NIOSH DTMD
DATE: JANUARY, 1980 FORMAT: COST:
SUMMARY: ENGINEERING CONTROL, HEAT STRESS, INDUSTRIAL VENTILATION, ERGONOMICS, NOISE AND VIBRATION CONTROLS, RADIATION, ILLUMINATION

TITLE: INDUSTRIAL HYGIENE ENGINEERING
SOURCE: COURSE SECTION 2, DTMD, NIOSH
DATE: 1/80 FORMAT: TEXT COST: ?
SUMMARY: EFFECTS ON HEALTH AND PERFORMANCE, CONTROL, HEAT STRESS INDICES, PROBLEMS
TITLE: OCCUPATIONAL HEALTH TRAINING COURSE FOR COMPLIANCE, SAFETY, AND HEALTH OFFICERS
VOLUME I, II - INSTRUCTORS' MANUAL
SOURCE: NATIONAL AUDIOVISUAL CENTER, NATIONAL ARCHIVES AND REPORTS SERVICE, GENERAL SERVICES ADMINISTRATION, ORDER SECTION RO, WASHINGTON, DC 20409
DATE: ? FORMAT: SLIDES 525 @ 2X2 COST: SLIDES 208.50, INST. MAN. 69.25, S & D MAN. 76.25
SUMMARY: COVERS RECOGNITION AND CONTROL OF OCCUPATIONAL HEALTH HAZARDS

TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME III
SOURCE: EDITED BY LEWIS J. CRALLEY LESTER V. CRALLEY
DATE: ? FORMAT: BOOK COST:
SUMMARY: RATIONALE, EMISSION INVENTORY, STATISTICAL DESIGN AND DATA ANALYSIS REQUIREMENTS, DATA AUTOMATION, ANALYTICAL MEASUREMENTS, MEASUREMENT OF WORKER EXPOSURE, BIOLOGICAL INDICATORS OF CHEMICAL DOSAGE AND BURDEN, EXPOSURE VALUATION (TO CHEMICALS, IONIZING AND NONIONIZING RADIATIONS, NOISE, HOT AND COLD ENVIRONMENTS, VIBRATIONS, ABNORMAL PressURES, BIOLOGICAL AGENTS), TOXICOLOGICAL DATA EXTRAPOLATION, HEALTH SURVEILLANCE PROGRAMS IN INDUSTRY, PHILOSOPHY AND MANAGEMENT OF ENGINEERING CONTROLS, PERSONAL PROTECTION, JOB SAFETY AND HEALTH LAW, COMPLIANCE AND PROJECTION
SUMMARY: 11-1.-RIN,ECT AND PROSPECT, LEGISLATION AND LEGISLATIVE TRENDS, IH
RECORDS AND REPORTS, SURVEYS AND PERSONNEL, EPIDEMIOLOGY, MODE OF ENTRY AND
ACTION OF TOXIC MATERIALS, PULMONARY EFFECTS OF INHALED INORGANIC DUSTS, OCC
DERMATOSES, PHYSIOLOGICAL EFFECTS OF ABNORMAL ATMOSPHERIC PRESSURES, NOISE AND
HEARING CONSERVATION, NONIONIZING, IONIZING RADIATION, LIGHTING, AIR POLLUTION,
AGRICULTURAL HAZARDS, ODOR MEASUREMENT AND CONTROL, SAMPLING AND ANALYSIS,
ENGINEERING CONTROLS, AIR POLLUTION CONTROLS, HEAT STRESS, RESPIRATORY
PROTECTION, ERGONOMICS, QUALITY CONTROL, CALIBRATION, SANITATION, FIRE AND
EXPLOSION HAZARDS
TITLE: RECOGNIZING JOB HEALTH HAZARDS, SAFETY AND HEALTH MODULE SH-08
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C., WACO TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: DISCUSSES 4 GENERAL CLASSES OF ENVIRONMENTAL STRESSES INC CHEMICAL, PHYSICAL, BIOLOGIC, AND ERGONOMIC. ALSO MODES OF ENTRY, SOURCES, PROTECTIVE MEASURES, HOW TO RECOGNIZE HEALTH HAZARDS

TITLE: SELF EVALUATION OF OCCUPATIONAL SAFETY AND HEALTH PROGRAMS NIOSH
PUBLICATION 73-187
SOURCE: NIOSH DTMD
DATE: ? FORMAT: ? COST: ?
SUMMARY: EMPLOYEE CENTERED PROGRAM, RECOGNIZING AND CONTROLLING HAZARDS, EMPLOYEE SELECTION AND TRAINING FOR SPECIFIC TASKS, MEASURING PROGRAM EFFICACY, SOURCES OF INFO AND CONSULTATION, CHEMICAL, BIOLOGICAL, PHYSICAL & PSYCHOLOGICAL AGENTS, PLANT SAFETY AND HEALTH

TITLE: THE HEAT STRESS MONSTER
SOURCE: NATIONAL NAVAL MEDICAL CENTER, EDUCATION AND TRAINING COMMAND, AUDIOVISUAL RESOURCES BRANCH, CODE 221, BETHESDA, MD 20014
DATE: ? FORMAT: 16 MM FILM COST: ?
SUMMARY: PHYSIOLOGIC STRESS, THERMAL REGULATION MECHANISMS, PHYSIOLOGIC MANIFESTATIONS, EMERGENCY CARE, WET BULB GLOBE TEMPERATURE, SAFE LIMITS OF EXPOSURE
INDUSTRIAL TOXICOLOGY
TITLE: ACCIDENT PREVENTION MANUAL FOR INDUSTRIAL OPERATIONS
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST: P
SUMMARY: HISTORY, OSH ACT, PROGRAM ORGANIZATION, INSPECTION AND CONTROL
PROCEDURES, REMOVAL OF JOB HAZARDS, ACCIDENT RECORDS AND INJURY RATES,
INVESTIGATION, ANALYSIS, AND COSTS, WORKMAN'S COMPENSATION, SAFETY TRAINING,
HUMAN FACTORS, HUMAN BEHAVIOR, OFFICE SAFETY, PUBLICIZING AND MAINTAINING
SAFETY, PLANT LAYOUT, EMERGENCY PLANNING, PERSONAL PROTECTIVE EQUIPMENT,
INDUSTRIAL SANITATION, HEALTH SERVICES, SOURCES OF HELP, MATERIALS HANDLING AND
STORAGE, TOOLS AND EQUIPMENT SAFETY TECHNIQUES, METALS, EXHAUST AND
VENTILATION, TOXICOLOGY, NOISE, ELECTRICAL HAZARDS, FIRE PROTECTION, SAFETY
ENGINEERING TABLES

TITLE: BASIC INDUSTRIAL HYGIENE
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION; BY RICHARD S. BRIEF
DATE: FORMAT: A TRAINING MANUAL, AIHA COST:
SUMMARY: REFERENCE LIST, GENERAL PRINCIPLES, MATHEMATICS, INDUSTRIAL PHYSICIAN,
TOXICOLOGIST, SAMPLING FOR GASES AND VAPORS, ANALYTICAL CHEMISTRY, PARTICULATE
SAMPLING, CALIBRATION OF AIR SAMPLING INSTRUMENTS, NOISE, EM SPECTRUM, IONIZING
RADIATION, ULTRAVIOLET, VISIBLE LIGHT, MICROWAVES, LASERS, HEAT AND COLD STRESS,
INDUSTRIAL VENTILATION, RESPIRATORY PROTECTIVE DEVICES, LABORATORY EXERCISES

TITLE: CASARETT AND DOULL'S TOXICOLOGY
SOURCE: EDITED BY JOHN DOULL CURTIS D. KLAASSEN MARY O. AMDUR
DATE: FORMAT: MACMILLAN BOOK COST:
SUMMARY: ORIGIN AND SCOPE OF TOXICOLOGY, TOX SAFETY EVALUATIONS,
ABSORPTION, DISTRIBUTION, EXCRETION, METABOLISM OF TOXIC SUBSTANCES, INFLUENCING
FACTORS, CHEMICAL CARCINOGENS, GENETIC TOX, TERATOGENS, CENTRAL NERVOUS SYSTEM
RESPONSES, LIVER, KIDNEY, RESPIRATORY SYSTEM, EYE, BLOOD, REPRODUCTIVE SYSTEM
RESPONSES, PESTICIDES, METALS, SOLVENTS, RADIOACTIVE MATERIALS, PLASTICS, TOXINS
OF ANIMAL ORIGIN, PHYTOTOXICOLOGY, FOOD ADDITIVES, AIR POLLUTANTS, WATER/SOIL
POLLUTANTS, FORENSIC TOXICOLOGY, CLINICAL, OCCUPATIONAL TOX, REGULATORY TOX,
TOXICOLOGY AND THE LAW
TITLE: CLINICAL SYMPOSIA VOLUME 30 NUMBER 4, 1970 OCCUPATIONAL PULMONARY DISEASE
SOURCE: CLINICAL SYMPOSIA PUBLISHED BY CIBA ARTICLE BY MORTON M. ZISKIND
DATE: FORMAT: BOOKLET COST:
SUMMARY: INHALED PARTICLES AND GASES, ACUTE REACTIONS, SUBACUTE REACTIONS, CHRONIC DISEASE, DIAGNOSIS, TREATMENT, PREVENTION

TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS, PARTICULATES, DERMATOSES, NOISE, IONIZING RADIATION, NONIONIZING RADIATION, TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION, AIR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVs, PELS, CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS, REVIEW OF MATHEMATICS

TITLE: FUNDAMENTALS OF INDUSTRIAL TOXICOLOGY
SOURCE: BY KIM ANDERSON AND RONALD SCOTT
DATE: FORMAT: BOOK COST:
SUMMARY: DEFINITION/SCOPE OF TOXICOLOGY, HISTORY, ROLE OF TOXICOLOGY, PHYSIOLOGY, MODE OF ACTION, DOSE-RESPONSE RELATIONSHIP, TYPES OF EXPOSURES, IDENTIFICATION OF CONTAMINANTS, BASIS OF AGENCIES, SOURCES OF INFORMATION
TITLE: HEALTH HAZARDS IN THE ARTS AND CRAFTS
SOURCE: PROCEEDINGS OF THE SOCIETY FOR OCCUPATIONAL SAFETY AND HEALTH
CONFERENCE ON HEALTH HAZARDS IN THE ARTS AND CRAFTS, 1980
DATE: FORMAT: SOOH BOOK COST:
SUMMARY: CASE STUDIES OF HEALTH PROBLEMS (CADMIUM POISONING, PERFORMING ARTS,
STAINED GLASS WORKERS), SURVEYS AND MONITORING STUDIES IN THE WORKPLACES (COLLEGE ARTS DEPARTMENTS, SMALL FURNITURE STRIPPING SHOPS, CONSUMER BENZENE
EXPOSURES DUE TO STRIPPING OF FURNITURE, POTTING STUDIO AND CLASSROOM, LEAD
EXPOSURE IN STAINED GLASS INDUSTRY, ROCK DUST EXPOSURE TO SCULPTORS),
EVALUATION OF INGREDIENTS IN ARTS AND CRAFTS MATERIALS TO MAKE THEM SAFER,
LEGAL, REGULATORY, AND POLICY ISSUES

TITLE: INDUSTRIAL ENVIRONMENTAL HEALTH
SOURCE: EDITED BY LESTER V. CRALLEY PATRICK R. ATKINS
DATE: FORMAT: BOOK, ACADEMIC PRESS COST:
SUMMARY: EPIDEMIOLOGIC STUDIES OF OCCUPATIONAL DISEASE, TOXICOLOGY, NOISE,
NONIONIZING RADIATION, IONIZING RADIATION, WORK IN HOT ENVIRONMENTS: TLV'S AND
PROPOSED STANDARDS, EVALUATION OF CHEMICAL HAZARDS IN THE ENVIRONMENT, HAZARD
EVALUATION AND CONTROL, PERSONAL PROTECTIVE DEVICES, OFF-JOB ENVIRONMENTAL
HEALTH STRESS AS RELATED TO THE WORKPLACE, IMPACT OF GOVERNMENTAL ENVIRONMENTAL
REGULATIONS UPON INDUSTRIAL ACTIVITIES

TITLE: INDUSTRIAL HEALTH
SOURCE: BY JACK PETERSON
DATE: FORMAT: BOOK COST:
SUMMARY: ENTRY & TOXIC ACTIONS OF CHEMICAL SUBSTANCES, LABORATORY DETERMINATION
OF TOXICITY, GASES, METALS AND METALLLOIDS, PNEUMOCONIOSES, ORGANIC SOLVENTS,
MONOMERS AND POLYMERS, PESTICIDES, SENSITIZATION & DERMATITIS, CARCINOGENESIS,
ABNORMAL PRESSURE, NOISE, BIOTHERMAL STRESS, NONIONIZING RADIATION, IONIZING
RADIATION, HAZARD EVALUATION AND CONTROL, REVIEW OF ORGANIC CHEMISTRY
NOMENCLATURE
TITLE: INDUSTRIAL HYGIENE REVIEW MANUAL
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1982 FORMAT: COST:
SUMMARY: CHEMISTRY, BIOCHEMISTRY AND PHYSICS, TOXICOLOGY, RESPIRATORY DISEASE, OCCUPATIONAL DERMATOSES, EXPOSURE CRITERIA, MEDICAL MONITORING, HEAT STRESS, NOISE: EFFECTS AND PROTECTION, OXYGEN LIMITED ENVIRONMENTS, INDUSTRIAL VENTILATION, ECONOMICS, HEALTH PHYSICS, NON-IONIZING RADIATION, ILLUMINATION, STATISTICS IN I.H., SAFETY, OSHA

TITLE: INDUSTRIAL DERMATOSES
SOURCE: UNIT 6, DEVELOPMENT OF AN INTERDISCIPLINARY COURSE IN OCCUPATIONAL HEALTH ENGINEERING, SMITH, OHIO STATE
DATE: 10/82 FORMAT: OUTLINE COST: NONE
SUMMARY: PREDISPOSITION, CAUSES, CONTROL

TITLE: INDUSTRIAL TOXICOLOGY
SOURCE: PRINCIPLES OF OSH ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: HISTORICAL, TYPES OF TOXIC EFFECTS, DOSE RESPONSE, ROUTES OF ENTRY, PATHWAYS, SITES, TISSUE RESPONSE SENSITIZERS, BIOLOGICAL MONITORING, REPRODUCTIVE EFFECTS, LEAD AND FEMALE WORKERS
TITLE: NATIONAL HAZARDOUS MATERIALS SEMINAR
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., STANTON, N.J., 08885
DATE: 1979 FORMAT: TEXT COST: 7
SUMMARY: PRINCIPLES OF TOXICOLOGY, AIRBORNE POISONS, PARTICULATES, GASES, HEAVY METALS, CLINICAL TOXICOLOGY

TITLE: OCC HEALTH TRAINING COURSE FOR COMPLIANCE, SAFETY, AND HEALTH OFFICERS
VOLUME I, II - INSTRUCTORS' MANUAL
SOURCE:
DATE: FORMAT: COST:
SUMMARY: BODY RESPONSES TO CHEMICALS, ROUTES OF ENTRY, DOSE RESPONSE, DERMATITIS, CARCINOGENS, AIRBORNE CONTAMINANTS, RESPIRATORY SYSTEM, PERMISSIBLE AIRBORNE CONCENTRATIONS CONTROL OF AIRBORNE HAZARDS, RESPIRATORY PROTECTION DEVICES, PHYSICAL STRESSES, NOISE, HEAT STRESS, IONIZING RADIATION, PRACTICAL FIELD APPLICATIONS, STATISTICS, RECOGNITION OF HEALTH HAZARDS, ROLE OF THE SAFETY SPECIALIST, BRIEFING ON THE IHFOM, TOTAL DUST AND FUME SAMPLING, WEIGHING AND DRYING, RESPIRABLE DUST SAMPLING, DUST SAMPLING LABORATORY, CALIBRATION, OSHA ANALYTICAL LABORATORY, DETECTOR TUBE SAMPLING, NOISE MEASUREMENT AND SAMPLING

TITLE: OCCUPATIONAL EPIDEMIOLOGY
SOURCE: BY RICHARD R. MONSON, MD, DSC
DATE: FORMAT: CRC BOOK COST:
SUMMARY: HISTORY, NATURE OF EPI. DATA, COLLECTION OF EPI. DATA, ANALYSIS OF DATA, INTERPRETATION OF EPI. DATA, OCCUPATIONAL EPIDEMIOLOGY, STUDIES OF MORTALITY, STUDIES OF MORBIDITY, SURVEYS OF HEALTH STATUS OF EMPLOYEES, CURRENT PROBLEMS IN OCCUPATIONAL EPI., RESPIRATORY CANCER, CARDIOVASCULAR DISEASES (OCCUPATIONAL)
TITLE: OCCUPATIONAL DISEASES — GUIDE FOR THEIR RECOGNITION NIOSH PUB. 77-181
SOURCE: NIOSH DTND
DATE: JUNE, 1977 FORMAT: COST:
SUMMARY: ROUTES OF ENTRY/MODES OF ENTRY, BIOLOGICAL HAZARDS, DERMATOSES, DISEASES OF THE AIRWAYS, PLANT AND WOOD HAZARDS, CHEMICAL HAZARDS, CHEMICAL CARCINOGENS, PESTICIDES, PHYSICAL HAZARDS

TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME III
SOURCE: EDITED BY LEWIS J. CRALLEY LESTER V. CRALLEY
DATE: FORMAT: BOOK COST:
SUMMARY: RATIONALE, EMISSION INVENTORY, STATISTICAL DESIGN AND DATA ANALYSIS REQUIREMENTS, DATA AUTOMATION, ANALYTICAL MEASUREMENTS, MEASUREMENT OF WORKER EXPOSURE, BIOLOGICAL INDICATORS OF CHEMICAL DOSAGE AND BURDEN, EXPOSURE EVALUATION (TO CHEMICALS, IONIZING AND NONIONIZING RADIATIONS, NOISE, HOT AND COLD ENVIROMENTS, VIBRATIONS, ABNORMAL PressURES, BIOLOGICAL AGENTS), TOXICOLOGICAL DATA EXTRAPOLATION, HEALTH SURVEILLANCE PROGRAMS IN INDUSTRY, PHILOSOPHY AND MANAGEMENT OF ENGINEERING CONTROLS, PERSONAL PROTECTION, JOB SAFETY AND HEALTH LAW, COMPLIANCE AND PROJECTION

TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME I
SOURCE: EDITED BY GEORGE D. CLAYTON FLORENCE E. CLAYTON
DATE: FORMAT: BOOK COST:
SUMMARY: IN-RETROSPECT AND PROSPECT, LEGISLATION AND LEGISLATIVE TRENDS, IN RECORDS AND REPORTS, SURVEYS AND PERSONNEL, EPIDEMIOLOGY, MODE OF ENTRY AND TOXIC MATERIALS, PULMONARY EFFECTS OF INHALED ORGANIC DUSTS, OCC DERMATOSES, PHYSIOLOGICAL EFFECTS OF ABNORMAL ATMOSPHERIC PressURES, NOISE AND HEARING CONSERVATION, NONIONIZING, IONIZING RADIATION, LIGHTING, AIR POLLUTION, AGRICULTURAL HAZARDS, ODOR MEASUREMENT AND CONTROL, SAMPLING AND ANALYSIS, ENGINEERING CONTROLS, AIR POLLUTION CONTROLS, HEAT STRESS, RESPIRATORY PROTECTION, ERGONOMICS, QUALITY CONTROL, CALIBRATION, SANITATION, FIRE AND EXPLOSION HAZARDS
TITLE: POLYCHLORINATED BIPHENYL IN THE WORKPLACE - A SPECIAL COURSE
SOURCE: NIOSH DTM
DATE: AUGUST, 1980
FORMAT: 
COST: 
SUMMARY: CHEMICAL HEALTH HAZARDS, TLV'S AND PCB'S EFFECT ON MAN, CHEMICAL HAZARDS CONTROL, RESPIRATORY PROTECTION, PERSONAL PROTECTION WEAR, RECORD KEEPING, MEDICAL MONITORING, MATERIAL HANDLING, AIR SAMPLING.

TITLE: RECOGNITION OF HEALTH HAZARDS IN INDUSTRY
SOURCE: WILLIAM A. BURGESS
DATE: 
FORMAT: BOOK
COST: 
SUMMARY: INDUSTRIAL UNIT OPERATIONS, ABRASIVE BLASTING, ACID/ALKALI METAL CLEANING, DEGREASING, ELECTROPLATING, FORGING, FOUNDRYS, GRINDING, POLISHING, BUFFING, HEAT TREATING, RADIOGRAPHY, MACHINING, METAL THERMAL SPRAYING, NONDESTRUCTIVE TESTING, PAINTING, SOLDERING, BRAZING, WELDING, PRODUCTION FACILITIES, ABRASIVES, ACIDS, ALUMINUM, AMMONIA, ARTWORK, ASBESTOS, ASPHALT, BATTERIES, BERYLLIUM, BRICK AND TILE, CEMENT, CHLORINE, COTTON, FERTILIZERS, FOOD, GARAGES, GLASS, IRON AND STEEL, LEATHER, LIME, PAINT, PETROLEUM, PLASTICS, POTTERY, PULP AND PAPER, RAYON, RENDERING PLANTS, RUBBER, SHIPBUILDING AND REPAIR, SMELTING, STONE QUARRYING, UNDERGROUND MINING.

TITLE: RECOGNITION OF OCCUPATIONAL HEALTH HAZARDS #510, VOL II
SOURCE: NIOSH DTM
DATE: DECEMBER, 1980
FORMAT: 
COST: 
SUMMARY: ILLUMINATION, HEAT STRESS, OCCUPATIONAL CANCER, ECONOMICS, WELDING, METAL PROCESSING AND CONTROLS, WELDING AND METAL WORKSHOP, INSTRUMENTATION, PHYSICAL HAZARDS, PHYSICAL HAZARDS WORKSHOP, VIBRATION, BACK ON THE JOB, ECONOMICS, MORE ABOUT ILLUMINATION, MONITORING, INSTRUMENTATION.
TITLE: RECOGNIZING JOB HEALTH HAZARDS, SAFETY AND HEALTH MODULE SH-08
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C., WACO TX 76710
DATE: ? FORMAT: MODULE COST: ?
SUMMARY: DISCUSSES 4 GENERAL CLASSES OF ENVIRONMENTAL STRESSES INC CHEMICAL, PHYSICAL, BIOLOGIC, AND ERGONOMIC. ALSO MODES OF ENTRY, SOURCES, PROTECTIVE MEASURES, HOW TO RECOGNIZE HEALTH HAZARDS.

TITLE: SELF EVALUATION OF OCCUPATIONAL SAFETY AND HEALTH PROGRAMS NIOSH
PUBLICATION 73-137
SOURCE: NIOSH DTMD
DATE: FORMAT: COST:
SUMMARY: EMPLOYEE CENTERED PROGRAM, RECOGNIZING AND CONTROLLING HAZARDS, EMPLOYEE SELECTION AND TRAINING FOR SPECIFIC TASKS, MEASURING PROGRAM Efficacy, SOURCES OF INFO AND CONSULTATION, CHEMICAL, BIOLOGICAL, PHYSICAL & PSYCHOLOGICAL AGENTS, PLANT SAFETY AND HEALTH.

TITLE: THE INDUSTRIAL ENVIRONMENT_ ITS EVALUATION AND CONTROL
SOURCE: NIOSH
DATE: FORMAT: BOOK COST:
SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY, PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS, GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING, DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS CHROMATOGRAPHY, QUALITY CONTROL IN LABORATORY ANALYSIS, PHYSICS OF SOUND, EAR PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS, RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL.
TITLE: TOXIC GASES AND VAPORS: CASE STUDIES
SOURCE: UNIT 17, DEVELOPMENT OF AN INTERDISCIPLINARY COURSE IN OCCUPATIONAL HEALTH ENGINEERING, SMITH, OHIO STATE
DATE: 10/82 FORMAT: OUTLINE COST: NONE
SUMMARY: BEHAVIORAL TOXICOLOGY, CONTROL OF INORGANIC MERCURY, CARBON MONOXIDE

TITLE: WOMEN IN THE WORKPLACE
SOURCE:
DATE: MARCH 1977 FORMAT: COST:
SUMMARY: HOW THE OCC ENVIRONMENT AFFECTS WORKER HEALTH, HOW THE OCCUPATIONAL ENVIRONMENT CAN AFFECT WOMEN WHO WANT TO HAVE HEALTHY CHILDREN, HAZARDS THAT AFFECT REPRODUCTION, BEHAVIORAL TOXICOLOGY, HEALTH HAZARDS TO WOMEN, PROBLEMS OF ALLEGED DISCRIMINATION, MEDICAL/LEGAL ASPECTS, GUIDELINES FOR EVALUATING THE DISABILITY OF PREGNANCY, TRENDS IN FEDERAL OSH STANDARDS, JOB MODIFICATION FOR BETTER SAFETY AND EFFICIENCY, THE TRADE UNIONS PERSPECTIVE ON WOMEN IN THE WORKPLACE
VENTILATION AND OTHER ENGINEERING CONTROLS
TITLE: ACCIDENT PREVENTION MANUAL FOR INDUSTRIAL OPERATIONS
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: COST: P
SUMMARY: HISTORY, OSH ACT, PROGRAM ORGANIZATION, INSPECTION AND CONTROL PROCEDURES, REMOVAL OF JOB HAZARDS, ACCIDENT RECORDS AND INJURY RATES, INVESTIGATION, ANALYSIS, AND COSTS, WORKMAN'S COMPENSATION, SAFETY TRAINING, HUMAN FACTORS, HUMAN BEHAVIOR, OFFICE SAFETY, PUBLICIZING AND MAINTAINING SAFETY, PLANT LAYOUT, EMERGENCY PLANNING, PERSONAL PROTECTIVE EQUIPMENT, INDUSTRIAL SANITATION, HEALTH SERVICES, SOURCES OF HELP, MATERIALS HANDLING AND STORAGE, TOOLS AND EQUIPMENT SAFETY TECHNIQUES, METALS, EXHAUST AND VENTILATION, TOXICOLOGY, NOISE, ELECTRICAL HAZARDS, FIRE PROTECTION, SAFETY ENGINEERING TABLES

TITLE: AIR POLLUTION MANUAL PART I, EVALUATION
SOURCE: DATE: FORMAT: COST:
SUMMARY: LEGISLATIVE AND ADMINISTRATIVE PROCEDURE, COMMUNITY RELATIONS, SOURCES OF AIR POLLUTION, HEALTH EFFECTS OF AIR POLLUTION, THE EFFECT OF POLLUTION ON ANIMAL HEALTH, EFFECTS OF AIR POLLUTION ON VEGETATION, EFFECTS OF AIR POLLUTION ON PROPERTY AND THE ECONOMY, COMMUNITY AIR POLLUTION SURVEYS, INSTRUMENTS AND METHODS FOR SAMPLING AMBIENT AIR, SOURCES SAMPLING, CHEMICAL ANALYSIS, METEOROLOGY, AIRBORNE AIR QUALITY

TITLE: APPLIED INDUSTRIAL HYGIENE #549
SOURCE: NIOSH DTMD
DATE: DECEMBER, 1980 FORMAT: COST:
SUMMARY: GAS AND VAPOR SAMPLING, AIR FLOW MEASUREMENTS, PARTICULATE SAMPLING, INDUSTRIAL VENTILATION, HEAT STRESS, RADIATION, NOISE
TITLE: BASIC INDUSTRIAL HYGIENE
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION' BY RICHARD S. BRIEF
DATE: FORMAT: A TRAINING MANUAL, AIHA COST:
SUMMARY: REFERENCE LIST, GENERAL PRINCIPLES, MATHEMATICS, INDUSTRIAL PHYSICIAN,
TOXICOLOGIST, SAMPLING FOR GASES AND VAPORS, ANALYTICAL CHEMISTRY, PARTICULATE
SAMPLING, CALIBRATION OF AIR SAMPLING INSTRUMENTS, NOISE, EM SPECTRUM, IONIZING
RADIATION, ULTRAVIOLET, VISIBLE LIGHT, MICROWAVES, LASERS, HEAT AND COLD STRESS,
INDUSTRIAL VENTILATION, RESPIRATORY PROTECTIVE DEVICES, LABORATORY EXERCISES

TITLE: COMFORT VENTILATION SYSTEMS
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: BASIC GOOD ENGINEERING DESIGN FOR COMFORT SYSTEMS

TITLE: CONTROL OF THE OCCUPATIONAL ENVIRONMENT-INSTRUCTORS MANUAL
SOURCE: NIOSH-DTMD
DATE: SEPTEMBER, 1980 FORMAT: COST:
SUMMARY: GENERAL CONCEPTS OF HAZARDS CONTROL, CONTROL OF AIRBORNE CONTAMINANTS,
CONTROL OF RADIATION, CONTROL OF THERMAL STRESS, CONTROL OF NOISE
TITLE: ENGINEERING CONTROL OF OCCUPATIONAL HEALTH HAZARDS IN THE FOUNDRY INDUSTRY
SOURCE: NIOSH DTMD
DATE: AUGUST, 1980 FORMAT: COST:
SUMMARY: POTENTIAL HAZARDS, CONTROL METHODS: SUBSTITUTION AND ISOLATION, CONTROL METHODS: INTRODUCTION TO VENTILATION, ENCLOSING, AND EXTERIOR HOODS, CONTROL METHODS: NON-RECEIVING HOODS AND GENERAL VENTILATION, MICROWAVE MONITORING, HOUSE KEEPING AND THE SEARCH FOR NEW AND IMPROVED CONTROL METHODS

TITLE: EVALUATION OF INDUSTRIAL HOODS
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: ? FORMAT: VIDEO CASSETTE COST: ?
SUMMARY: DESCRIBES HOODS AND METHODS OF EVALUATION (24 MIN)

TITLE: EXHAUST, DUST CONTROL AND VENTILATION SYSTEMS, SAFETY AND HEALTH MODULE IH-44
SOURCE: CENTER FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, 601 LAKE AIR DR., SUITE C, WACO TX 76710
DATE: ? FORMAT: MODULE COST: :
SUMMARY: CONTAMINANTS THAT CAN BE CONTOLED BY EX VENTILATION, TYPES OF SYSTEMS, COMPONENTS
TITLE: FIRST CONSIDERATION
SOURCE: DTMD, NIOSH, (513)684-8231
DATE: 1981 FORMAT: VIDEO TAPE COST: 50 - 60$
SUMMARY: DEALS WITH AIRBORNE PARTICULATES, THEORY OF CONTROL TECHNOLOGY
EXPLAINED IN DETAIL, DESIGNED FOR ENGINEERS

TITLE: FLAMMABLE LIQUIDS, PART 2
SOURCE: OHIO STATE UNIV., LABOR EDUCATION AND RESEARCH SERVICE, 156 W. 19TH ST.,
COLUMBUS, OH 43210
DATE: ? FORMAT: 16 MM FILM COST: $90 OR 30 RENTAL F
SUMMARY: INDUSTRIAL TRANSPORTATION AND STORAGE OF FLAMMABLES, REQUIREMENTS FOR
CONTAINERS AND STORAGE AREAS, VENTILATION AND STATIC CONTROL

TITLE: FUNDAMENTALS OF INDUSTRIAL HYGIENE
SOURCE: NATIONAL SAFETY COUNCIL
DATE: FORMAT: NSC BOOK COST:
SUMMARY: FUNDAMENTAL CONCEPTS, LUNGS, SKIN, EARS, EYES, SOLVENTS,
PARTICulates, DERMAToses, NOISE, IONIZING RADIATION, NONIONIZING RADIATION,
TEMPERATURE EXTREMES, ERGONOMICS, BIOLOGICAL HAZARDS, TOXICOLOGY, EVALUATION,
IR SAMPLING INSTRUMENTS, DIRECT READING GAS AND VAPOR MONITORS, CONTROL
METHODS, VENTILATION, PROTECTIVE EQUIPMENT, REGULATIONS, DESCRIPTIONS OF
PROFESSIONALS IN THE OCCUPATIONAL HEALTH FIELD, SOURCES OF HELP, TLVS, PELS,
CATALOG OF TOXIC SUBSTANCES, CHEMICAL HAZARDS, GLOSSARY, CONVERSION OF UNITS,
VIEW OF MATHEMATICS,
TITLE: HAZARDOUS MATERIALS SAFETY SEMINAR  
SOURCE: NATIONAL HAZARDS CONTROL INSTITUTE, STARSON CORP., STANTON, N.J., 08025  
DATE: 1979  FORMAT: TEXT  COST: ?  
SUMMARY: WORKING AREAS, VENTILATION, CHEMICAL STORAGE, DISPENSARY, REFERENCES

TITLE: HEATING AND COOLING FOR MAN IN INDUSTRY  
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION  
DATE:  FORMAT: BOOK  COST:  
SUMMARY: PLANNING OF A TEMPERATE INDUSTRIAL ENVIRONMENT, HEAT EXCHANGE AND HUMAN TOLERANCE LIMITS, CONTROL OF RADIANT HEAT, TYPES OF VENTILATION SYSTEMS, ADDING HEAT TO SPACE, REMOVING HEAT FROM SPACE, MOISTURE CONTROL, MAKE-UP AIR AND HEAT CONSERVATION AND RECOVERY, AIR DISTRIBUTION, SELECTION AND APPLICATION OF AIR FILTERS, TESTING OF AIR FLOW SYSTEMS, INSTRUMENTS USED TO ASSESS THE THERMAL ENVIRONMENT, AIR FLOW AROUND BUILDINGS, BUILDING AIR FLOW AND PRESSURIZATION, SUPPLY & EXHAUST SYSTEM DESIGN

TITLE: INDUSTRIAL HEALTH  
SOURCE: BY JACK PETERSON  
DATE:  FORMAT: BOOK  COST:  
SUMMARY: ENTRY & TOXIC ACTIONS OF CHEMICAL SUBSTANCES, LABORATORY DETERMINATION OF TOXICITY, GASES, METALS AND METALLOIDS, PNEUMOCONIOSES, ORGANIC SOLVENTS, HOMOMERS AND POLYMERS, PESTICIDES, SENSITIZATION & DERMATITIS, CARCINOGENESIS, ABNORMAL PRESSURE, NOISE, BIOTHERMAL STRESS, NONIONIZING RADIATION, IONIZING RADIATION, HAZARD EVALUATION AND CONTROL, REVIEW OF ORGANIC CHEMISTRY NOMENCLATURE
TITLE: INDUSTRIAL VENTILATION
SOURCE: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
DATE: FORMAT: ASCII BOOK COST:
SUMMARY: GENERAL PRINCIPLES OF VENTILATION, DILUTION VENTILATION, VENTILATION FOR HEAT CONTROL, HOOD DESIGN, SPECIFIC OPERATIONS, DESIGN PROCEDURE, MAKE-UP AND RECIRCULATED AIR, CONSTRUCTION SPECIFICATIONS, TESTING OF VENTILATION SYSTEMS, FANS, AIR CLEANING DEVICES.

TITLE: INDUSTRIAL NOISE MANUAL
SOURCE: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION
DATE: FORMAT: AIHA BOOK COST:
SUMMARY: PHYSICS OF SOUND, INSTRUMENTS FOR SOUND MEASUREMENTS, TECHNIQUE FOR SOUND MEASUREMENT, NOISE SURVEYS, VIBRATION, ANATOMY/PHYSIOLOGY OF THE EAR, EFFECTS OF NOISE ON MAN, HEARING MEASUREMENT, MEDICAL ASPECTS OF HEARING CONSERVATION, PERSONAL PROTECTIVE DEVICES, HEARING CONSERVATION PROGRAMS, ENGINEERING CONTROL, LEGAL ASPECTS.

TITLE: INDUSTRIAL VENTILATION
SOURCE:
DATE: 1982 FORMAT: COST:
SUMMARY: GENERAL VENTILATION PRINCIPLES, DILUTION VENTILATION, HEAT CONTROL, HOOD DESIGN, SPECIFIC OPERATIONS, DESIGN PROCEDURES, FANS, MAKEUP AND RECIRCULATED AIR, CONSTRUCTION SPECIFICATIONS, TESTING OF VENTILATION SYSTEMS, AIR CLEANING DEVICES.
TITLE: INDUSTRIAL VENTILATION #588
SOURCE: NIOSH DTMD
DATE: FEBRUARY, 1980 FORMAT: COST:
SUMMARY: DILUTION VENTILATION, HOOD DESIGN, DESIGN PROCEDURE, MAKE-UP AND
RECIRCULATED AIR, SPECIFICATIONS AND COST, TESTING OF VENTILATION SYSTEMS, FANS,
AIR CLEANING DEVICES

TITLE: INDUSTRIAL HYGIENE REVIEW MANUAL
SOURCE: NIOSH DTMD
DATE: SEPTEMBER, 1982 FORMAT: COST:
SUMMARY: CHEMISTRY, BIOCHEMISTRY AND PHYSICS, TOXICOLOGY, RESPIRATORY DISEASE,
OCUPATIONAL DERMATOSES, EXPOSURE CRITERIA, MEDICAL MONITORING, HEAT STRESS,
NOISE: EFFECTS AND PROTECTION, OXYGEN LIMITED ENVIRONMENTS, INDUSTRIAL
VENTILATION, ECONOMICS, HEALTH PHYSICS, NON-IONIZING RADIATION, ILLUMINATION,
STATISTICS IN I.H., SAFETY, OSHA

TITLE: INDUSTRIAL HYGIENE MEASUREMENTS # 550
SOURCE: NIOSH DTMD
DATE: MAY, 1982 FORMAT: COST:
SUMMARY: GAS AND VAPOR SAMPLING, AIR FLOC MEASUREMENTS, PARTICULATE SAMPLING,
INDUSTRIAL VENTILATION, HEAT STRESS, RADIATION, NOISE
TITLE: INDUSTRIAL HYGIENE ENGINEERING # 551
SOURCE: NIOSH DTMD
DATE: JANUARY, 1980 FORMAT: COST:
SUMMARY: ENGINEERING CONTROL, HEAT STRESS, INDUSTRIAL VENTILATION, ERGONOMICS, NOISE AND VIBRATION CONTROLS, RADIATION, ILLUMINATION

TITLE: INDUSTRIAL EXHAUST SYSTEMS
SOURCE: U OF MICHIGAN, AUDIO VISUAL EDUCATION CENTER, 416 FOURTH ST., ANN ARBOR, MICHIGAN 48103
DATE: ? FORMAT: 16 MM FILM, B/W, SOUND, 12 MIN COST: ?
SUMMARY:

TITLE: INDUSTRIAL HYGIENE ENGINEERING
SOURCE: 551 COURSE SECTION 3, DTMD, NIOSH
DATE: 1/80 FORMAT: TEXT COST: ?
SUMMARY: PRINCIPLES, DILUTION, MAKE UP AIR, HOOD DESIGN, HOOD EVALUATION, AIR OVENS, FAN SELECTION, COST, MINE VENTILATION, PROBLEMS
TITLE: INDUSTRIAL VENTILATION
SOURCE: PRINCIPLES OF OSH & ENGINEERING, ZIMMERMAN, PURDUE
DATE: 7/83 FORMAT: OUTLINE COST: NONE
SUMMARY: FUNDAMENTALS, TYPES, DILUTION, LOCAL EXHAUST, AIR CLEANERS, AIR MOVERS, SYSTEM DESIGN, MAKE-UP AIR

TITLE: NIOSH CONTROL TECHNOLOGY ASSESSMENT REPORTS
SOURCE: NIOSH
DATE: 1980 FORMAT: MODULE INC. INSTRUCTORS GUIDE, SUDENT OUTLINE, SLIDES COST: ?
SUMMARY: DEVELOPED FROM NIOSH CONTROL TECHNOLOGY ASSESSMENT REPORTS, FIRST MODULE ON FOUNDRY WITH OTHERS TO FOLLOW

TITLE: OCC HEALTH TRAINING COURSE FOR COMPLIANCE, SAFETY, AND HEALTH OFFICERS VOLUME I, II - INSTRUCTORS’ MANUAL
SOURCE: 
DATE: 
SUMMARY: BODY RESPONSES TO CHEMICALS, ROUTES OF ENTRY, DOSE RESPONSE, NERMATITIS, CARCINOGENS, AIRBORNE CONTAMINANTS, RESPIRATORY SYSTEM, PERMISSIBLE AIRBORNE CONCENTRATIONS CONTROL OF AIRBORNE HAZARDS, RESPIRATORY PROTECTION DEVICES, PHYSICAL STRESSES, NOISE, HEAT STRESS, IONIZING RADIATION, PRACTICAL FIELD APPLICATIONS, STATISTICS, RECOGNITION OF HEALTH HAZARDS, ROLE OF THE SAFETY SPECIALIST, BRIEFING ON THE IHFOM, TOTAL DUST AND FUME SAMPLING, WEIGHING AND DESSICATION, RESPIRABLE DUST SAMPLING, DUST SAMPLING LABORATORY, CALCULATION OF OSHA ANALYTICAL LABORATORY, DETECTOR TUBE SAMPLING, NOISE MEASUREMENT AND SAMPLING
TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME III
SOURCE: EDITED BY LEWIS J. CRALLEY LESTER V. CRALLEY
DATE: [Format: BOOK COST:
SUMMARY: RATIONALE, EMISSION INVENTORY, STATISTICAL DESIGN AND DATA ANALYSIS REQUIREMENTS; DATA AUTOMATION, ANALYTICAL MEASUREMENTS, MEASUREMENT OF WORKER EXPOSURE, BIOLOGICAL INDICATORS OF CHEMICAL DOSAGE AND BURDEN, EXPOSURE EVALUATION (TO CHEMICALS, IONIZING AND NONIONIZING RADIATIONS, NOISE, HOT AND COLD ENVIRONMENTS, VIBRATIONS, ABNORMAL PRESSURES, BIOLOGICAL AGENTS), TOXICOLOGICAL DATA EXTRAPOLATION, HEALTH SURVEILLANCE PROGRAMS IN INDUSTRY, PHILOSOPHY AND MANAGEMENT OF ENGINEERING CONTROLS, PERSONAL PROTECTION, JOB SAFETY AND HEALTH LAW, COMPLIANCE AND PROJECTION.

TITLE: PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOLUME I
SOURCE: EDITED BY GEORGE D. CLAYTON FLORENCE E. CLAYTON
DATE: [Format: BOOK COST:
SUMMARY: IH - RETROSPECT AND PROSPECT, LEGISLATION AND LEGISLATIVE TRENDS, IH RECORDS AND REPORTS, SURVEYS AND PERSONNEL, EPIDEMIOLOGY, MODE OF ENTRY AND ACTION OF TOXIC MATERIALS, PULMONARY EFFECTS OF INHALED INORGANIC DUSTS, OCC DERMATOSES, PHYSIOLOGICAL EFFECTS OF ABNORMAL ATMOSPHERIC PRESSURES, NOISE AND HEARING CONSERVATION, NONIONIZING, IONIZING RADIATION, LIGHTING, AIR POLLUTION, AGRICULTURAL HAZARDS, ODOR MEASUREMENT AND CONTROL, SAMPLING AND ANALYSIS, ENGINEERING CONTROLS, AIR POLLUTION CONTROLS, HEAT STRESS, RESPIRATORY PROTECTION, ERGONOMICS, QUALITY CONTROL, CALIBRATION, SANITATION, FIRE AND EXPLOSION HAZARDS.

TITLE: PITOT TRAVERSE
SOURCE: NIOSH EDUCATIONAL RESOURCE CENTERS
DATE: [Format: VIDEO CASSETTE COST:
SUMMARY: SAMPLING POINTS, MEASUREMENT TECHNIQUES AND DATA TREATMENT.
TITLE: SAFETY IN THE SCHOOL SCIENCE LABORATORY #25  
SOURCE: NIOSH DTMD  
DATE: FORMAT: COST:  
SUMMARY: SCOPE, NEEDS ASSESSMENT, LEGAL ASPECTS, STUDENT INVOLVEMENT, EYE & FACE PROTECTION, HANDLING CHEMICALS, STORAGE/DISPOSAL OF CHEMICALS, LABELING, HANDLING GLASSWARE, BIOLOGICAL AND ANIMAL HAZARDS, VENTILATION, FIRE CONTROL, LABORATORY HARDWARE AND RECORDS

TITLE: THE INDUSTRIAL ENVIRONMENT—ITS EVALUATION AND CONTROL  
SOURCE: NIOSH  
DATE: FORMAT: BOOK COST:  
SUMMARY: SIGNIFICANCE OF OCC HEALTH, MATHEMATICS, CHEMISTRY, BIOCHEMISTRY, PHYSIOLOGY, TOXICOLOGY, USE OF STANDARDS, SIGNIFICANCE OF GUIDES, CODES, STANDARDS, GENERAL EVALUATION PRINCIPLES, CALIBRATING SAMPLING EQUIPMENT, PREPPING KNOWN CONCENTRATIONS, PARTICULATE SAMPLING, SIZING METHODS, GAS AND VAPOR SAMPLING, DIRECT READING INSTRUMENTS, MEDICAL ASPECTS OF THE OCC ENVIRONMENT, ANALYTICAL CHEMISTRY SEPARATIONS, SPECTROPHOTOMETRY, EMISSION SPECTROSCOPY, GAS CHROMATOGRAPHY, QUALITY CONTROL IN LABORATORY ANALYSIS, PHYSICS OF SOUND, EAR PHYSIOLOGY, NOISE MEASUREMENT, VIBRATION, ILLUMINATION, NONIONIZING & IONIZING RADIATIONS, HEAT STRESS, THERMAL STANDARDS AND MEASUREMENT, ERGONOMICS, RESPIRATORY PROBLEMS, DERMATOSES, PRINCIPLES OF CONTROL.

TITLE: VENTILATION, PART I  
SOURCE: OHIO STATE UNIVERSITY, LABOR EDUCATION AND RESEARCH SERVICE, 156 W. 19TH WE., COLUMBUS OH 43210  
DATE: ? FORMAT: SLIDES AND AUDIO CASSETTE COST: $54 INC GUIDE  
SUMMARY: BASIC PRINCIPLES, COMMON SYSTEMS
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<tr>
<th>Rank</th>
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<tr>
<td>1.</td>
<td>Mel First</td>
<td>Harvard School of Public Health</td>
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<tr>
<td>2.</td>
<td>Nelson Rogers</td>
<td>Georgia Institute of Technology</td>
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<td>3.</td>
<td>Geoff Eichholz</td>
<td>Georgia Institute of Technology</td>
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<td>4.</td>
<td>Tom Sadouski</td>
<td>Coca Cola Company</td>
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<td>5.</td>
<td>Prasanna Kadaba</td>
<td>Georgia Institute of Technology</td>
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<td>6.</td>
<td>Nelson Leidel</td>
<td>NIOSH</td>
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<td>7.</td>
<td>Winston Boteler</td>
<td>Georgia Institute of Technology</td>
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<td>8.</td>
<td>Charles Gorton</td>
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<td>John Carden</td>
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<td>Gunter Sharp</td>
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<td>Bill Rouse</td>
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<td>Mike York</td>
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<td>13.</td>
<td>Justin Myrick</td>
<td>Georgia Institute of Technology</td>
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ENGINEERING FOR OCCUPATIONAL SAFETY AND HEALTH:
A NEW UPPER LEVEL COURSE WITHIN THE COLLEGE OF ENGINEERING
AT GEORGIA TECH

The National Institute for Occupational Safety and Health (NIOSH) is supporting the development of this video based course for our undergraduate engineering students. We plan to have the course ready for delivery by Spring Quarter 1984. Our course will serve as a model for other engineering colleges around the country.

COURSE OBJECTIVES

- To provide knowledge of basic occupational safety and health problems, concepts and regulations.
- To provide an appreciation for the importance of good engineering practice in the prevention of work related injuries and illnesses.
- To introduce basic principles, in specific engineering disciplines, needed to provide a proper design basis for safety and health protection.
- To develop discipline relevant quantitative skills.

The prevention of occupationally related injuries and illness is a national goal with growing emphasis. This course is intended to contribute to the attainment of this goal by providing timely information of special interest to engineers. The national concern with occupational safety and health impacts industry in a number of ways including increased emphasis on employee protection, the need to comply with new regulations and concern over potential civil and criminal liability. This in turn generates a need for new or augmented employee skills. This course will provide the fundamental framework needed for these skills; consequently, enhancing our students value to their future employers.

COURSE DELIVERY

The course will award three hours of credit and will be multiply listed in all of the schools wishing to participate. It will be delivered in one of the Institute's video theatres. Each session will consist of a 35 to 40 minute lecture on videotape followed by a 10 to 15 minute instructor led question and answer period or short lecture segment.

WE NEED YOUR HELP

The course development committee is soliciting lecturers to participate. Each taped lecture session will cover a specific topic. We wish to have teachers with special knowledge deliver these lectures so if you are such a person, WE NEED YOUR HELP!

This package contains titles and brief descriptions of the lectures to be included. The lectures will be taped without a class present and at times convenient for the lecturer. We have a comprehensive collection of resource materials and visuals which will be made available for lecture preparation.

If you are interested in delivering one or more of the course lectures please contact one of the course committee members: Winston Boteler (2535), John Carden, Chair (3708), Charlie Gorton (2894) and Prasanna Kadaba (3291).
Information for Lecturers
Participating in
Engineering for Occupational Safety & Health

The Course committee thanks you for agreeing to participate in the development of this important new course within the Engineering College. The purpose of the course is to provide our students with insight into how they, in the practice of their profession, can help improve workplace safety and health. Since the course is intended for engineering students we want to emphasize the engineering aspects of safety and health protection. Two other major engineering schools have developed this type of course for their students, but their courses tended to emphasize issues of primary importance to occupational safety and health professionals such as safety engineers and industrial hygienists. We want this course to deal with ways in which an engineer can in the normal course of practice impact on the safety and health of those working around him/her or those using the equipment or facilities developed with his/her assistance. We feel that your participation as an engineering educator will help us maintain this perspective.

Course Format

The course will be delivered in one of the Institute's video theaters. A videotaped lecture will be shown during the first 35-40 minutes of the class followed by a question and answer period or the presentation of additional material. Student evaluation will consist of 2 one-hour exams and a final examination. It is hoped that computer administered evaluations will at some point be developed for the course. Problem sets will be used to develop quantitative skills and maintain momentum. Any comments, or suggestions concerning the overall course structure that you wish to provide will be appreciated.
A very brief description of the requested lecture content is included. This content recommendation is made to provide integration for the course, but obviously reflects the biases of the course committee. We anticipate you will develop your lecture based on your experience and evaluation of the importance of the topics involved. Many of the lectures deal with subject areas which could be the object of an entire course.

Choosing aspects of the subject that are most relevant to our students and incorporating them into a single 35 minute lecture is no small task. We can provide information which may be of assistance. We have a library of training materials in occupational safety and health and if you wish, we will attempt to locate materials relevant to your lecture topic. A list of resources related to your subject area is attached. Most of the printed materials are available, and we may be able to obtain the videotapes and films as well. We have a series of slides (560) prepared by OSHA for training inspectors. Some of these may be of use. If you wish to use graphics we can assist with the preparation of "slick" versions for on-camera use. A number of special effects are also at our disposal during lecture taping. We will tape without students present, thus retakes of short segments are possible if necessary. We can use the on-screen character generator, chrom-a-key, inclusion of slides, movies, and video tapes, sound overlay and split screen display for viewing models or instruments. We have a short tape illustrating these techniques and will be happy to run it for you.

Taking full advantage of the video capabilities available to us will require a high degree of planning. The easiest way to accomplish this is to prepare a detailed outline or script of your lecture. With this in hand, the production personnel in the video center can be much more effective in coordinating the use of special effects which significantly enhance the appearance of a taped lecture. Obviously this is important for maintaining student interest.
In order to insure the best quality product possible the committee requests the following:

1. development of required visuals as soon as possible
2. a detailed outline or script as soon as possible, but no later than 2 to 3 weeks prior to taping.
3. any numerical problems, sources of problems, readings, or reference materials that would help engineering students master the material you will cover.
4. any questions you would recommend for evaluating student mastery of your material.
5. a brief list of the resource materials you feel are most valuable for developing educational materials in your topic area. We wish to add your suggestions to our resource list.

Course Development Schedule

A "Tentative Taping Schedule" is enclosed. We hope that it will be possible for you to tape your lecture during one of the time slots indicated. The video classroom unfortunately is booked during normal working hours, thus an evening taping schedule is necessary. Please contact John Carden (3708) with your preference for taping slots. We plan to offer the course for the first time during the Fall Quarter this coming academic year.
### TENTATIVE TAPING SCHEDULE

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**Notes:**
- The schedule is tentative and subject to change.
- Days may be skipped or time blocks may be extended as needed.
- Specific tasks or activities are not listed in the schedule.
January 13, 1984

Mr. John T. Talty  
DTMD-NIOSH  
Robert A. Taft Laboratories  
4676 Columbia Parkway  
Cincinnati, OH 45226

Dear John:

I am enclosing a schedule for the implementation of our course, "Engineering for Occupational Safety and Health." As you can see, the schedule is quite tight. This letter describes some of the action items on the schedule and describes the resources needed to accomplish them.

Preparation of Demo Videotape: We are preparing a short (approximately 5 minutes) videotape illustrating the techniques to be used in the course. A review of our tape library indicated that the examples on hand were inappropriate because they involved either candid classroom presentations not making use of techniques we plan to use or were highly polished involving non-classroom presentations. We should be able to deliver this tape to you by the week of January 23.

Complete Info Package for Solicitation: You have reviewed the initial draft of the lecture outlines to be included in the package. We are in the process of incorporating your suggestions. The purpose of these outlines is to provide a basis for evaluating interest on the part of prospective lecturers and to provide guidance to those who choose to participate. In addition to providing these outlines, I will discuss each lecture in detail with those who participate in order to maintain a high degree of integration, but obviously, some flexibility will be necessary.

Discussion with School Directors: This will represent the initial step in soliciting lecturers. The directors will be asked for suggestions, for specific lectures, and I will suggest people who have been recommended. Listing the course for a Spring Quarter offering will also be discussed. The Info Package will be sent in advance of the meeting.

Lecturer Selection: Faculty members indicating an interest will be "interviewed" to evaluate their appropriateness and availability to meet the schedule. The integrated nature of the course will be emphasized.

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Lecture Preparation: This step will involve working with the lecturers to maintain integration. Each lecturer will be requested to prepare an outline for review. We will work with lecturers to provide needed background materials, references, visuals, slides, etc. All tapes will be prepared without a class present, making use of the techniques presented on the demonstration tape.

Videotaping: This activity will be performed in our video classroom studio. We will provide coordination for this activity and monitor the results to assure acceptable quality.

Additional resources are required to accomplish this phase of the course development program. These resources are estimated as follows:

A. Funds for management of the presentations for videotaping. These funds will be used for the following tasks:

1. Meet with the School Directors
2. Accomplish lecturer selection
3. Integrate lecture preparation
4. Provide resources and materials to lecturers
5. Coordinate and quality assure videotaping process
6. Prepare and present for taping any lectures not presented by other faculty members

B. The funds required for these tasks are as follows:

1. Personal Services $5,072
   Calculated on the basis of 31.7 days @ $160/day
2. Fringe Benefits 1,192
   23.5% of Personal Services
3. Supplies 396
4. Overhead 3,290
   49.4% of Direct Costs

Total Estimated Cost $9,950

A request for quote submitted to The Georgia Tech Research Institute in care of Ms. Faith G. Costello would be an appropriate vehicle to initiate the necessary funding arrangements.

C. Funds for costs associated with the in-studio videotaping. These costs can be broken down as follows:

1. Facilities
   Nine days of recording sessions, three hours each with one hour on each end for studio set-up and strike (totals a charge for five hours per day at $60/hr) $2,700

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# Engineering for Occupational Safety and Health

## Course Development Schedule

### 1984

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<th>JANUARY</th>
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- XXXXX  COMPLETE INFO. PACKAGE FOR SOLICITATION OF LECTURERS
- XXXXX  DISCUSSIONS WITH SCHOOL DIRECTORS
- XXXXX  LECTURE SELECTION
- LECTURE PREPARATION
- VIDEO TAPING
- PREPARATION OF DEMO. TAPE

**********

---

**Instructor:** [Name]

**Assistant:** [Name]

**Scheduling Officer:** [Name]
2. Videotape
   Fifty-four, one hour videotapes at $32.50 each (two copies of each program both to be retained by Georgia Tech).  
   \[1,755\]

3. Other Services
   Including Graphics, average of $12 each, slides, figures average of $3.25 each, editing, three hours of editing to package a one-hour program. $180 for facilities plus $32.50 tape  
   \[1,000\]

4. Producer's Fee
   For coordination, discussion, preliminary production advice, working with talent, and initial rehearsal.  
   \[1,091\]

   **Total**  
   \[6,546\]

A request for quote submitted to the Department of Continuing Education, Georgia Institute of Technology, Atlanta, GA 30332, in care of Mr. David Edwards (Assistant Director) would be an appropriate vehicle to initiate the necessary funding arrangements.

We are looking forward to proceeding quickly with the implementation of this important course. Thank you for your assistance and interest.

Sincerely,

John Carden, Jr., Ph.D.
Associate Professor

JC:ctm
bxc: W. Carlson
D. Edwards

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Lecture Overview

LAWS AND REGULATIONS

Method: Video Taped Lecture

Purpose: To provide historical perspective and to introduce the legislation important for worker health protection.

Objectives: Introduce important historical figures in industrial health protection, the development of a legal framework in the USA and provide a more detailed overview of the Occupational Safety and Health Act of 1970.

Instructor Materials: Video tape and lecture notes.

Student Materials: Lecture notes handout.

Video Lecture prepared by
Professor Winston Boteler
The Georgia Institute of Technology
Spring 1985
1. Historical Perspective on Worker Protection:

1.1. Greeks reported toxic effects of lead as early as 2,000 BC

1.2. Romans identified risk of sulfur inhalation

1.3. Dust respirators made from animal membranes used first century AD

1.4. Simple ventilation systems developed

1.5. Paracelsus described miners' diseases in 1500's

1.6. Bernardino Ramazzini wrote "Diseases of Tradesmen" in 17th century. Some consider him "Father" of industrial hygiene:

* delayed effects of exposure to toxic materials
* hazardous materials studies
* age effects on susceptibility.

1.7. Alice Hamilton played major role in development of occupational health protection in the USA:

* demonstrated relationship between industrial work and disease
* first occupational physician in USA
* wrote "Industrial Poisons in the United States".

2. History of worker safety and health legislation in the USA:

2.1. 1877 Massachusetts passed first factory inspection act

2.2. 1910 Bureau of Mines formed after Nation's worst mine disaster

2.3. Following WW1, Bureau of Occupational
Safety and Health and Public Health Service Formed

2.4. 1969 Coal Mine Safety and Health Act passed after 78 killed in 68 explosion

2.5. 1970 Occupational Safety and Health Act passed. Most important legislation for worker protection. See below.

2.6. 1972 Water Pollution Control Act

2.7. 1977 Mine Safety and Health Act Amended.

3. Occupational Safety and Health Act of 1970:

3.1. General Duty Clause; Employer must provide place of employment free from hazards likely to cause death or physical harm

3.2. State and local government workers covered under Section 16

3.3. Calls for efficient and equitable enforcement:

* authority to inspect workplaces and issue citations.

3.4. Provides for development of standards to provide protection against occupational hazards including emergency standards.

3.5. Large body of regulations promulgated under authority of Act "General Industry Standards"

* Subpart A: general purpose and scope

* Subpart B: adoption and extension of existing standards

* Subpart C: general safety and health provisions

* Subpart D: walking-working surfaces
* Subpart E: means of egress

* Subpart F: powered platforms

* Subpart G: occupational health and environmental control; ventilation, noise, ionizing radiation, nonionizing radiation

* Subpart H: hazardous materials

* Subpart I: personal protective equipment

* Subpart J: general environmental conditions

* Subpart L: fire protection

* Subpart M: compressed gases

* Subpart N: materials handling and storage

* Subpart O: machinery and machine guarding

* Subpart P: portable power tools

* Subpart Q: welding, cutting and brazing

* Subpart R: special industries

* Subpart S: electrical

* Subpart T: commercial diving operations

* Subpart Z: toxic and hazardous substances.
Lecture Overview

ETHICS AND LIABILITY

Method: Video Taped Lecture

Purpose: To introduce basic concepts in ethics and liability as they relate to an engineer.

Objectives: Discuss criminal, civil and common law, origin and nature of morals and group ethics, ethical conflicts for engineers, types of liability and implications for engineers.

Instructors Materials: Video tape and lecture notes.

Students Materials: Lecture notes handout.

Video tape prepared by
Professor Nelson Rogers
The Georgia Institute of Technology
Spring 1985
1. Introduction to ethics:

1.1. Earlier session dealt with occupational safety and health criminal and regulatory law

1.1.1. Keys to law:

* Constitutional or Statute; written
* Common or Equity; unwritten (precedent).

1.1.2. Criminal -- society vs. criminal; civil -- defendant vs. plaintiff.

1.2. Relationships to professional ethics:

1.2.1. What is law?

* Authoritative body
* Enforcement system
* Judicial system

1.2.2. What are professional (group) ethics?

* Group consensus regarding major questions of right and wrong

1.2.3. What are morals?

* Individual values regarding major questions involving right and wrong

1.3. Ethics involve individual morals and group ethical consensus

* But these are separate; individual values vs. group consensus vs. authoritative law

1.4. How are we penalized?

1.4.1. Morals - conscience

1.4.2. Statute law - death, imprisonment, money fines
1.4.3. common law - damages

1.4.4. (equity) - restraint

1.4.5. group or professional ethics - withdraw love and affection (kick you out of the club).

2. Value acquisition

2.1. Where do we get our moral values?

* mother's knee, second grade teacher, best friend, first football coach

* set by age 12? Booth Tarkington - 17 vs. 12

* trauma may change values later in life - psychological, physical, spiritual.

2.2. Where do we get our knowledge of the law?

* school, academic courses, society, media (major impact)

* law changes slowly and society is also slow to perceive these changes

2.3. Where do we get our knowledge of group or professional ethics?

2.3.1. after we join the group - generally no training before

2.3.2. rules are explained as we participate in groups throughout our lives

* professional disciplines have codes of ethics - corporations have policies - community clubs have rules and regulations.

3. The resulting conflict:

3.1. Internal conflict
3.2. Mass confusion in codes, policies and rules between:

* truly ethical rules guiding our conduct in the group and
* administrative, policy, customs and traditions.

3.3. Most confusion arises because we do not separate social responsibilities from economic responsibilities as we participate in socio-economic system.

4. Socio-economic conflict

4.1. Particular problem for engineers

4.1.1. "Engineers will never create any design or build any system for the benefit of societal functions without first gaining the support or resources to perform that function from the economic system."

* to benefit society, engineers must go hat in hand to an individual or group who controls resources or investment -- government or private industry.

4.2. Thus engineers are susceptible to economic pressures in their societal service

4.2.1. this is is the biggest source of problems in professional group ethics

* society demands a need be satisfied -- engineer can satisfy need but cost is high -- economic system demands "compromise".
4.3. What is the value of human life?

4.3.1. examples:

* US shipyard
* Northern European shipyard
* developing nation shipyard

4.4. Value has to do with societal expectations and the resources available to create a system that benefits society

5. Introduction to liability:

5.1. When societal expectations become larger than the resources available, then someone becomes liable for the inadequacies and a trend develops in the legal system to charge those who make decisions on an economic basis with liability for the compromises they are forced to make in design.

5.2. Engineer - particularly the registered professional engineer - is caught in the middle

5.3. Formerly only challenged for negligence in design

5.4. Now society has introduced the concept of "strict liability"

* lack of due care vs. "deep pocket" idea (every type of injury to society should be insured against)

* started in dangerous activities and has been broadened by courts to include engineering "compromise."

6. Ethical aspects of liability

6.1. Engineers are utilitarians - "best for society as a whole" balanced against resources available

* cost / benefit / risk analysis concept
6.2. Corporation is egalitarian in its thinking

* "He who benefits from a planned action ("compromise") must himself be subject to the risks of such action."

6.3. Society is becoming more libertarian where it refuses to stand the costs of those risks and wants those costs charged back to the "compromise"

6.4. Auto examples

6.5. Actual vs. punitive damages (redistribution of wealth concept)

6.6. Can we afford to reduce uncertainty (risk) to zero?

6.7. How is unreasonable risk defined? Economic or societal terms?
Lecture Overview

NOISE

Method: Lecture

Purpose: To introduce noise definitions, measurement, and control.

Objective: To familiarize the student with noise terminology, characteristics of sound, measurement, control, and noise safety regulations.

Instructor Materials: Video tape and lecture notes.

Student Materials: Lecture notes handout.

Video Lecture Prepared By:

Professor G. Eichholz
The Georgia Institute of Technology
Spring, 1985
1. Nature and types of noise

1.1 Noise
* Any type of sound produced that is an impingement as an unwanted phenomenon

1.2 Occupational Noise
* Anything that inhibits a person's ability to perform adequately at his job
* airports, motorcycles

1.3 Environmental Noise
* Impingement of the general public which may require regulation

2. Characteristics of Sound

2.1 Intensity

2.2 Frequency distribution
* Range - 30 - 16,000Hz

2.3 Attack
* Sharp rise in frequency or intensity

2.4 White Noise
* Covers entire noise spectrum

2.5 Narrow band
* One or few frequencies present

3. Physiological Damage

3.1 Brain function is impaired at high levels by distraction and loss of concentration
3.2 Quality of Life

* Zoning requirements
* Schools
* Hospitals

3.3 Refer to Figure 1 - Impulse frequencies

3.4 Refer to Figure 2 - Sound pressure level vs frequency - isocentric contours

4. Noise Effects

4.1 Decreased acuity

4.2 Narrowed frequency bands

4.3 Decreased sensitivity with aging

5. Noise Measurement

5.1 Decibel

* Unit of noise
* Logrithmic scale
* Weber - Fechner Law states that ear will see 10 fold increase as a 1 order of magnitude increase
* Loudness measured in decibel
* Relative scale
* \[ L_{\text{db}} = 10 \log \frac{I}{I_0} \]
  where \( I = \) Intensity
  \( I_0 = \) Threshold of audibility
  \( I_0 = 0.004 \text{ dynes/cm}^2 \)

5.2 Sound Pressure

* \( P_0 = 10^{-16} \text{ watts/cm}^2 \)
* Pressure is proportional to intensity squared
5.3 Refer to Figure 3 Threshold of (pain) feeling

* Range - 0db - 120db
* 40db - conversation
* 60db - noisy street
* 80db - major machinery operation

5.4 Sound Pressure Level - Lp

* \[ L = 10 \log \frac{P}{P_0} \]

5.5 Sound Level Meter

* 6 scales
* \( A_s, A_f, B_s, B_f, C_s, C_f \)
* \( s = \) Slow - average value measurements
* \( f = \) fast - peak value measurements
* \( A, B, & C \) - scales simulate response to human ear
* \( A \& B \) - filter upper & lower end of scale
  \( C \) - flat scale which does not favor either end

* Refer to Figure 4

6. Noise Control

6.1 Regulations

* Walsh - Healy Act
* General law covering safe conditions in the work place - allowable level - 85db
* Refer to Figure 5 - IQ score vs percentage of noise
6.2 Regulations

* Allowable level: 85dbA

* For every increase in decibel level, there must be an approximate decrease of 10-15 minutes working time

* Maximum upper limit 105dbA

6.3 Time of Exposure

* reduce time of exposure if noise level cannot be reduced

6.4 Reduction of Source

* Barriers and isolators

* Deflectors

6.5 Ear Protectors

* Intensity at ear is reduced

* Most attenuation at lower frequencies

6.6 Keep noise as low as reasonable

6.7 EPA

* Low product noise emission committee

6.8 Federal Housing Authority

* Building noise

* Air-borne noise

* Impact noise

  * mass law

  * compound paritions

7. Industrial Noise Sources

7.1 Structure-borne noise reduced by shock mounting structure
7.2 Linear panels into ducts

7.3 Isolation

   * Enclosures used as room around machinery

7.4 Muffler
Figure 37. Typewriter noise as indicated in Impulse (upper trace) and Slow modes (lower trace).
Figure 1. Curves of equal loudness level for pure tones in free sound field, according to ISO Recommendation 228. These curves show how frequency response of the human ear varies with loudness level.

Figure 2
<table>
<thead>
<tr>
<th>Sound pressure in bar and N/m²</th>
<th>Sound level in dB</th>
<th>Environmental conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mbar 100 N/m²</td>
<td>134</td>
<td>Threshold of pain</td>
</tr>
<tr>
<td>100 μbar 10 N/m²</td>
<td>114</td>
<td>Pneumatic chiper</td>
</tr>
<tr>
<td>10 μbar 1 N/m²</td>
<td>94</td>
<td>Loud automobile horn (dist. 1 m)</td>
</tr>
<tr>
<td>0.1 μbar 0.01 N/m²</td>
<td>74</td>
<td>Inside subway train</td>
</tr>
<tr>
<td>1 μbar 0.1 N/m²</td>
<td>54</td>
<td>Inside motor bus</td>
</tr>
<tr>
<td>0.01 μbar 0.001 N/m²</td>
<td>34</td>
<td>Average traffic on street corner</td>
</tr>
<tr>
<td>0.001 μbar 0.0001 N/m²</td>
<td>14</td>
<td>Conversational speech</td>
</tr>
<tr>
<td>0.0002 μbar 0.00002 N/m²</td>
<td>0</td>
<td>Typical business office</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Living room, suburban area</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Library</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bedroom at night</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Broadcasting studio</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Threshold of hearing</td>
</tr>
</tbody>
</table>

Some commonly encountered noise levels (sound pressure level).

Figure 3
The Weighting Curves A, B, C and D.
Figure 1 The distribution of IQ scores for both groups A and B in the quiet and in the noise. The two distributions are different. That in the quiet is normal whilst that in noise is skewed to low values. The noise has reduced the scores of the intelligent students.

Figure 2 The effect of noise is to reduce the scores of subjects with high IQ and to increase the scores of subjects with low IQ.

Figure 5
Lecture Overview

VIBRATION

Method: Video taped lecture.

Purpose: To introduce important concepts related to vibration, occupational diseases resulting from exposure and approaches to control.

Objectives: Discuss parameters describing vibration and its potential for harm, occupational diseases including Raynaud's and Dart's diseases, methods of vibration control and the damping properties of various materials.

Instructors
Materials: Video tape and lecture notes.

Student
Materials: Lecture notes handout.

Video tape prepared by:
Professor Winston Boteler
The Georgia Institute of Technology
Spring 1985
1. Definitions and Concepts

1.1. Harmonic oscillation

* "vibration" oscillations passing through medium other than air

* characterized by frequency and amplitude

* frequency defined as reciprocal of wavelength

* Figure 1 illustrates an undamped vibration.

1.2. Relations describing vibrations:

1.2.1. maximum velocity = amplitude X frequency (V_{max} = a \times f)

1.2.2. acceleration (acc) = a \times f^2;

* important in describing stresses imposed by vibrations

* measured with accelerometer.

1.2.3. rate of change of acceleration = a \times f^3

1.2.4. resonance frequency

* occurs when natural and forcing frequencies coincide

1.2.5. natural frequency

* determined by stiffness and mass of object

* defined as the reciprocal of 2 \pi times the square root of the ratio of the stiffness to the mass.

2. Effects of vibration
2.1. Major physiological
- heart pain
- intestinal bleeding at high frequencies.

2.2. Raynaud's Phenomenon or white finger disease
- associated with high frequency (50 - 100 Hz) and small amplitude vibrations
- blood vessels constrict to cause numbness and whiteness in hands.

2.3. Dart's Disease
- associated with vibrations over 200 Hz
- develop blue swollen hands.

2.4. Resonance frequencies of parts of body effect impact of vibration.

3. Mechanical effects of vibration

3.1. Damage to machinery begins to occur at an acceleration times frequency of about 240

4. Methods of vibration control

4.1. Do not operate at natural frequency

4.2. modify mass and or stiffness

4.3. Maintain quality control by checking equipment with accelerometers or spectrographs
4.4. Isolate structures by absorbing vibration between vibrating equipment and structure

* Transmissibility = amplitude out / amplitude in

* Critical damping = $C_c$

* see Figure 2 for example of damping and critical damping

* damping characteristics of various materials:

<table>
<thead>
<tr>
<th>Material</th>
<th>Damping Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>spring steel</td>
<td>0.005</td>
</tr>
<tr>
<td>elastics</td>
<td>0.05</td>
</tr>
<tr>
<td>neoprene</td>
<td>0.05</td>
</tr>
<tr>
<td>silicone rubber</td>
<td>0.15</td>
</tr>
<tr>
<td>metal mesh</td>
<td>0.12</td>
</tr>
<tr>
<td>air</td>
<td>0.17</td>
</tr>
</tbody>
</table>

5. Standards development

5.1. No OSHA standard for vibration

5.2. No accepted measurement technique to predict health effects from vibration exposure.
UNDAMPED FREE VIBRATION

Figure 1
Fig. 55. Damped oscillation: $\zeta < 1.0$.

Fig. 56. Critically damped motion: $\zeta = 1.0$.  

Figure 2
HEAT STRESS

Method: Video Taped Lecture

Purpose: To provide a basic overview of the problem of heat stress.

Objectives: To introduce environmental indicators assessment parameters and models, heat related diseases, predisposing factors, approaches to control and standards.

Instructor Materials: Video tape and lecture notes.

Student Materials: Lecture notes handout.

Video lecture prepared by
Professor Winston Boteler
The Georgia Institute of Technology
Spring 1985
HEAT STRESS

1. Some basic definitions and relations:

1.1. Dry bulb temperature is the air temperature as measured with a ordinary exposed bulb thermometer

1.2. Wet bulb temperature is the air temperature measured with a wet wick around the thermometer bulb

1.3. Relative humidity is a measure of the ability of the atmosphere to absorb additional moisture. It can be expressed as:

\[ \text{RH} \% = \frac{P_a}{P_s} \times 100 \]

where

- \( P_a \) is the ambient partial pressure of water vapor and
- \( P_s \) is the saturation vapor pressure of water at ambient temperature.

1.4. Psychrometric charts, such as that shown in Figure 1 are used to determine the relative humidity from wet and dry bulb temperature measurements

1.5. Heat storage \( (S) \) in humans can be approximated using:

\[ S = M + R + C + E + D \]

where:

- \( M \) = metabolic heat production
- \( R \) = radiative heat loss or gain as a result of infrared energy transfer
- \( C \) = convective heat loss or gain as a result of energy transfer to passing air currents
- \( E \) = evaporative heat loss as a result of water evaporation from the skin
- \( D \) = conductive heat loss or gain as a result of direct contact with environmental surfaces.

1.6. A model for approximating the relation
between environmental factors and thermal comfort, referred to as New Effective Temperature, is illustrated in Figure 2.

2. Common heat related diseases:

2.1. Heat stroke:
* thermoregulatory failure
* life threatening emergency
* hot dry skin, flushed face, high body temperature, rapid pulse
* cool as rapidly as possible and get immediate medical assistance.

2.2. Heat exhaustion:
* water and electrolite depletion
* cool moist skin, sweating and rapid pulse
* rest in cool place with water and electrolite replacement.

2.3. Heat cramps:
* electrolite depletion
* painful muscle spasms
* replace electrolites.

2.4. Heat rash "heat rash":
* continuous moisture on skin surface due to sweat
* small red blisters and prickling sensation
* dry clothing, reduce humidity and keep skin and clothing clean.

3. Factors affecting response to heat:

3.1. Air temperature

3.2. Relative humidity
3.3. Wind speed

3.4. Air contaminants (dust, fumes, aerosols, gases)

3.5. Age

3.6. Sex

3.7. Body build and obesity

3.8. General health

3.9. Nutritional status

3.10. Training and acclimatization

3.11. Physical effort

3.12. Opportunity to cool off (rest)

3.13. Figure 3 shows a model for predicting safe working conditions under environmental conditions represented by the wet bulb globe temperature (WBGT).

4. Evaluation of heat stress:

4.1. Establishment of allowable exposure limits

4.2. Heat Stress Index (HSI)

4.3. Effective Temperature Index

4.3.1. Figure 4 shows equivalent performance or stress as a function of exposure time and Effective Temperature

4.4. The relationship between core body temperature and errors in the performance of tasks is shown in Figure 5

4.5. The amount of metabolic heat produced by a variety of tasks is illustrated in Figure 6.

5. Methods for reducing heat stress potential:

5.1. Metabolic heat:

* control exertion and provide rest periods.
5.2. Radiant heat:
* increase distance between source and worker
* install barriers
* install IR absorbing materials
* light colors on source and worker
* minimum exposed skin area.

5.3. Convective heat:
* reduce air temperature
  * for Tdb < 95 deg F, increase air velocity and increase exposed skin area
  * for Tdb > 95 deg F, decrease air velocity and decrease exposed skin area.

5.4. Evaporative heat loss:
* reduce relative humidity
* increase air velocity
* increase exposed skin area.

5.5. Conductive heat:
* insulate contact surfaces
* insulate worker
  * insulating properties of clothing are shown in Figure 7.

6. Standards:

6.1. No OSHA heat exposure standards

6.2. Proposed Standard by NIOSH

6.3. General Duty Clause of OSHAct requires employers to adequately protect workers.
Air Movement or Turbulence
15 to 25 ft. per min.

Figure 1
Figure 2
Figure 3
Effective temperature

°F

Sitting

Mental efficiency

Moderate work

Exposure time in hours

°C

Figure 4
**Figure 5**

**Mean Percent Increase in Errors**

**Mean Rectal Temperature at End of Task**

- Resistance
- Vigilance
- Coding
- Heavy pursuit
- W.T. reception

**MEAN RECTAL TEMPERATURE AT END OF TASK**

**MEAN PERCENT INCREASE IN ERRORS**

- 0 25 50 75 100 125
- 36 37 38 39 40 41

- 100 110 120 130 140 150
- 0 25 50 75 100 125

°F
Table 7
Insulation of Clothes Worn*

<table>
<thead>
<tr>
<th>Insulation in clo†</th>
<th>Clothes worn</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No clothes</td>
</tr>
<tr>
<td>.2</td>
<td>Light sleeveless dress, cotton underwear</td>
</tr>
<tr>
<td>.5</td>
<td>Light trousers, short sleeve shirt</td>
</tr>
<tr>
<td>.7</td>
<td>Warm long sleeve dress, full length slip</td>
</tr>
<tr>
<td></td>
<td>or</td>
</tr>
<tr>
<td></td>
<td>Light trousers, vest, long sleeve shirt</td>
</tr>
<tr>
<td>1.0</td>
<td>Jacket, light trousers, vest, long sleeve shirt</td>
</tr>
<tr>
<td>1.5</td>
<td>Heavy 3 piece suit, long underwear</td>
</tr>
</tbody>
</table>

*Adapted from McIntyre, 1973.
†Under standard conditions, 1 clo unit of insulation produces a temperature difference between the skin and the external air of .18°C per kilocalorie per square meter per hour of heat loss.
<table>
<thead>
<tr>
<th>Heat production in W/m²† of surface area</th>
<th>Heaviness of work</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>Lying half asleep</td>
</tr>
<tr>
<td>60</td>
<td>Sitting at rest</td>
</tr>
<tr>
<td>75</td>
<td>Office work</td>
</tr>
<tr>
<td>90</td>
<td>Light work standing</td>
</tr>
<tr>
<td>170</td>
<td>Walking at 5 Kph (3 mph)</td>
</tr>
<tr>
<td>250</td>
<td>Heavy manual work</td>
</tr>
<tr>
<td>320</td>
<td>Digging</td>
</tr>
</tbody>
</table>

*Adapted from McIntyre, 1973.
†Watts per square meter.
Lecture Overview

IONIZING AND NONIONIZING RADIATIONS

Method: Lecture

Purpose: To introduce the basic concepts of ionizing and nonionizing radiation.

Objectives: To familiarize the student with ionizing and nonionizing radiations, definitions, history, health effects and controls.

Instructor Materials: Video tape and lecture notes.

Student Materials: Lecture notes handout.

Video Lecture prepared by:

Professor Melvin W. Carter
The Georgia Institute of Technology
Spring, 1985
1. Scope and EM Spectrum

1.1 Covers 20 orders of magnitude (from $10^{-13}$ eV to $10^7$ eV). eV is defined as the energy required to move an electron through a potential of 1 volt.

1.2 Energy spectrum from high to low

* Gamma radiation ($\gamma$)
* X-ray
* UV (10-12eV)
* Visible
* IR
* Microwave
* RF
* Extremely low frequency

* Note: UV is boundary between ionizing and nonionizing radiation.

* Ionizing: the ability for electrons to be removed from an atom.

2. Particulate Radiations

2.1 Electrons

* Very small mass
* Negative charge

2.2 Protons

* Large mass
* Positive charge

2.3 Neutrons

* No charge
2.4 Beta particle
* Same as an electron but originate from the nucleus

2.5 Alpha particle
* Excited $^4$He nucleus

2.6 Positron
* Positive electron

3. History of Radiation
3.1 1895 - Discovery of x-rays by Roentgen
3.2 Curies discovered Radium
3.3 Thompson demonstrated the biological effects of radiation
* Small finger irradiated for 30 minutes for several days showed pronounced effect

4. Health Aspects
4.1 Early studies of health effects arose from concerned physicists, chemists, etc. who were directly involved.
* Initial impetus from professionals and by professional societies

5. Early effects
5.1 Eyes - cataracts
5.2 Retinal burns

6. Health Effects
6.1 Somatic effects seen in persons exposed
* Erythema
* Epilation
6.2 Genetic effects
   * Progeny of radiation exposed person
   * 1927 first observed genetic effects in fruit flies

6.3 Teratogenic effects
   * Rollins discovered effects of damage in-utero

7. Applications
7.1 Medical
   * Therapy
   * Diagnosis

7.2 Industrial
   * Telecommunications
   * Smoke detectors
   * Thickness gauges

7.3 Scientific

7.4 Home
   * Microwave ovens (nonionizing radiations)
   * Smoke detectors

7.5 Environment
   * Em radiation
   * RF for navigation

8. Radiation Controls - important factors
8.1 Time
8.2 Frequency
8.3 Distance from Sources

8.4 Shielding

9. Radiation Parameters of Interaction with Materials

9.1 Absorption (energy deposition)

9.2 Reflection

9.3 Transmission

9.4 Scattering

10. Nonionizing

10.1 Measured by power density

* Amount of power deposited per unit area i.e. W Watt/cm²

10.2 Effects

* Heat deposition and temperature rise

* Same disagreement between USA and USSR standards. Central nervous effects

* Controversy over effects
Lecture Overview

CHEMICAL EXPOSURE AND INDUSTRIAL TOXICOLOGY

Method: Lecture . Length: 40 min.

Purpose: To introduce the fundamental concepts underlying occupational exposure limits and to discuss how various forms of these limits come into being.

Objectives: Brief discussion of the following:

1. the discipline of toxicology
2. how toxicological data is obtained
3. how exposure guides are developed
4. and how exposure regulations are promulgated.

Instructor Materials:

Overhead transparencies from the lecture figures.

Student Materials:

Handout figures.

Prepared by:

Dr. John L. Carden
Georgia Institute of Technology

Date:

June 1985
1. Introduction

1.1. What is the main activity of the discipline called toxicology?

Toxicology is the study of chemical or physical agents which interact with biological systems in such a manner as to produce a response from the organism which is considered harmful or deleterious to it.

1.2. How is toxicology organized?

Industrial toxicology is the branch which studies the toxicity of industrially important agents and is thus of greatest importance to occupational health protection.

2. Dose-response relationship.

2.1. Simple statement:

The harm likely to occur as the result of exposure to a toxic material increases as the amount of toxin taken in increases.

2.2. Operational statement:

The frequency of a given well defined response (death, specified weight loss, etc.) increases with increasing dose. (see Figure 1.)

2.2.1. LD-50 is defined as the dose required to kill half the experimental population within a specified time.

2.2.2. The existence of the dose-response relationship is the fundamental hypothesis in most toxicological studies and applications.

3. Dose-effect relationship.

3.1. Simple statement:

The type and extent of damage or disease produced by exposure to a toxin can vary with the amount of toxin taken in.

Figure 2. shows the effects observed with increasing dose of dimethyl mercury.
3.2. Figure 3. shows a generalized dose-effect relationship.

3.2.1. Important features of Figure 3:

* below some dose the body remains in its normal homeostatic state

* above this dose increasing difficulty is experienced with the damage eventually exceeding the body's capacity for repair.

4. Threshold concept

Suggested by dose-response and effect relationships.

4.1. Simple statement:

For a given toxin a threshold dose exists such that at that dose only a small fraction of those exposed will experience a predefined health effect.

4.2. Occupational exposure limits are based on thresholds with criteria like:

Non-serious health effect (minor irritation, small biochemical change, etc.) with less than 5% of the population developing this or a more serious health effect. NO ADVERSE EFFECT LEVEL

5. How well does this approach to worker health protection work?
As usual reality is more complicated than theory. Some complications include:

5.1. The toxicological data base reflects, through large uncertainty, the great variability that exists in the biological system it is derived from.

5.1.1. Major contributors to variability include:

* route of exposure
  * inhalation
  * oral
  * dermal

* sex
* age
* genetic differences
* preexisting disease

These factors make setting exposure limits imprecise and open to debate.
5.1.2. The thresholds for toxins which produce chronic effects are very difficult to evaluate. This leads to problems like the current conflict over a benzene exposure regulation.

5.1.3. Some toxins may not have thresholds.

Subject of debate: Some compounds, particularly genetic toxins like beta-napthylamine, may even if only a few molecules are present, be able to initiate a progressive disease; bladder cancer in the case of this compound.

6. How is the industrial toxicology data base developed? The following are the primary sources:

1. Experimental investigations on animals
2. Clinical surveillance of exposed workers
3. Investigations on volunteers.

6.1. Objectives of animal studies:

1. establish tentative "no adverse effect level"
2. identify biological monitoring methods
3. identify preexisting pathological states which alter susceptibility.

6.1.1. A large variety of tests are used including:

1. acute toxicity tests (local and systemic)
2. skin sensitization tests
3. chronic toxicity tests
4. short term mutagenicity and carcinogenicity tests
5. reproductive and teratogenicity tests
6. biochemical tests
7. interactive studies (exposure to multiple agents).

6.1.2. Always some uncertainty when predicting human response from observations on animals.

6.2. Objectives in clinical surveillance of workers:

1. validate "no adverse effect level"
2. validate biological monitoring methods

6.2.1. Epidemiology plays an important role in identifying and characterizing health effects due to worker exposures. Epidemiological study designs include:

1. Prospective studies - study is underway while dose is being acquired.
   experimental versus cohort studies.
2. Retrospective studies - study follows exposure and may even begin after disease appears.
   cohort versus case control studies.
6.3. Experiments on volunteers:

6.1 Requirements:

1. substantial prior knowledge
2. carefully planned and executed protocol.

6.2. Must be designed for very specific purpose such as:

1. half life of toxin in body
2. threshold for sensory response
3. effects on perception and vigilance.

7. How is the toxicological data base used in the development of exposure limits?

7.1 There are two distinct types of exposure limits:

* recommendations and good practice
* regulations.

7.1.1. Recommendations and good practice. Developed by health protection professionals.

For example:

Exposure guides developed by the American Conference of Governmental Industrial Hygienists called TLV's

TLV (threshold limit value) is defined as the airborne concentration of an agent which is believed nearly all workers may be exposed day after day without adverse effects. Three categories of TLV's are given:

1. TLV-TWA which represents an 8 hr. time weighted exposure
2. TLV-STEL which is a short term exposure limit
3. TLV-C which is a ceiling or maximum concentration for even instantaneous exposure.

Figure 4. demonstrates these limits.

The TLV's are developed by an independent pannel of experts and are revised annually.

7.1.2. Regulated exposure limits:

OSHA (Occupational Safety and Health Administration) has, as required by law, developed a set of exposure limits for industry. These regulations are established by experts and politicians so the process is often tedious.

7.1.3. Differences between two classes of exposure limits:
6.3. Experiments on volunteers:

6.1 Requirements:

1. substantial prior knowledge
2. carefully planned and executed protocol.

6.2. Must be designed for very specific purpose such as:

1. half life of toxin in body
2. threshold for sensory response
3. effects on perception and vigilance.

7. How is the toxicological data base used in the development of exposure limits?

7.1 There are two distinct types of exposure limits:

* recommendations and good practice
* regulations.

7.1.1. Recomendations and good practice. Developed by health protection professionals.

For example:

Exposure guides developed by the American Conference of Governmental Industrial Hygienists called TLV's

TLV (threshold limit value) is defined as the airborne concentration of an agent which is believed nearly all workers may be exposed day after day without adverse effects. Three categories of TLV's are given:

1. TLV-TWA which represents an 8 hr. time weighted exposure
2. TLV-STEL which is a short term exposure limit
3. TLV-C which is a ceiling or maximum concentration for even instantaneous exposure.

Figure 4. demonstrates these limits.

The TLV's are developed by an independent pannel of experts and are revised annually.

7.1.2. Regulated exposure limits:

OSHA (Occupational Safety and Health Administration) has, as required by law, developed a set of exposure limits for industry. These regulations are established by experts and politicians so the process is often tedious.

7.1.3. Differences between two classes of exposure limits:
1. The regulatory process responds very much slower to new information than the guide development process.
2. Economic considerations are included in the regulatory process.
3. Regulations often allow greater exposure than under current good practice guides.

For example:

Formaldehyde exposure limits in ppm

<table>
<thead>
<tr>
<th>TLV regulation</th>
<th>TWA (8 hr.)</th>
<th>STEL</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>none given</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

The next lecture deals with these exposure limits in more detail and includes a discussion of few examples of industrial toxins.
"Dose-effect" relationships are also often observed

Death
Deafness
Loss of vision

Ataxy (uncoordinated movements)
Paraesthesia (sensory disturbances)

Human response to chronic methylmercury ingestion. (IRAG: 320 affected, 35 died)

Study of occurrence of a particular effect as a function of dose:

"Dose-response"
Dose Response Curves for two Compounds

Figure 1. A dose response curve
Figure 3. Generalized Dose-Effect Curve
Figure 4. Exposure limits for toluene
Lecture Overview

CHEMICAL EXPOSURE AND INDUSTRIAL TOXICOLOGY - 2

Method: Lecture
Length: 50 min.

Purpose:
To make it possible for the student to locate information which will assist in preventing adverse health effects from chemical exposures.

Objectives:
The student will be able to identify the most common sources of exposure limits and be aware of the unique nature of source.

Instructors Materials:
Figure 1. plus various texts.

Student Materials:
Lecture notes.

Prepared by:
Dr. John L. Carden
Georgia Institute of Technology

Date:
June 1985
1. Introduction

1.1. You now have at least some basic information about exposure limits and the toxicological data base they are derived from.

1.2. As the people who design, maintain and control the work environment, we should strive to maintain a high level of production while assuring workers do not sacrifice their health in doing their part.

Figure 1. illustrates the role of exposure limits in this process.

1.3. Will finish up this short lecture by discussing where to go for help with a chemical exposure problem.

2. Where do you start?

2.1. Assume you or others are exposed via inhalation or dermal absorption and you want to assess the associated hazard.

2.1.1. Assume the agent is near garden variety, i.e., most common few hundred compounds. There are lots of possibilities for help.

2.1.1.1. Threshold Limit Values we have discussed. American Conference of Governmental Industrial Hygienists.

The information here was designed to be applied to health protection in the work environment. Much more valuable to you and I than LD-50 values.

Pocket Guide

Documentation of TLV

2.1.1.3 Occupational Health Guidelines for Chemical Hazards. (DHHS Pub. 81-123). NIOSH/OSHA

2.1.1.4. Material Safety Data Sheets (MSDS). Should be provided by chemical supplier. Some large collections are available from services such as Genium Publishing Corp. (formally a division of G.E.). Particularly valuable for proprietary mixtures.

2.1.1.5. General Industry Standards -- The Regs. 29CFR1910.1000. Good "book" to have around. Ask OSHA for your free copy!


2.1.2. How about a really odd material?

2.1.2.1. Most general reference Registry of Toxic Effects of Chemical Substances (RTECS). Maintained under legislative mandate by NIOSH. Quarterly update. Available in three formats: on-line database, inexpensive microfilm edition available for each update and printed edition every few years. Tox window to hundreds of thousands of compounds with current literature citations. A good place to start if available.

2.1.3. Where can you find more detail?
Figure 1. The role of exposure limits in protecting workers while promoting production.
Useful Literature in Evaluating Health, Safety, and Disposal
Questions Concerning Hazardous Materials


2. Threshold Limit Values for Chemical Substances and Physical Agents in the Workroom Environment with Intended Changes for (stated following year), American Conference of Governmental Industrial Hygienists, P. O. Box 1937, Cincinnati, Ohio 45201. Revised annually.


10. Basic Industrial Hygiene, American Industrial Hygiene Association, Akron.


32. NIOSH Current Intelligence Bulletins, also available through U.S. G.P.O.

34. NIOSH Recommended Standards, also available through U.S. G.P.O.


37. CHRIS (Chemical Hazards Response Information System) consists of four volumes:
   - CG-446-1: A Condensed Guide to Chemical Hazards
   - CG-446-2: Hazardous Chemical Data
   - CG-446-3: Hazard Assessment Handbook
   - CG-446-4: Response Methods Handbook

   All available through U.S. G.P.O. (Also routine updates)


39. Handbook of Occupational Safety and Health, National Safety Council, Chicago, IL, 60611


41. Chemical Hazards in the Workplace: Measurement and Control, Gangadhar Choudhary, ACS Symposium Series #149, American Chemical Society (1981)


Lecture Overview

INDUSTRIAL DISEASES: LECTURES 1 & 2

Method: Video taped lecture.

Purpose: To introduce important physiological factors related to occupational diseases.

Objectives: Discuss inhalation, skin absorption and ingestion as routes of entry of toxins. Discuss physical, chemical and biological diseases of the workplace.

Instructors
Materials: Video tape and lecture notes.

Student
Materials: Lecture notes handout.

Video tape prepared by
Professor Winston Boteler
The Georgia Institute of Technology
Spring 1985
1. Facts:

1.1. Long latency period for some serious industrial diseases

1.2. 100,000 people die each year of industrially related diseases

1.3. Figures 1 and 2 give indication of nature of work related disorders.

2. Routes of entry:

2.1. Inhalation

2.1.1. total surface area in lungs 90 square meters with 70 in alveolar surfaces (see Figure 1)

2.1.2. water soluble materials rapidly absorbed through lung membranes while water insoluble materials retained longer in lungs.

2.1.3. materials entering lungs may include gases, vapors and particulates

2.1.4. particulate deposition

* depends on anatomical arrangement, breathing depth, breathing rate, physical nature of particles, chemical nature of particles

* "respirable particles" smaller than 16 micrometers

2.1.5. lung action for particle removal

* mucociliary escillator

* lumphatic system

* fluid leaching

* absorption into blood stream.

2.2. Skin contact

2.2.1. most common cause of occupational illness

2.2.2. Skin structure very important in
determining effectiveness of toxin in contact with skin (see Figure 4)

2.2.3. absorption mechanisms

2.2.4. cuts and scratches increase penetration

2.2.5. ACGIH has developed TLV's for 179 substances in contact with skin

2.2.6. strong acids and bases cause immediate damage (strong irritants)

2.2.7. sweating and degree of skin hydration effect penetration

2.3. Ingestion

2.3.1. most likely with smokers, gum chewers, and those who eat on the job, Not major occupational route of exposure.

3. Modes of action

3.1. Physical

3.1.1. irritants

3.1.2. inert gases

3.1.3. adsorption

3.1.4. radiation

3.2. Chemical

3.2.1. direct combination

3.2.2. indirect combination

3.2.3. chelation

3.3. Biological

3.3.1. viral diseases

* rabies
* cat scratch fever
* orf
* milker's modules
* newcastle disease
* viral hepatitis
* ricksettsial and chlamydial diseases
* Q fever
* ornithosis

3.3.2. bacterial diseases
* tetanus
* anthrax
* brucellosis
* leptospirosis
* plague
* food poisoning
* tuberculosis
* mycobacterial infections
* tularemia

3.3.3. fungal diseases
* candidiasis
* aspergillosis
* coccidiodomycosis
* histoplasmosis
* sporotrichosis
* dermatophytoses

3.3.4. parasitic diseases
* swimmer's itch
* creeping eruption
* hook worm
* ascariasis
* mites, chiggers, ticks

3.3.5. dermatoses
* natural protection
* primary irritants
* allergic sensitizers
* photosensitizers

3.5. Diseases of the airways and lungs
3.5.1. airways mechanisms and responses
* airways resistance
* responses to dust deposition

3.5.2. extrinsic allergic alveolitides
* clinical features
* prevention
* pathology
* immunology

3.5.3. pneumoconiosis
* deposition of particles
* clearing of particles
* pathology
* radiographic diagnosis
* physiological responses

3.6. Plant and wood hazards
3.6.1. plant and plant products
3.6.2. woods.
Percent distribution of total illnesses by type of illness, United States, 1976.

Skin diseases or disorders were the most prevalent of all types of job-related illness recorded. These diseases or disorders are more readily observable than other illnesses.
Lost workday illnesses as a percent of total illnesses within each type of illness, United States, 1976.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin diseases or disorders</td>
<td>20</td>
</tr>
<tr>
<td>Disorders due to physical agents</td>
<td>30</td>
</tr>
<tr>
<td>Dust diseases of the lungs</td>
<td>40</td>
</tr>
<tr>
<td>Poisoning</td>
<td>50</td>
</tr>
<tr>
<td>Respiratory conditions due to toxic agents</td>
<td>60</td>
</tr>
<tr>
<td>Disorders associated with repeated trauma</td>
<td>30</td>
</tr>
<tr>
<td>All other illness</td>
<td>20</td>
</tr>
</tbody>
</table>

Skin diseases or disorders, the most prevalent occupational illness recorded, had the smallest proportion of illnesses involving lost worktime. Disorders associated with repeated trauma had the greatest.
Plate 38.
The Lungs, Bronchi, Pleurae, and Blood Vessels

Figure 3
Plate 53. The Skin

The Skin (Hairy)

Bare nerve endings (pain)

Sebaceous gland provides oil component for bacterial flora—prevents dryness.

Arrector pili (smooth mus.)

Protection: Barrier to bacterial invasion. Protects deeper tissues from injury. Contains nerves to record conditions of external environment.

Heat regulation

Limited excretory and absorbing powers

Conium or dermis

Sweat gland

Melanin's corpuscle (light touch)

Subcutaneous protective padding and storage of fat

Krause's end bulb (cold)

Fascia

Muscle

Vascular papilla

THE SKIN (HAIRLESS)

—SOLE OF FOOT, PALM OF HAND

Surface cells of epidermis, subject to wear and injury, are shed and are replaced by migratory cells going through stages of evolution from St. germinativum layer.

Ampulla of sweat gland

Duct

Figure 4
Lecture Overview

LIGHTING AND ILLUMINATION

Method: Lecture Materials

Purpose: To introduce basic concepts of lighting and illumination, and requirements for safe healthful working conditions.

Objective: To familiarize the student with definitions and characteristics of light, and recommendations of safe light and illumination levels.

Instructor Materials: Video tape and lecture notes

Student Materials: Lecture notes handout

Video Lecture Prepared By:

Professor Winston Boteler
The Georgia Institute of Technology
Spring, 1985
1. Lighting Units

1.1 Foot-candle
* The amount of light received by an object one foot away from a standard candle

1.2 Foot-lambert
* Equivalent unit of one foot-candle

1.3 NIT
* SI unit for illumination
* 1 NIT = \( \frac{1 \text{ candle}}{m^2} = 0.3 \text{ ft-lambert} \)

2. Characteristics of Light

2.1 Electromagnetic spectrum
* Visible range from 400 - 700 nm

2.2 Inverse square law applies for light intensity
* \( I = \frac{1}{r^2} \)
* Figure 1

2.3 See graph of common light levels - Figure 2

2.4 See Figure 3 - critical detail vs % contrast

2.5 Contrast ratio
* The ratio of the difference in reflectance of the surface of an object to the reference surface or background of object being observed

* ex white paper - 80% reflection
  black print - 4% reflection
  \( \frac{80-4}{80} = 95\% \)

3. Light and human physiology
3.1 Eye

* Refer to Figure 4 - Visual Acuity vs. Degrees from fovea

* Fovea is focal point of eye

* Acuity is best when object is directly in front of the eye

* Blind spot - \( \sim 18^\circ \) from fovea where optic nerve connects to the eye

4. Recommendations for Lighting Levels

4.1 Varies from Country to Country

* US > GB > USSR

* Other countries have reduced level of general illumination

* Small, local lighting is more common in other countries

* Refer to Figure 5 - recommended levels of light

5. Lighting Definitions

5.1 Graying light

* Light at an angle to the object being illuminated

* Increases contrast by producing shadows

5.2 Glare

* Extraneous light coming from a direction other than that which we are observing

5.3 Flicker

* Illumination varying in a periodic manner

* Variation in frequency from generating system
* Results from CRT terminals

* Small changes in frequency cause discomfort

5.4 Spectral Power Vs. Wavelength - Refer to Figure 6

* Sunlight has similar power in all wavelengths

* Fluorescent light has more energy in the near UV
Figure 2. The inverse square law, which relates the amount of light received from a lamp to its distance.
Table 1

Some Common Light Levels

<table>
<thead>
<tr>
<th>Effect upon people</th>
<th>Luminance in nits†</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retinal burn</td>
<td>$10^{10}$</td>
<td>Brightness of sun</td>
</tr>
<tr>
<td>Discomfort glare</td>
<td>$10^5$</td>
<td></td>
</tr>
<tr>
<td>Minute details visible</td>
<td>$10^3$</td>
<td>Fluorescent lamp</td>
</tr>
<tr>
<td>Good reading light</td>
<td>$10^2$</td>
<td></td>
</tr>
<tr>
<td>Gross details visible</td>
<td>$10$</td>
<td></td>
</tr>
<tr>
<td>Threshold for color</td>
<td>$10^{-2}$</td>
<td>Twilight</td>
</tr>
<tr>
<td>Threshold for night vision</td>
<td>$10^{-6}$</td>
<td>Dark night</td>
</tr>
</tbody>
</table>

†1 nit is defined as 1 candela per square meter (1 cd/m²). Roughly 1 nit = 3 lux = .3 foot lamberts or millilamberts.
Light and Vision

Critical detail in minutes of arc (log scale)

Percent contrast ratio (log scale)

- 3 Nits
- 60
- 300 Nits

Figure 3
Figure 4
Table 2

Recommended Minimum Levels of Light*

<table>
<thead>
<tr>
<th>Minimum luminance in nits†</th>
<th>Kind of visual task</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000</td>
<td>Exceptionally severe tasks with minute detail</td>
<td>Inspecting very small instruments</td>
</tr>
<tr>
<td>-600</td>
<td></td>
<td>Watchmaking</td>
</tr>
<tr>
<td>600</td>
<td>Very severe prolonged tasks with very small detail</td>
<td>Gauging very small parts</td>
</tr>
<tr>
<td>-400</td>
<td></td>
<td>Hosiery mending</td>
</tr>
<tr>
<td>300</td>
<td>Severe prolonged tasks with small detail</td>
<td>Fine assembly and machining</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weaving thin fibres</td>
</tr>
<tr>
<td>200</td>
<td>Fairly severe tasks with small detail</td>
<td>Drawing offices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cutting and sewing clothes</td>
</tr>
<tr>
<td>100</td>
<td>Ordinary tasks with medium detail</td>
<td>General offices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>General assembly</td>
</tr>
<tr>
<td>60</td>
<td>Rough tasks with large detail</td>
<td>Stores</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Heavy machinery assembly</td>
</tr>
<tr>
<td>30</td>
<td>Casual seeing</td>
<td>Passages</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cloakrooms</td>
</tr>
</tbody>
</table>

*Adapted from Hopkinson and Collins, 1970.
†candela per square meter (cd/m²).
Sunlight - 5,300K

Fluorescent lamp

Wavelength (nm)

Relative spectral power

- Blue - green - Yellow
- Violet - blue - Green - Red

"Daylight"

Fluorescent lamp

Sunlight 5,300K

Figure 6
Lecture Overview

VENTILATION I

Method: Lecture

Purpose: To introduce the basic concepts of general ventilation for occupational safety and health.

Objective To familiarize the student to areas of ventilation, types of dispersion, currents, and ventilation control.

Instructor Materials: Video tape and lecture notes.

Student Materials: Lecture notes handout

Video Lecture Prepared By:

Professor Winston Boteler
The Georgia Institute of Technology
Spring, 1985
1. Areas of Concern:

* Dusts
* Toxic Gases

1.1 Dusts

* Source Control
* Smooth Surfaces - Wall, Floors
* Sweeping compounds to minimize air-borne dust
* Polyester antistatic clothing for control

1.2 Dust Dispersion

1.2.1 Intrainment of air

1.2.2 Moving parts of machinery control by enclosure and local exhaust ventilation

1.2.3 Air exchange in work room

* Positive pressure - inlet at ceiling - outlet at floor
* Regulate the number of air changes

1.3 Respirable Dusts

* <15 μm - trapped in lungs

1.4 Air flow generated by hot objects

1.4.1 Covective currents

* Carry intrained particles with it
* Refer to Figure 1

1.5 Ventilation Currents

* Units feet/minute

2. Control of Gaseous Particles

2.1 Dilution
2.2 Design of Exhaust Systems

2.2.1 Circulars, square, rectangular openings, flared slots

2.2.2 Airflow openings - Refer to Figure 2

* Square - add flange to minimize loss
* Circle opening - Refer to figure 3
* Flanges
* Refer to Figure 4

2.2.3 * Inlet should be as close to source as possible

2.2.4 * Phantom duct techniques

2.2.5 Total enclosures or booths

2.2.6 Remote handling areas

2.2.7 Booth Design

* Deep entrance is necessary to prevent leakage

2.2.8 Material Handled

2.3 Duct Design

* Diameter
* \((\text{Velocity})^2\) is proportional to resistance in duct
* Reduce velocities to minimum to reduce resistance
* Height considerations
* Condensation
Fig. 4.8. Bad design of booth. Entrance walls too shallow, leading to leakage around edges.

Fig. 4.9. Good design of booth. Deep entrance prevents outward leakage.
Fig. 4.2. Velocity contours and stream lines for a square opening. (After Vali, 1932)
Flow into circular opening with flange. Velocity contours are percentages of average face velocity. (After DallaValle, 1952.)

Figure 3
Fig. 4.4. Axial velocity towards circular openings of 0.2 and 0.3 m diameter for flow rate of 3 m$^3$/min.
Lecture Overview

VENTILATION II

Method: Lecture

Purpose: To introduce the basic concepts of general ventilation

Objectives: To familiarize the student with local exhaust and dilution ventilation, ACGIH guidelines, and fan selection.

Instructor: Video tape and lecture notes

Materials: Lecture notes handout

Video Lecture Prepared By:

Professor Winston Boteler
The Georgia Institute of Technology
Spring, 1985
1. General Ventilation
   * Local exhaust
   * Dilution

2. Ventilation Design Concentration (VDC)

   \[
   \text{CFM Required} = \frac{\text{Lb. of \text{ Solvent Evap.}}}{\text{min.}} \times 400 \times 10^6 \times \frac{\text{MW}}{\text{VDC}}
   \]

   * Used to specify the number of air changes per minute
   * Size of workroom is not a factor

3. ACGIH Guidelines

3.1. Refer to Figures 1 for proper layout of air inlet and exhaust

4. Must decide most appropriate type of ventilation for particular application i.e., local exhaust vs dilution ventilation

5. Comfort ventilation is not adequate for hazardous material control but is used for some purposes
   * CO\textsubscript{2} Buildup
   * Bacteria
   * Odors
   * Heat
   * Natural Ventilation
   * Wind
   * Temperatures

6. General Exhaust Ventilation

6.1 * Recirculation of air

6.2 * Control humidity and stagnant air

7. Make up air considerations
7.1 Air that must be brought into building when air is being removed

* Avoid negative pressure situation

8. Air Heating

9 Examples of operations requiring exhaust

9.1 Tank Operations

* Local exhaust ventilation
* Slot ventilation

9.2 Welding Operations

10. Fan Selection

10.1 Determine Speed and Efficiency

10.2 Types

* Axial Figure 2
* Centrifugal Figure 3
* Mixed flow blower Figure 4

10.3 Criteria for Fan Selection

Specific Speed, Ns

\[ N_s = \frac{N Q}{P^0.75 S} \left( \frac{d}{d_0} \right)^{0.75} \]

Where: d = Air density

N = Rotational speed

Q = Air flow rate

\( P_s \) = Static pressure in inches of water

Refer to Figure 5
2-3 DILUTION VENTILATION

- Good air inlet
- Fair air inlet
- Poor air inlet

POOR FAN LOCATIONS

- Best exhaust (local)
- Calculate air volume as booth 100 cfm/sq.ft. open area.
- Best air inlet

GOOD FAN LOCATION

Note:
Inlet air requires tempering during winter months. See Section 7

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS

PRINCIPLES OF DILUTION VENTILATION

DATE 1-66 Fig. 2-1
Fig. 12—Typical axial fan.
Fig. 7—Centrifugal blower.
Fig. 17—Typical mixed-flow blower.
A Forward-curved centrifugal blower
B Narrow backward-curved centrifugal blower
C Wide backward-curved centrifugal blower
D Mixed-flow blower
E Vane axial blower
F Tube axial blower
G Partially cased fan

Figure 5
Lecture Overview

EMISSIONS CONTROL

Method: Lecture

Purpose: To introduce basic principles of emissions control.

Objectives: To familiarize the student with emissions control, sources, and monitoring techniques.

Instructor
Materials: Video Tape and Lecture Notes

Student
Materials: Lecture Notes Handout.

Video Lecture Prepared By:

Professor Charles Gorton
The Georgia Institute of Technology
Spring, 1985
1. Emissions Control Considerations
   * Emissions
   * Sources
   * Monitoring
   * Controls

2. Emission Types
   2.1 Innocuous
   2.2 Nuisance
   2.3 Depletion of O₂
      * Blanketing (N₂)
   2.4 Combustible
   2.5 Toxic
   2.6 Carcinogenic

2.7 Emission States
   * gas
   * vapor
   * mist
   * dust
   * aerosol
   * fume

3. Emission Sources
   * processes
   * fugitive
      * unknown origin of occurrence
   * accidental releases
3.1 Processing Emission Sources
   * unloading
   * raw material storage
   * feeding
   * processing
   * product removal - batch process
   * product storage
   * loading

3.2 Fugitive Sources
   * solids conveying - bucket elevators
   * seals
   * valves
   * pressure reliefs
   * instrumentation
   * sampling
   * heat exchangers
   * vents - gas tanks
   * drains
   * flanges

3.3 Accidental Releases
   * leaks
   * spills

4. Monitoring Control
4.1 Types of Surveys
   * boundary - process unit
   * area - area sampling
4.2 Instrumentation
* gas chromatograph
* infrared
* ultraviolet
* light scattering

5. Emission Controls
* process
* equipment
* source control

5.1 Process Control
* substitution
* modification

5.2 Equipment
* maintenance
* seals
* valves

5.3 Source Control
* dilution ventilation
* local ventilation
* dispersion
* consequent analysis - pathways of toxic materials
Lecture Overview

ELECTRICAL HAZARDS

Method: Lecture
Purpose: To introduce common industrial electrical hazards.
Objectives: To familiarize the student with electrical hazards, definitions, and protective measures.

Instructor Materials: Video tape and lecture note
Student Materials: Lecture notes handout

Video lecture prepared by:
Professor Winston Boteler
The Georgia Institute of Technology
Spring, 1985
1. Definitions

1.1. AC Current

* A current produced in a conductor rotating in a magnetic field
* USA - 60 Hz 115 V
* Europe 50 Hz 230 V
* Industrial Voltage 880V to 440 V

1.2 DC Current

* Constant voltage above zero

1.3 Amperes = \( \frac{Volts}{resistance} \)  \( A = \frac{V}{R} \)

\[ V = IR \] (Direct current)

* levels that affect the body are in MA (milliamps) range

1.4 Impedance

* Used in alternating current

\[ V = IZ \]

\[ Z = \text{Impedance (AC current)} \]

1.5 Current Flow

1.6 Ground Fault

* Low resistance on the system may cause a current flow out. See Figure 1.

1.7 Short

* Occurs when a hot wire and a ground wire are brought together

1.8 Resistance

* Dry skin 1,000,000
  600,000 ohms

* Wet skin 1,000 ohms

* Internally 400 –600 ohms

* Ear-to-ear 100 ohms
1.9 Human can stand 50 ma for 4 sec both time and current level important

2.0 Average current one can stand

\[ \text{Average } I = 11.6 (t)^{-1/2} \]

2.1 Maximum Safe Let-go Current < 10 ma

- Respiratory failure at 20 -40 ma to chest
- Fatal at 50 ma
- Electric shock @ 2ma-8ma
- Slight sensation 1 ma on hand (DC)
  - 0.6 (AC) males
  - 0.3 (AC) females

Sensitivity decreases with increasing frequency

Refer to Figure 2.

3. Electric Shock

3.1 First indication of shock

DC - 9 ma

- 60 HZ 1.8 men
- 1.2 women

3.2 Let Go Threshold - above which you can't let go

DC 76 volts
- 60 HZ 16 males
  - 11 females

* Pain threshold at 20 ma
* Blood vessel constriction at 50-100 ma
3.3 Effects on the body

* Chest muscle - respiration and heart beat
* Temporary paralysis of nerve centers
* Fibrillation of the heart at 50 ma
* Muscular contractions - stops heart
* Hemorrhages hand to foot type accident
* Tissue destruction

4. Protective measures

4.1 Grounding

* Entire circuit
* Equipment

4.2 Insulation

* Complete circuits with insulation

4.3 Ground - Fault Circuit Interrupter

* Comparison of in and out-going current

4.3.1 Types

* Differential transformer
* Isolation transformer

4.4 Graph of Shock Duration vs Current
Refer to Figure 3

4.5 Installation of Electrical Equipment

4.6 Turn Switch Off

4.7 Lockout System

* Prevents equipment from being turned on while performing repairs

4.8 Magnetic Circuit Breakers

5. Static Electricity

* Produced when two pieces of equipment are separated
5.1 Source
* Charge flow
* Charge separation
* Mixing
* Fryers
* Splash filling

5.2 Problems
* Polyester garments
* Minimum spark energies
* Refer to Figure 4

5.3 Protection
* Bonding and grounding
* Increasing conduction of floors, footwear, tires
* Increase conductivity of non-conductors
* Increase conductivity of atmosphere by ionization
  * Use high voltage
  * Alpha source - Po-210.
Ground-Fault Circuit Interrupter

GFCI monitors the difference in current flowing into the "hot" and out to the grounded neutral conductors. The difference (1/2 ampere in this case) will flow back through any available path, such as the equipment grounding conductor, and through a person holding the tool, if the person is in contact with a grounded object.
### 41—Electrical Hazards

**TABLE 41-A**

**EFFECTS OF ELECTRIC CURRENT ON MAN**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Direct</th>
<th>60 Hz</th>
<th>10,000 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>Slight sensation on hand</td>
<td>1</td>
<td>0.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Perception threshold</td>
<td>5.2</td>
<td>3.5</td>
<td>1.1</td>
</tr>
<tr>
<td>Shock—not painful, muscular control not lost</td>
<td>9</td>
<td>6</td>
<td>1.8</td>
</tr>
<tr>
<td>Shock—painful, muscular control not lost</td>
<td>62</td>
<td>41</td>
<td>9</td>
</tr>
<tr>
<td>Shock—painful, let-go threshold</td>
<td>76</td>
<td>51</td>
<td>16</td>
</tr>
<tr>
<td>Shock—painful and severe, muscular</td>
<td>90</td>
<td>60</td>
<td>23</td>
</tr>
<tr>
<td>contractions, breathing difficult</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shock—possible ventricular fibrillation</td>
<td>500</td>
<td>500</td>
<td>100</td>
</tr>
<tr>
<td>effect from 3-second shocks</td>
<td></td>
<td></td>
<td>$165/\sqrt{f}$</td>
</tr>
<tr>
<td>Short shocks lasting t seconds</td>
<td></td>
<td></td>
<td>$165/\sqrt{f}$</td>
</tr>
<tr>
<td>High voltage surges</td>
<td>50*</td>
<td>50*</td>
<td>13.6*</td>
</tr>
</tbody>
</table>

*Energy in watt-seconds or joules

**Figure 2**
The Human Body
As A Circuit Element

RESISTIVE: 0-1 KHz
RESISTIVE/CAPACITIVE: 1-200 KHz

CONTACT RESISTANCE (Dry): 100-300
CONTACT RESISTANCE (Wet): 1-3 KΩ
CONTACT RESISTANCE (>150 VAC): 0

MINIMUM RESISTANCE BETWEEN EXTREMITIES: 500 ohms
<table>
<thead>
<tr>
<th>Substance</th>
<th>MJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane/air</td>
<td>0.29</td>
</tr>
<tr>
<td>Propane/air</td>
<td>0.25</td>
</tr>
<tr>
<td>Benzene/air</td>
<td>0.20</td>
</tr>
<tr>
<td>Hydrogen/air</td>
<td>0.014</td>
</tr>
</tbody>
</table>

Energy Available from Person at 2.8 kV = 0.78

Figure 4
References

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"Dimensions of Attachment Plugs and Receptacles," C73 Series. (Also NEMA WD.1-1965.)
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Ground Fault Circuit Interrupters for Personnel Protection, 636.
Grounding Electric Shovels, Cranes and other Mobile Equipment, 287.
Grounding Portable Electrical Equipment, 299.
Hand Saws, Electric, 344.
Industrial Electric Substations, 559.
Lead-Acid Storage Batteries, 635.
Lighting, Emergency, 248.
Linemen's Climbers, 620.
Live Line Tools, 495.
Maintenance of Electric Motors, 546.
Nondestructive Testing of Materials, 662.
Portable Reamer-Drills, 497.
Radio Frequency Heating, 519.
Static Electricity, 547.
Temporary Electric Wiring for Construction Sites, 515.
Underground Residential Distribution of Electricity, 657.
X-Rays in Industry, 475.

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"Electrical Construction Materials List."
"Hazardous Location Equipment List."

Lecture Overview

HIGH PRESSURE HAZARDS

Method: Lecture

Purpose: To introduce the basic concepts of high pressure hazards and controls of these in the work environment.

Objectives: To familiarize the student with sources of high pressure hazards, monitoring methods and controls.

Instructor Materials: Video tape and lecture notes

Student Materials: Lecture notes handout

Video lecture prepared by

Professor Gorton
The Georgia Institute of Technology
Spring, 1985
1. Sources of High Pressure Hazards

1.1 Gases and Vapors
   * compressed gases
   * boilers and superheaters

1.2 Immiscible Liquids
   * water and oil

1.3 Chemical Reactors
   * loss of coolant
   * unstable operating conditions

1.4 Deflagrations
   * slow burning reactions
   * gases and vapors
   * mists
   * dusts
   * cubic law

   \[ \left( \frac{dp}{dt} \right)_{max_1} \]
   \[ \frac{V_1^{1/3}}{V_2^{1/3}} = \left( \frac{dp}{dt} \right)_{max_2} \]

   \( V = \) volume of container
   \( \frac{dp}{dt} = \) rate of pressure change with time

1.5 Detonations
   * solids
   * gases and vapors
   * mists
   * dusts
2. Monitoring High Pressure Hazards
   2.1 Gauges
   2.2 Automatic Controls

3. Control of High Pressure Hazards
   3.1 Blanketing
   3.2 Suppression
       * deflagrator indicator
   3.3 Venting
   3.4 Pressure Relief Valve
   3.5 Rupture disc
   3.6 Blast mats
   3.7 Containment
FIRE AND LIFE SAFETY

Method: Lecture

Purpose: To introduce basic concepts in fire and life safety.

Objectives: To familiarize the student with fire and life safety programs, facility planning and design and emergency organization.

Instructor Materials: Video tape and lecture notes.

Student Materials: Lecture notes handout.

Video Lecture prepared by
Prof. Winston Boteler
The Georgia Institute of Technology
Spring 1985
FIRE SAFETY

1. Objectives of a fire safety program:

1.1. Plan safe buildings, processes and equipment

1.2. Provide fire protection equipment where needed

1.3. Maintain this equipment in a state of readiness

1.4. Train employees in emergency response and loss control

1.5. Determine the value of insurance coverage required to reimburse for losses which occur

2. Responsibilities of the fire risk manager:

2.1. Inspection

2.2. Development of systems and procedures for fire risk management

2.3. Provide fire safety input to other operating units

2.4. Fire insurance program

2.5. Coordination with local fire departments

2.6. Organization of fire emergency response program

2.7. Assure compliance with all codes and standards

2.8. Identify and evaluate risks.

3. Considerations when planning new facilities:

3.1. Life safety

3.2. Protection of property

3.3. Operations interfaces.
4. Planning considerations for fire safety:

4.1. Site selection:

4.1.1. adequacy of water supply
4.1.2. fire exposure from surrounding buildings
4.1.3. exposure to natural hazards such as flood earthquake and heavy snow
4.1.4. availability and adequacy of local fire department
4.1.5. security of surrounding neighborhood

4.2. Facility planning:

4.2.1. limit size of hazardous areas with fire walls and fire cutoffs
4.2.2. use fire resistant materials
4.2.3. provide adequate emergency exits
4.2.4. provide adequate automatic sprinklers, hydrants and other fixed protection systems
4.2.5. safe and reliable building services
4.2.6. location of hazardous processes

5. Fire safety during building construction

5.1. Guard service

6. Periodic fire safety inspections

6.1. Sprinkler valves and alarms
6.2. Water pressure conditions
6.3. Fire pumps
6.4. Fire doors

7. Emergency organization on each shift in a typical sprinklered plant

7.1. Designated person in charge
7.2. A fire squad for each operating department

7.3. A sprinkler control person

8. Training

8.1. Monthly meetings


10. Life safety in industrial operations

10.1. Human factors:

10.1.1. physical and psychological characteristics

10.1.2. age

10.1.3. agility

10.1.4. decision making capability

10.1.5. awareness

10.1.6. training

10.1.7. special knowledge and beliefs.

11. Control of personnel

12. Evaluation of types and likely severity of potential fires in facility

12.1. Fire hazards in each process

12.2. Fire characteristics of materials being processed including:

* ignition temperature

* burning rate

* smoke production

* susceptibility to ignition
12.3. Fire characteristics of other materials in building

12.4. Fire loading (pounds of combustibles per square foot of floor space)

12.5. Fire ignition sequence of materials in building

13. Other fire and life safety considerations
   13.1. Building design features
   13.2. Influence of fire protection equipment
   13.3. NFPA Life Safety Code requirements
   13.4. Risk to life

14. Design of facility exits
   14.1. Degree of fire and life safety risk
   14.2. General industrial occupancy
   14.3. High hazard industrial occupancy
   14.4. NFPA design requirements (means of egress)
      * 45 feet to exit for high hazard area
      * 100 feet to exit for nonsprinklered area
      * 150 feet to exit for sprinklered area

15. Life safety requirements in industrial occupancy
   15.1. Enclosed vertical openings
   15.2. Fire alarm
   15.3. High hazard areas
      * auto fire exit systems
      * explosion venting
   15.4. Exit drill
Lecture Overview

FACILITY LAYOUT AND MATERIALS HANDLING

<table>
<thead>
<tr>
<th>Method:</th>
<th>Lecture Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose:</td>
<td>To introduce facility design and materials handling to safeguard against occupational hazards.</td>
</tr>
<tr>
<td>Objective:</td>
<td>To familiarize the student with building design, layout, materials handling, and storage considerations to insure occupational health and safety.</td>
</tr>
<tr>
<td>Instructor</td>
<td></td>
</tr>
<tr>
<td>Materials:</td>
<td>Video tape and lecture notes</td>
</tr>
<tr>
<td>Student</td>
<td></td>
</tr>
<tr>
<td>Materials:</td>
<td>Lecture notes handout</td>
</tr>
</tbody>
</table>

Video Lecture Prepared by:

Professor Winston Boteler
Georgia Institute of Technology
Spring, 1985
1. Site Layout and Planning
   1.1 Administrative and Service buildings and parking
   1.2 Roads and internal railways
   1.3 Production units
   1.4 Fire fighting
   1.5 Storage, loading, off loading
   1.6 Noise

2. Building Layout
   2.1 Walking distances
   2.2 Hot areas
   2.3 Cross flow
   2.4 Adjacent hazards
   2.5 Maintenance Operations
   2.6 Weather hazards

3. Design
   3.1 Technical Safety
   3.2 Economics and environment
   3.3 Siting and separation
   3.4 Aisles and passages
   3.5 Access to work points
   3.6 Booby traps
   3.7 Access to overhead work points
   3.8 Machine Guarding
   3.9 Electrical Safety
3.10 Protection of electrical cables and apparatus
3.11 Securing overhead equipment
3.12 Rescue of injured personnel inside vessels
3.13 Isolation of process and storage vessels
3.14 Electrical bonding
3.15 Product spillage
3.16 Misuse of plant and equipment

4. Materials in Process
4.1 Dust control
4.2 Handling hazardous materials
4.3 Monitoring flammable/toxic materials
4.4 Overhead conveyors
4.5 Wet conveyors

5. Storage
5.1 Handling
5.2 Dike drainage
5.3 Local stocks
5.4 Product stores

6. Fire - Water Damage

7. Workshops
7.1 Layout
7.2 Welding
7.3 Gas cylinders
7.4 Cranes
8. Laboratories

8.1 Fume hoods

8.2 Floors

8.3 Storage of flammable and toxic chemicals

8.4 Other Safety Precautions
   * adequate ventilation
   * eye showers
   * whole body showers

9. Offices

9.1 Storage shelves

9.2 Electrical outlets

9.3 Safes

9.4 Office furniture and environment

10. Kitchens and Canteens (Vending Machines)

10.1 Kitchen equipment

10.2 Steam and condensation

10.3 Environment

10.4 Cold Storage
Lecture Overview

MAN-MACHINE INTERFACE

Method: Lecture

Purpose: To introduce the basic concepts of man's interaction with machines. Introducing ergonomic considerations in the work environment.

Objectives: To familiarize the student with man-machine interface history, man-machine interactions and conditions of skilled work.

Instructor Materials: Video tape and lecture notes.

Student Materials: Lecture notes handout.

Video Lecture Prepared By:

Professor Winston Boteler
The Georgia Institute of Technology
Spring, 1985
1. History of Ergonomics
   * World War II Aircraft problems
   * 1961 National Ergonomics Association

2. Ergonomics
   2.1 Natural laws which apply to work
   2.2 Equipment must be designed to take into account the operator
   2.3 Manual dexterity must be accounted for
   2.4 Impairment associated with workers ability - errors.

3. Goal of Ergonomics
   3.1 To determine worker limitations and how workplace must be arranged to compensate for these limitations

4. Man-Machine Information Flow
   4.1 Refer to Figure 1
   4.2 Sensations of hands and other sensory receptors to mechanical processes must be considered

5. Allocation of functions
   5.1 Those parts of a process which will be performed by man and those by machine - the interface.

6. Separate Functions by Allocation
   6.1 Refer to Figure 2

7. Man-Machine Interactions
7.1 Automotive Industry
   * Pre World War II, hand tools and much labor
   * Post World War II, brought much automation to automotive industry
   * Today robotics used increasingly

8. Human Error Considerations
8.1 Degree of error is determined by the magnitude of the discrepancy
8.2 Refer to Figure 3
8.3 Refer to Figure 4

9. Conditions under which skilled work is performed
9.1 Physical complaints associated with work
   * Backaches, etc.
   * Refer to Figure 5
9.2 Information Transmission
9.3 Visual Control
9.4 Unwanted Stimuli
9.5 Unnecessary Manual Work
9.6 Control Arrangements
9.7 Effort and Stress
9.8 Hand and Arm Movements
9.9 Arrangement of Materials Components and Tools
9.10 Two-handed Operations
9.11 Rhythm
   * Hand movement, free, unpaced, unimposed
9.12 Refer to Figure 6

10. Dial Instruments
* Open window
* Round dial - movable pointer
* Fixed pointer with a movable dial
* Refer to Figure 7

10.1 Dial Considerations for Selection
* Degree of accuracy
* Simplest

11. Types and Choices of Controls
11.1 Controls for Precision Work with Little Force
* Push buttons
* Toggle switches
* Knobs

11.2 Controls - Force - Wide Range - Little Precision
* Cranks
* Hand wheels
* Levers
* Pedals

12. Inter-relation Between Controls and Display Instruments
Figure 1
<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>MACHINE PERFORMANCE</th>
<th>HUMAN PERFORMANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPEED</td>
<td>MUCH SUPERIOR</td>
<td>LAG ONE SECOND</td>
</tr>
<tr>
<td></td>
<td>CONSISTENT AT ANY LEVEL</td>
<td>1 HORSEPOWER FOR 10 secs.</td>
</tr>
<tr>
<td></td>
<td>LARGE STANDARD CONSTANT FORCES</td>
<td>0.5 HORSEPOWER FOR FEW MIN.</td>
</tr>
<tr>
<td></td>
<td>AND POWER AVAILABLE</td>
<td>0.2 HORSEPOWER FOR CONT.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WORK OVER A DAY</td>
</tr>
<tr>
<td>CONSISTENCY</td>
<td>IDEAL—FOR ROUTINE, REPI TITION</td>
<td>NOT RELIABLE — SHOULD BE MONITORED</td>
</tr>
<tr>
<td></td>
<td>AND PRECISION</td>
<td>SUBJECT TO LEARNING AND</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FATIGUE</td>
</tr>
<tr>
<td>COMPLEX ACTIVITIES</td>
<td>MULTI-CHANNEL</td>
<td>SINGLE CHANNEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LOW INFORMATION THRU PUT</td>
</tr>
<tr>
<td>MEMORY</td>
<td>BEST FOR LITERAL REPRODUCTION AND SHORT TERM STORAGE</td>
<td>LARGE STORAGE MULTIPLE ACCESS</td>
</tr>
<tr>
<td>FINESSING</td>
<td>GOOD DEDUCTIVE</td>
<td>GOOD INDUCTIVE</td>
</tr>
<tr>
<td></td>
<td>TIDIOUS TO REPROM</td>
<td>EASY TO REPROGRAM</td>
</tr>
<tr>
<td>COMPUTATION</td>
<td>FAST, ACCURATE</td>
<td>SLOW, SUBJECT TO ERROR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GOOD AT ERROR CORRECTION</td>
</tr>
<tr>
<td>INPUT</td>
<td>CAN DETECT FEATURES OUTSIDE RANGE OF HUMAN ABILITIES</td>
<td>WIDE RANGE (10^{12}) AND</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VARIETY OF STIMULI DEALT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WITH BY ONE UNIT, e.g. EYE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DEALS WITH RELATIVE LOCATION,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MOVEMENT, COLOR</td>
</tr>
<tr>
<td></td>
<td>INSENSITIVE TO EXTRANEOUS STIMULI</td>
<td>AFFECTED BY HEAT, COLD, NOISE</td>
</tr>
<tr>
<td></td>
<td>PooR PATTERN DETECTION</td>
<td>AND VIBRATION</td>
</tr>
<tr>
<td>CYCLIC CAPACITY</td>
<td>SUDDEN BREAKDOWN</td>
<td>GREAT PATTERNS DETECTION</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DETECT VERY LOW SIGNALS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DETECT SIGNAL IN HIGH NOISE</td>
</tr>
<tr>
<td>INTELLIGENCE</td>
<td>INCAPABLE OF</td>
<td>CAN DEAL WITH UNPREDICTED AND</td>
</tr>
<tr>
<td>MANIPULATIVE ABILITIES</td>
<td>SPECIFIC</td>
<td>UNPREDICTABLE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CAN ANTICIPATE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CAN ADAPT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GREAT VERSATILITY AND MOBILITY</td>
</tr>
</tbody>
</table>
Table 23.3. Functional characteristics of various types of controls. \(^1\)A = Activation; D = Setting a discrete variable; C = Setting a continuous variable; CC = Continuous control; D = Data entry. Adapted from Murrell\(^9\) (1965), McCormick\(^7\) (1970), Singleton\(^8\) (1974) and Grandjean\(^8\) (1980)

<table>
<thead>
<tr>
<th>Type of control</th>
<th>'Typical function</th>
<th>Speed</th>
<th>Comparative performance</th>
<th>Accuracy</th>
<th>Force</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand push button</td>
<td>A</td>
<td>Good</td>
<td>Unsuitable</td>
<td>Very poor</td>
<td>Very poor</td>
<td></td>
</tr>
<tr>
<td>Toggle</td>
<td>A,D</td>
<td>Good</td>
<td>Unsuitable</td>
<td>Very poor</td>
<td>Very poor</td>
<td></td>
</tr>
<tr>
<td>Selector switch</td>
<td>D</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Unsuitable</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Knob</td>
<td>D,C,CC</td>
<td>Very poor</td>
<td>Good</td>
<td>Unsuitable</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Thumbwheel</td>
<td>D,C,CC</td>
<td>Very poor</td>
<td>Good</td>
<td>Unsuitable</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Crank</td>
<td>C,CC Small</td>
<td>Good</td>
<td>Poor</td>
<td>Very poor</td>
<td>Good</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C,CC Large</td>
<td>Good</td>
<td>Poor</td>
<td>Very poor</td>
<td>Good</td>
<td></td>
</tr>
<tr>
<td>Handwheel</td>
<td>C,CC</td>
<td>Poor</td>
<td>Good</td>
<td>Moderate</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Lever</td>
<td>C,CC Horizontal</td>
<td>Good</td>
<td>Poor</td>
<td>Very poor</td>
<td>Poor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C,CC Vertical</td>
<td>Good</td>
<td>Moderate</td>
<td>Good</td>
<td>Poor</td>
<td></td>
</tr>
<tr>
<td>Keyboard</td>
<td>D</td>
<td>Good</td>
<td>Moderate</td>
<td>Unsuitable</td>
<td>Poor</td>
<td></td>
</tr>
<tr>
<td>Foot push button</td>
<td>A,D</td>
<td>Moderate</td>
<td>Unsuitable</td>
<td>Very poor</td>
<td>Very poor</td>
<td></td>
</tr>
<tr>
<td>Foot pedal</td>
<td>C,CC</td>
<td>Good</td>
<td>Poor</td>
<td>Good</td>
<td>Very poor</td>
<td></td>
</tr>
</tbody>
</table>
Figure 23.3 An example of the relationship between speed and error in a simple control task.
Table 3.7.4 PHYSICAL COMPLAINTS DURING SEDENTARY WORK

<table>
<thead>
<tr>
<th>Discomfort of:</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head</td>
<td>14</td>
</tr>
<tr>
<td>Back</td>
<td>57</td>
</tr>
<tr>
<td>Neck and shoulders</td>
<td>24</td>
</tr>
<tr>
<td>Buttocks</td>
<td>16</td>
</tr>
<tr>
<td>Arms and hands</td>
<td>15</td>
</tr>
<tr>
<td>Knees and feet</td>
<td>29</td>
</tr>
<tr>
<td>Thighs</td>
<td>19</td>
</tr>
<tr>
<td>No complaints</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100</td>
</tr>
</tbody>
</table>

Figure 5
Figure 3.7.3 Grasping distance and work area. Optimum grasping distance is 350 — 450 mm from lowered elbow. Maximum distance is 550 — 650 mm from the shoulder.
The working environment

Figure 3.7.5 Effects of dial types on reading precision

Figure 3.7.4 Simple display instrument
Lecture Overview

Proper Use of the Human Body in Strenuous Work

Method: Lecture

Purpose: To introduce the basic concepts of proper use of the body when doing strenuous work

Objective: To familiarize the student with manual materials handling, with respect to strenuous work and the body, characteristics, and bio-mechanics

Instructor
Materials: Video tape and lecture notes

Student
Materials: Lecture notes handout

Video Lecture Prepared By:

Professor Winston Boteler
The Georgia Institute of Technology
Spring, 1985
1. Manual Materials Handling

1.1 Refer to Figure 1

1.2 Refer to Figure 2

2. Work Capacity

2.1 \( V_O_2 \) (\( O_2 \) volume consumed)

* Oxygen uptake to determine energy demands

1 liter of \( O_2 \) = 4.9 Kcal = 19.4 Btu/hr.

2.2 * For typical worker \( V_O_2 \) = 3 to 3.5 l min.

2.3 * Production of energy with aerobic intake

Athlete = 4600 to 5200 Btu/hr.

Average worker = 3000 to 4000 Btu/hr.

2.4 * Refer to Figure 3

2.5 * Lower rates of heat loss with more skin area per unit mass (obese persons)

* Thin people loose heat more easily because they have a high ratio of skin area to mass

* Average work rate -1400 Btu/hr

2.6 Rest time

\[
\% \text{Trest} = \frac{1400 - M}{400 - M} = 37.5\%
\]

400 = resting metabolic rate
If \( M = 2000 \text{ Btu/hr} \)

\[
\text{Trest} = \frac{600}{1600}
\]
2.7 Energy Expenditure
* Breathing respiration test
* Heart rate measurement
* Refer to Figure 4

3. Age and Sex Considerations
3.1 Great dependency over 65 yrs.
3.2 Maximum $O_2$ intake between 20-25 years.
3.3 Aerobic power of women is 70-75% of that of men
3.4 Women experience greater strain in hot environments than men
3.5 Women experience a greater sensitivity to CO than men

4. Bio mechanics
4.1 Functioning of the structural elements and effects of external and internal forces on various parts of the body.
4.2 Cumulative effects of excessive physical stress on the worker can result in physical injuries
* Trigger finger
* Tenosynovitis
* Bursitis
4.3 Cases of excessive fatigue and discomfort are, often forerunners of soreness and pain.
4.4. Hand and Forearm

* Finger flexing
* Tendons - forearm muscle
* Tendons - lubricated sheath
* Wrist bent toward little fingers - and tendons bunch up - excessive force or repeated rapidly for long periods of time leads to tenosynovitis

* Refer to Figure 5

4.5 Hand tools

* Refer to Figure 6
* Refer to Figure 7

4.6 Upper Arm and Shoulder

4.7 Lower Limbs

* Legs, ankles, feet
* Standing job - mats provide comfort
* Static work causes fatigue
Figure 1
Figure 2
TABLE I

Metabolic Energy Costs ($M$) of Several Typical Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>$M$ (Btu/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resting, prone</td>
<td>330–360</td>
</tr>
<tr>
<td>Resting, seated</td>
<td>380–400</td>
</tr>
<tr>
<td>Standing, at ease</td>
<td>400–450</td>
</tr>
<tr>
<td>Drafting</td>
<td>430</td>
</tr>
<tr>
<td>Light assembly, bench work</td>
<td>430</td>
</tr>
<tr>
<td>Medium assembly</td>
<td>640</td>
</tr>
<tr>
<td>Driving automobile</td>
<td>670</td>
</tr>
<tr>
<td>Walking, casual</td>
<td>700–900</td>
</tr>
<tr>
<td>Sheet-metal work</td>
<td>715</td>
</tr>
<tr>
<td>Machining</td>
<td>740</td>
</tr>
<tr>
<td>Rock drilling</td>
<td>900–2250</td>
</tr>
<tr>
<td>Mixing cement</td>
<td>1100</td>
</tr>
<tr>
<td>Walking on job</td>
<td>1150–1600</td>
</tr>
<tr>
<td>Pushing wheelbarrow</td>
<td>1200–1650</td>
</tr>
<tr>
<td>Shoveling</td>
<td>1300–2100</td>
</tr>
<tr>
<td>Working with axe</td>
<td>1640–5700</td>
</tr>
<tr>
<td>Climbing stairs</td>
<td>1800–3100</td>
</tr>
<tr>
<td>Slag removal</td>
<td>2530–3000</td>
</tr>
</tbody>
</table>

Figure 3
### Table 1

Energy Costs ($M$) Approximated from Heart-Rate Data

<table>
<thead>
<tr>
<th>Activity</th>
<th>Heart rate (beats/min)</th>
<th>$M$ (Btu/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sitting quietly</td>
<td>60-70</td>
<td>380-400</td>
</tr>
<tr>
<td>Sitting, light to moderate arm and leg movements</td>
<td>65-75</td>
<td>380-600</td>
</tr>
<tr>
<td>Standing, moderate effort</td>
<td>75-100</td>
<td>600-1200</td>
</tr>
<tr>
<td>Walking about, heavier effort</td>
<td>100-125</td>
<td>1200-1800</td>
</tr>
<tr>
<td>Heavy work</td>
<td>125-150</td>
<td>1800-2400</td>
</tr>
<tr>
<td>Very heavy work</td>
<td>150-180</td>
<td>2400 to maximum</td>
</tr>
</tbody>
</table>

*a Adapted from *Ergonomics Guide on Metabolic and Cardiac Costs of Physical Work.* Values are for the "average" male worker.
Fig. 9-4.—Diagram of hand anatomy.
Needle-nose pliers has offset handle, padding, and spring to automatically open jaws.

Figure 6.
Hand tools

The use of certain designs of hand tools can produce both fatigue and soreness. In general, a sound biomechanical analysis is prerequisite to the determination of the proper tool for a particular task.

A commercially available hand tool, usually designed for occasional use by a man, is rarely a good instrument to specify for repetitive manual effort by female operators. Generally speaking, design efforts have been concentrated on the working end of the tool rather than on the handle; however, it is the handle that is often unsuited to the repetitive use to which the tool may be put. See Figure 9-5.

Fig. 9-5.—Soldering iron has right-angle head and protective flange.
Lecture Overview

THE PSYCHOLOGY OF WORKING SAFELY

Method: Lecture

Purpose: To identify sources of worker hazards and ways to control hazards in the work environment.

Objective: To familiarize the student with worker safety, accidents and their controls, and behavioral factors involved in working safely.

Instructor Materials: Video tape and lecture notes

Student Materials: Lecture notes handout

Video Lecture Prepared by:

Professor Winston Boteler
The Georgia Institute of Technology
Spring, 1985
1. Accidents in Working Safely
   1.1 Major cause
       * Human errors

2. Behavioral Factors in Accident Control
   2.1 Psychological Factors
       * Human errors include omission and commission
       * How and why
       * Workers fail to use safety guards
       * Workers ignore warnings
       * Well-trained workers forget
   2.2 Safety vs. Saving Time
   2.3 Safety vs. Saving Effort
   2.4 Safety vs. Comfort
   2.5 Safety vs. Getting Attention
   2.6 Safety vs. Independence
   2.7 Safety vs. Group Acceptance

3. Behavioral Factors in Working Safely
   3.1 Resentment of Criticism
   3.2 Resistance to Change
   3.3 Safety Climate
   3.4 Work Habits
   3.5 Emotional Upset
   3.6 Fatigue
   3.7 Age and Experience
4. Safety Control Methods

4.1 Working Hours, Incentives, Outside Influences

4.2 Rest Pauses, - to alleviate fatigue and boredom

4.3 Working Hours and Overtime

4.4 Accident Distribution

4.5 Shift Work

4.6 Incentives For Production and Safety

4.7 Training of Young Workers

4.8 Periodic Investigation of the Work Area to Look For Possible Accident Conditions

4.9 Look for Radical Changes in Personality

4.10 Physical Condition and Ability
Lecture Overview

FIRST CONSIDERATION

Method: Lecture Methods

Purpose: To introduce control technology and its applications to the industrial environment.

Objective: To become familiar with control technology including engineering controls, isolation, control monitoring, work practices, and personal protective equipment.

Instructor Materials: Lecture Materials

Student Materials: Lecture Handouts

Video Lecture Prepared By:

NIOSH - DTMD
1981
1. Control Technology Model

1.1 Technical Solutions

* Engineering design (control)
* Control devices

1.2 People Solution

* Work practices
* Personal protection equipment

2. Engineering Controls

2.1 Material Substitution

2.2 Process Modification

2.3 Equipment Modification

2.4 Process Isolation

2.5 Local Ventilation

3. Control Monitoring

* Properly functioning engineering controls
* Portable monitoring devices
* Fixed monitoring devices
* Personal monitoring
* Medical monitoring - Post exposure

4. Work Practices

4.1 Training and Education

5. Personal Protective Equipment

* Last resort
* Respirators
* Protective Clothing

6. NIOSH Control Technology Assessment Study in the Pesticides Industry

6.1 An Application of Control Technology in a Diverse Industry.
6.2 Pesticide Industry Distribution Process

* Large chemical plant formulator retail distributor
* Formulation stage: blend technical grade chemical with clay, activate and package

6.3 Does Material Substitution Apply?

* No - EPA approves specific chemicals used. - Not viable

6.4 Process Equipment and Modification?

* Change the process
* Alter method of feeding material into system

Areas where exposure may occur

* Storage
* Handling
* Packaging
* Shield pumps
* Reduce pressure in tanks
* Use gravity to move product
* Interlock system - auto shut down

6.5 Process Isolation?

* Separate liquid mixing and packaging area
* Minimize traffic
* Isolate control room and pressurize to keep it clean
* Use high velocity local isolation

6.6 Portable Types of Monitoring Devises?

* Expensive for sophisticated programs but can utilize micro processing

* Use of membrane filters to measure particulates
* Skin absorption no monitoring device so must use biomonitoring techniques
  Determine baseline with pre-employment physical

6.7 People Solutions
* Workplace practices
  Safety indoctrination by training and education
* Monthly safety meetings
* Encourage good work practices
  Washing hands, showers

6.8 Personal Protective Equipment
* Gloves, aprons, lye goggles
* Respiration variables to consider
* Selection of a respirator for a specific hazard depending on contaminant and concentration
* Respirator fit
* Training
* How and why respirator selected
* Explain hazard to employee
* Respirator maintenance

7. Management needs to make health and safety a major priority.