

# **Index**

- acrylamide, 255  
 acrylonitrile, 88, 89, 90, 197  
 adriamycin, 269  
 AFL-CIO, 193, 390  
**AFLCIO L. Brennan, 396**  
**AFL-CIO v. Marshall, 397**  
 Agent Orange (2,4,5 -trichlorophenoxy acetic), 7, 77, 78  
 agricultural chemicals, 74-75, 110  
   exposure to, 74, 92  
 Alabama, 245  
 Alaska, 206  
 alcohol consumption, 2, 32, 57, 60, 61, 81, 101, 162, 165, 167, 170, 345, 347, 350, 356, 357, 365  
 allyl chloride, 83  
 alpha -fetoprotein (AFP), 147, 154, 155  
 American College of obstetricians and Gynecologists, 106  
 American Conference of Governmental Industrial Hygienists, 100, 204, 254, 269  
 American Cyanamid Co., 184, 187, 191, 251-260  
   Occupational Exposure Review Committee (OERC), 256, 258, 260  
 American Federation of Labor, 236  
 American Federation of State, County, and Municipal Employees, 201, 390  
 American Iron and Steel Institute, 193  
**American Iron and Steel Institute v. OSHA, 396**  
 American Law Institute, 304  
 American Medical Association, 106  
 American National Standards Institute, 189  
 American National Standards Institute Committee C95, 98  
 American Petroleum Institute, 164, 193, 394  
**American Petroleum Institute v. OSHA, 391**  
**American Textile Manufacturers Institute v. Donovan, 397**  
 Americium, 224  
 aminopterin, 170  
 anesthetic agents, 7, 82, 83, 110, 170  
 animal studies, 8, 54, 67, 70-91, 95, 96, 98-104, 108, 110, 162, 167-71, 175, 202, 208, 217, 218, 252, 253, 255, 288, 344, 346, 355, 356, 395  
 antihistamines, 356  
 antimony, 7, 69, 74, 110, 204  
   uses of, 74  
 Apgar score, 45, 106  
 Aristotle, 33  
 aromatic amines, 88  
 arsenic, 7, 69, 73, 74, 93, 110, 169, 170, 390, 392, 395  
   occupational exposure, 73  
   occurs in, 73  
 asbestos, 192, 196, 197, 292, 305, 306, 402, 403  
   standard 18.5, 197, 391  
   emergency temporary standard, 395  
**Asbestos Information Association v. OSHA, 196**  
 asbestosis, 25, 281-286, 291, 305, 306  
 "as-low-as-reasonably achievable" (ALARA)  
   assumption, 226, 228, 230  
 Assistant Secretary for Health, DHHS, 183  
 Atlanta, Georgia, 184  
 atmospheric pressure, 93, 94, 102, 103, 110  
 Atomic Energy Commission (AEC), 223, 224  
   Standards for Protection Against Radiation, 223  
 Belmont Report, 332  
 Bendectin", 356  
 benzene, 7, 10, 81, 82, 169, 203, 269, 394  
   standard, 193, 191  
**Benzene, 196, 393-395, 397**  
 beryllium, 69  
 biological agents, 107-110  
 birth defects (see congenital malformations)  
 Birth Defects Monitoring Program (BDMP) (see Centers for Disease Control (CDC))  
 birth rate, 34  
 bisulfan, 170  
 Bladex (see cyanazine)  
 boron, 7, 69, 70, 71, 110  
   as boric acid, berates, 70  
   uses of, 70  
 Myra Bradwell, 235  
**Bradwell v. Illinois, 236**  
 breast milk, 53, 74, 77, 79, 80, 151, 293, 354, see also lactation  
 Bulletin of Atomic Scientists, 229  
 Bureau of Labor Statistics (BLS) (see Department of Labor)  
 butadiene (1-3 butadiene), 7, 67, 88, 89, 110, 175, 210, 222  
 byssinosis, 286, 394, 395  
 cadmium, 7, 69, 72, 73, 93, 110, 203, 269  
   occupational exposure to, 72  
   uses of, 72  
 caffeine, 357  
 California, 76, 163, 186, 206, 236, 239, 316, 317  
 Canada, 252  
 capafol (Difolatan"), 269  
 captan, 269  
 carbaryl, 7, 67, 75, 110, 269  
   workers exposed to, 75

- carbon dioxide, 97  
carbon disulfide, 7, 67, 81, 82, 93, 169, 175, 204  
carbon monoxide, 169, 269  
carbon tetrachloride, 7, 81, 82, 269, 309  
Carter Administration, 10, 183, 195, 204, 209, 392, 393, 395, 396  
Centers for Disease Control (CDC), 22, 27, 90, 164, 172, 174, 182, 183, 184, 208, 353  
    Birth Defects Monitoring Program (BDMP), 27, 90, 164, 351, 352  
central nervous system (CNS), 46, 55, 57, 70, 72, 90, 147, 154, 170, 352, 353, 356, 357  
Chemical Information System (NIH), 171  
Chemical Manufacturers Association, 193  
chemicals  
    quantities manufactured, 37  
    chemical work, 92  
Chemical Substances Information Network (CSIN), (EPA, CEQ), 171, 403  
chemotherapeutic drugs, 175  
chlamydia, 344  
chlorambucil, 269  
chloramphenicol, 356  
chlordane, 92  
chlordecone, 110  
chlorinated terphenyls, 402  
chloroethane, 77  
chloroprene, 7, 67, 88, 89, 110, 169  
chromium, 69  
Clet[ekind **Board of Education v. LaFleur**, 240, 241  
Clyne, Dr. Robert, 259, 260  
cobalt, 73, 93  
cold environments, 94, 110  
congenital malformations, 57, 60-62, 72, 73, 77, 71, 82, 89, 90, 92, 93, 96, 100, 106, 106, 131, 147, 148, 150, 152, 155, 165, 167, 170, 174, 198, 238, 239, 302, 310, 343, 348.35-, 400"  
    incidence of, 5, 33  
    terminology, 55  
congenital syphilis, 109, 111  
congressional issues and options:  
    compensation for job-induced reproductive harm, 24-26  
    issues in research, 26, 27  
    regulation, 21-24  
    sex discrimination, 16-21  
Connecticut, 206, 207  
Consumer Product Safety Commission (CPSC), 172, 173, 204, 216, 219, 398  
control of hazardous exposure:  
    administrative controls, 4, 198, 267  
    educational programs, 4  
    engineering controls, 4, 32, 198, 248, 260, 267  
    personal protective equipment, 32, 198, 248, 260, 263, 267  
copper, 69, 73  
Costle, Doug, 200  
cotton dust standard, 185, 186, 187, 391, 397  
Council on Environmental Quality (CEQ), 171, 403  
Craig I. **Boron**, 240  
cyanazine (Bladex), 217, 218  
cyanide gas, 304  
cyclophosphamide, 269  
cyclopropane, 82, 83  
cystic fibrosis, 347  
cytomegalovirus, 7, 108, 110, 355  
dacarbazine, 269  
danazol, 356  
data:  
    Chemical Information System, NIH, 171  
    Environmental Mutagen and Environmental Teratogen Information Center, DOE, 172  
    Chemical Substances Information Network (CSIN), EPA, CEQ, 171, 403  
    Interagency Toxic Substances Data Committee (ITSDC), EPA, 403  
    Scientific Parameters in Health and the Environment, NIH, 1 ;'1  
    Status Report of Chemical Activities, EPA, 173, 219  
    Toxic Information Series, EPA, 173  
DBCP (dibromochloropropane), 4, 6, 7, 36, 48, 74, 75, 76, 110, 163, 169 175, 197, 199, 200, 204, 208, 217, 295, 296  
    uses of, 7.5  
DDT, 7, 53, 74, 76, 77, 110, 344, 346, 355  
    use of, 76  
Delaware, 206, 351  
Department of Agriculture, 173  
Department of Defense (DOD), 94, 225, 270, 272  
Department of Energy (DOE), W, 171, 172, 225  
    Environmental Mutagen and Environmental Teratogen Information Center, 172  
Department of Health and Human Services (DHHS), 56, 172, 174, 182, 195, 225  
Department of Labor, 19, 22, 174, 181, 184, 195, 197, 392  
    Bureau of Labor Statistics (BLS), 33, 35, 185  
    office of Federal Contract Compliance Programs (OFCCP), 19, 20.5  
    Standard Industrial Classification (SIC) injury and illness rates, 184  
Department of Transportation (DOT), 225  
Department of the Treasury  
    Bureau of Alcohol, Tobacco, and Firearms (BATF) 398  
DES (see diethylstilbestrol)  
developmental toxicants/toxicity, 5, 6, 55-57, 59, 62, 74, 161, 169, 170 217, 218, 219, 227, 228

- dose-response considerations
  - principal manifestations, 61
  - species/gender differences, 59
  - time frame, 59
- diabetes, 347, 355
- diamox, 256, 257
- diazinon, 269
- dibromochloropropane (see DBCP)
- dibutylphthalate, 269
- dichloropropene (1,3-dichloropropene), 83
- dicumarol, 356
- Dieldrin, 77
- diethylstilbestrol (DES), 32, 91, 269, 320, 356
- dimethylacetamide (DMAC), 265, 269
- diethylformamide (DMF), 265
- dimethylphthalate, 269
- dimitrotoluene, 67
- dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin) (TCDD),
  - 7, 77, 78, 81, 110, 175, 269, 354
  - as a contaminant, 77
- diphenylamine, 269
- diphenylhydantoin, 170
- diquat, 269
- discriminatory impact (disparate impact), 242-247, 249-251, 262, 263
  - business necessity exception, 243-250
  - statistical analysis to prove, 262-263
    - (applicant flow data, population pool analysis)
- discriminatory treatment (facial and pretext discrimination), 242-251
  - bona fide occupational qualification (BFOQ), 242-246, 250, 262
- District of Columbia, 206, 351
- DNA (deoxyribonucleic acid), 56, 72, 86, 109, 110, 154
- dose-response assessment, 8, 37, 162, 170, 395
- Down syndrome, 60, 147, 154, 167, 352, 355, 357
- Dun & Bradstreet, 175, 176
- Dunlop, John (former Secretary of Labor), 193
- EDB (ethylene dibromide), 7, 84, 85, 110, 169, 175, 204, 404
  - exposure to, 84
  - uses of, 84
- Egypt, 395
- E.I. du Pont de Nemours & Co., 255, 265
- electric fields, 93, 94
- Eli Lilly & Co., 217
- embryo/fetus, 5, 14, 15, 49, 51, 52, 54-56, 57, 61
  - abnormal development, 54
  - development, 51, 52
  - duty to, 15
  - embryogenesis, 49
  - impaired, 56
  - embryotoxicity, 55, 57
  - fetotoxicity, 55, 73, 74
  - loss of embryo, 5, 51, 54, 61 (see also spontaneous abortion)
  - rights of, 14, 15
- emergency temporary standards (ETSs), 9, 23, 24, 182, 194, 195, 196, 197, 199, 208, 209
  - "grave danger," 23, 182, 194, 196, 197, 208
- employer and employee duties, 187-189
  - biological monitoring, 188
  - compliance with standards, 187
  - environmental monitoring, 188
  - medical surveillance, 188
- Endrin, 77
- enflurane, 82, 83
- England, 102
- Environmental Mutagen and Environmental Teratogen Information Center (database), (DOE), 172
- Environmental Protection Agency (EPA), 9-11, 21, 27, 35, 37, 38, 55, 56, 75, 77, 163, 171-173, 176, 181, 182, 184, 200-204, 209-225, 398, 400-404
  - Advanced Notice of Proposed Rulemaking (ANPR), 218
  - Cancer Assessment Group, 374
  - Developmental Biology Division in Research, 172
  - Federal Radiation Guidance, 223, 225
  - Health Effects Research Laboratory (HERL), 172
  - Interagency Toxic Substances Data Committee (ITSDC), 403
  - Male/Female Reproductive Effects Risk Assessment Guidelines, 9, 173
  - Office of Pesticide Programs (OPP), 172, 173, 215, 222, 403
  - Office of Radiation Programs, 172, 173
  - Office of Research and Development (ORD), 172
  - Office of Toxic Integration, 403
  - Office of Toxic Substances (OTS), 171-173, 218, 403
  - Pesticide Advisory Committee, 200
  - Proposed Guidelines for Assessment of Developmental Toxicants, 9
  - Rebuttable Presumption Against Registration (RPAR), 201, 202, 215, 404
  - red-border review of regulatory actions, 172
  - Reproductive Effects Assessment Group (REAG), 173, 218, 221
  - Toxics Information Series, 173
- epichlorohydrin, 7, 67, 83, 84, 88, 89, 92, 110
- epidemiological studies, 8, 68, 163-167, 205, 208, 245, 292, 395, 402
  - analytical, 164
  - case control, 164

- cohort, 164
  - cross sectional, 164
- descriptive, 164
  - case reports, 164
  - surveillance, 164
- general considerations, 165
  - measurement of reproductive endpoints, 165
  - study design, 165
- key factors, 166
  - confounding factors, 166
  - power, 166
  - sample size, 166
- major factors in discrepancies among, 68
- Equal Employment Opportunity Commission (EEOC), 19, 184, 205, 262, 263
- equal protection analysis, 237-246
  - rational basis test, 238-240
  - strict scrutiny test, 238-240
- ergotamines, 269
- ethanol, 81
- ethical issues, 4, 14, 15, 329-337
  - beneficence, 14, 15, 329, 331-335, 337
  - employer's duty to workers, 15
  - justice, 4, 14, 15, 329, 331, 335, 336
  - respect for persons, 14, 329, 331, 332, 334, 335, 337
- ethinyl estradiol, 90, 91
- ethoxy ethanol, 265
- ethyl benzene, 69
- ethylene dibromide, 269
- ethylene dichloride, 92
- ethylene oxide (EtO), 4, 6, 7, 10, 36, 67, 85-87, 175, 198, 199, 201-203, 217, 219, 222, 269, 390, 392
  - occupational exposure to, 85
  - standard, 198, 203, 208
  - uses of, 85
- ethylene thiourea (ETU), 7, 67, 88, 89, 110, 204, 265, 269
- EtO (see ethylene oxide)
- exposure assessment, 8, 37, 162
  - estimates of exposed workers, 162
- Exxon Chemical Americas, 265, 266, 267
  
- Federal Advisory Council on Occupational Safety and Health (FACOSH), 195
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (see legislation)
- Federal Radiation Council (FRC), 223, 225
- female reproductive health, tests of, 132, 139-151, 154, 343, 346
  - basal body temperature, 142, 154
  - patterns of, 144
  - cervical mucus, 139, 142, 145, 154, 343, 346
  - sperm-cervical mucus interaction, 139
- diagnostic techniques, 134
- endometrial cells, 145
  - endometrial biopsy, 142, 145, 146
- indirect indicators, 142, 144
- menstrual cycle, 143 (see also menstruation)
- ovaries (see ovarian function)
- patient history, 132
- physical examination, 141
- tubal patency/uterine structure, 146
- fertility evaluation, 129-151, 365
  - features of, 129
  - chronology of, 130
  - patient history questionnaire, 365
  - (see male reproductive health, tests of, and female reproductive health, tests of)
- fetal:
  - growth, 49, 51, 52, 57
  - impaired, 56
  - loss, 54
  - measurements
    - amniocentesis, 147, 148, 155
    - karyotyping of amniotic cells, 154
    - chorionic villus biopsy, 148, 149
    - contraction stress test, 155
    - fetoscopy, 148, 155
    - heart response, 155
  - fetal protection policies (FPPs), 4, 12, 16-19, 21, 245-247, 249, 250, 251-261, 267, 331, 335, 337
  - fetal solvent syndrome, 82
  - Finland, 68, 73, 93
  - 5, azacytidine, 269
  - Florida, 206, 294, 351
  - fluorinated hydrocarbons, 82, 83
  - Food and Drug Administration (FDA), 27, 172, 173, 204, 216, 398
    - Center for Devices and Radiological Health, 100
  - Ford Administration, 204, 392, 393
  - formaldehyde, 7, 10, 87, 88, 110, 204, 210, 222
  - formamide, 265
  - Fortune 500, 235, 261
  - 4',4' methylene dianiline, 222
  - 14th Amendment to the U.S. Constitution, 235, 237
  - France, 164
  
  - GAF Corp. v. OSHRC, 390**
  - gamma rays, 94, 355
  - Geduldig v. Aiello, 241**
  - General Accounting Office, 174, 401
  - Georgia, 206, 311, 315, 351
  - glial protein S-100, 154
  - glycidyl ethers, 67
  - glycol ethers, 10, 67, 175, 210, 218, 219, 222, 355
  - gonorrhea, 344, 346
  - gravitational fields, 93, 94
  - Greece, 395

- halothane, 82, 83  
 Hamilton, Alice, 35  
 Hawaii, 75, 76, 108, 200  
**Hayes v. Shelb, v Memorial Hospital, 245, 246, 247, 248, 249**  
 hazard identification, 8, 37, 161  
 Health Effects Research Laboratory (HERL), EPA, 172  
 heat, hot environments, 69, 94, 103, 110  
 hemophilia, 147, 148, 154, 155  
 hepatitis B, 7, 108, 109, 111, 355  
 Heptachlor, 77  
 heroin, 347  
 herpes simplex virus, 109, 111, 355  
 herpes zoster, 355  
 hexafluoroacetone (HFA), 265, 269  
 "hierarchy of controls" concept, 198  
 Hiroshima, 96  
 hormones, 7, 43-49, 53, 58, 76, 77, 79, 90, 91, 110, 131, 142, 148, 152-155, 174, 175, 199, 295, 343, 345-347, 356  
   follicle-stimulating hormone (FSH), 44-48, 152  
   luteinizing hormone (LH), 44-48, 152, 199  
   luteinizing hormone-releasing hormone (LHRH), 44-47  
   occupational exposure to, 90, 91  
 human chorionic gonadotropin (hCG), 45, 49, 50, 51, 146, 154  
 hydrazine hydrate, 256  
 hydrazine sulfate, 256  
 hydrocortisone acetate, 91  
 hydrogen sulfide, 69, 70, 93  
 hyperbaric/hypobaric environments, 102, 103, 110, 197, 391
- Illinois, 206  
 imipramine, 356  
 iridium, 269  
 industrial alcohols, 175  
 industrial exposures, undefined, 91, 110  
**Industrial Union Department v. American Petroleum Institute (API), 393**  
 infant mortality, 60  
   rates of, 348, 349, 350, 351  
 infertility, 4, 31, 33, 59-62, 70-72, 75, 76, 83, 93, 96, 129, 152, 163, 165, 252, 259, 289, 293, 296, 297, 301-348, 402  
 infrared radiation, 97  
 insulin, 356  
 interagency relations, 183  
 Interagency Testing Committee, 400, 403  
 International Chemical Hazards Union, 217  
 International] Chemical workers Union, 275, 276  
 International Commission on Radiation Protection (ICRP), 226, 227, 230
- ionizing radiation (see radiation)  
 Iowa, 206, 351  
 isotretinoin (Accutane®), 356  
 Israel, 76, 92  
**ITT v. Grinnell, 391**
- Judges 13:7, 33
- Kansas, 351  
 Kentucky, 294  
 Kepone (chlordecone), 7, 74, 77, 169  
   use of, 77  
 Klinefelter syndrome, 147, 154, 347
- laboratory work, 7, 92, 175  
 lactation, 53, 141 (see also breast milk)  
 laparoscopy, 144, 146  
   for observation of ovary, 144  
   for observation of peritoneal cavity, 146  
   laparoscopic ovarian biopsy, 144  
 laser radiation, 7, 97, 98  
 lead, 4, 6, 7, 35, 36, 69, 70, 72, 110, 169, 170, 175, 184, 186, 188, 198, 199, 253, 256, 257, 258, 260, 265, 269, 351, 355, 390, 392  
   lead compounds, 69  
   lead standard, 198, 200, 203, 208, 391, 394, 397  
   workers exposed to, 69  
 lead chloride, 70
- legislation:  
   Atomic Energy Act (AEA), 171, 209, 223, 224, 225  
   Civil Rights Act (see Title VII of the Civil Rights Act)  
   Clean Air Act, 171, 202, 210, 224  
   Comprehensive Environmental Response, Compensation and Liability Act of 1980 (Superfund), 171, 210  
   Endangered Species Act of 1973, 404  
   Energy Reorganization Act of 1974, 223, 224  
   Environmental Research and Dekrelopment Act, 172  
   Federal Employee Compensation Act, 272  
   Federal Environmental Pesticide Control Act (FEPCA), 184  
   Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 3, 10, 171, 172, 182, 184, 200, 201, 209, 210, 231-218, 219, 221, 222, 404  
   cancellation and reregistration of pesticides, 216  
   farmworker protection standards, 215  
   registration, 214  
   registration of pesticides, 214  
   regulatory action on applications for registration, 214  
   special rel-iew, 214

- storage, packaging, and disposal of pesticides, 216
- use of restricted pesticides, 216
- Federal Mine Safety and Health Act, 174
- Federal Tort Claims Act, 231, 325, 326
- Federal Water Pollution Control Act of 1972, 210
- Mine Safety and Health Act, 219, 398
- National Environmental Policy Act, 193
- National Labor Relations Act, 184
- Occupational Safety and Health Act (OSH Act), 3, 4, 9, 10, 15, 21, 22, 24, 38, 174, 181-209, 219, 332, 334, 394
  - action level concept, 188
  - general duty clause, 189-192
  - hazard communication standard, 206
  - hazard exposure control, 198-199
  - hazard identification, 195-197
  - Written Hazard Communication Program, 207
- Paperwork Reduction Act, 220
- Pregnancy Discrimination Act, 242, 244, 248
- Regulatory Flexibility Act, 193, 220
- Resource Conservation and Recovery Act, 171, 210
- Safe Drinking Water Act, 210
- Solid Waste Disposal Act, 210
- Title VII of the Civil Rights Act, 3, 4, 12, 15, 16, 18, 21, 38, 184, 186, 187, 295, 239, 241, 242, 244, 245, 246, 250, 251, 260, 261, 263
- Toxic Substances Control Act (TSCA), 3, 6, 8, 10, 37, 38, 56, 62, 171, 172, 210-213, 216-218, 219, 221, 222, 267, 400-403
- Uranium Mill Tailings Radiation Control Act of 1978, 224
- lithium, 69, 356
- Louisiana, 206, 351
  
- magnetic fields, 93, 94, 101, 102
- Maine, 206
- male reproductive health, tests of, 46, 47, 131-140, 152, 153
  - antisperm antibodies, 152
  - automated analysis of sperm movement, 153
  - diagnostic techniques, 133
  - immunobeads, 152, 153
  - laboratory evaluation, 135
  - Leydig cells, 46, 47
  - personal history, 131, 132
  - physical examination, 131
  - semen (see semen)
  - sperm (see sperm)
  - testicular biopsy, 152
  - vasography, 152
- manganese, 7, 69, 71, 110
  - compounds of, 71
  - uses of, 71
- Manville Corp., 321, 322
- marijuana use, 345, 346, 347, 357
- Maryland, 206, 351
- Massachusetts, 206, 207
- McCarthy Scales of Children's Abilities, 80
- medical removal protection/policy (MRP), 185, 186, 198, 199, 200, 390
  - rate retention (RR), 185, 186
- melphalan, 269
- Memorandum of Understanding, EPA, OSHA, 219, 221, 222
- Memorial Sloan-Kettering Cancer Center, 268
- menstruation, 142, 143, 153
  - anovulatory cycle, 153
  - menstrual cycle, 143
  - regular menstruation, 142
- Mercer, Glen, 257
- mercury, 6, 7, 57, 69, 71-73, 110, 203, 269, 355
  - forms of, 71
  - methylmercury, 32, 69, 170
  - occupational exposures, 71
- Merrell-National Laboratories, 356
- metals:
  - biological indicators of exposure, 69
  - classified as occupational carcinogens, 69
- methotrexate, 170, 256, 269
- methoxychlor, 344
- methoxyflurane, 269
- methylcellosolve, 269
- methyl chloride, 92
- Metropolitan Atlanta Congenital Defects Surveillance Program, 164, 352
- Michigan, 79, 206, 295, 311
- microwave radiation (see radiofrequency/microwave radiation)
- Minamata disease, 32, 355
- Mine Safety and Health Administration, 181, 204
- Minnesota, 206, 294, 351
- Mirex, 77
- Mississippi, 351
- Missouri, 206, 351
- monohalomethanes, 67
- Mount Sinai School of Medicine, 101
- Muller v. Oregon*, 237
- mumps, 6, 152, 346, 347, 355
- mutagens/mutagenicity, 56, 77, 81, 83, 84, 86, 90, 202, 218, 219, 252, 255, 275, 296, 302, 322, 330, 400, 401
  
- Nagasaki, 96
- narcotics use, 345, 346
- National Academy of Sciences, 37, 172
- National Advisory Committee on Occupational Safety and Health (NACOSH), 195

- National Center for Health Statistics (NCHS), 348, 352
- National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 332
- National Congress of Hispanic American Citizens v. Marshall*, 392
- National Council on Compensation Insurance (NCCI), 305, 306
- National Council on Radiation Protection and Measurements (NCRP), 226, 227, 228, 230, 247
- National Fire Protection Association, 189
- National Institute for Environmental Health Sciences (NIEHS), 27
- National Institute for Occupational Safety and Health (NIOSH), 5, 9, 10, 22, 23, 27, 67, 69, 87-89, 101, 162, 163, 171, 174-176, 181-184, 189, 195, 198, 199, 204, 205, 208, 209, 255, 260, 276, 392, 393, 396, 400
- exposure estimates, 175
  - Health Hazard Evaluation Program, 174
  - major activities, 174
  - reproductive health hazard research 174, 175
  - reproductive risk assessment, 175
- National Institutes of Health (NIH), 27, 171, 173, 199
- National Labor Relations Board, 184
- National Occupational Hazard Survey 1972-74, 162
- National Realty v. OSHRC*
- National Science Foundation (NSF), 27
- National Toxicology Program (NTP), EPA, PHS, DHHS, 172, 175
- NCHS National Health and Nutrition Examination Survey (HANES), 27
- Nebraska, 351
- New Hampshire, 206
- New Jersey, 206, 207, 308, 399
- New York, 206, 217, 237, 239
- nickel, 69
- 9 to 5 Association of Working Women, 101
- nitrophen (TOK), 218
- nitrous oxide, 82, 83, 204, 269
- noise, 94, 104, 110
- nonionizing radiation, 96-99, 110
- No-observed-effects-level (NOEL), 17, 170
- thresholds for toxic effects, 170
- North Carolina, 206, 291, 351
- North Carolina Workers' Compensation Act, 291
- North Dakota, 351
- nuclear magnetic resonance, 150
- Nuclear Regulatory Commission (NRC), 9, 11, 21, 38, 94, 181, 209, 223-231, 269, 406
- regulations and reproductive risk, 226
  - Regulatory Guide Number 8.13, 228, 230
  - temporary workers, 308
- Oak Ridge National Laboratory, 171
- Occidental Chemical Co., 199
- Occupational Safety and Health Act (OSH Act) (see legislation)
- Occupational Safety and Health Administration (OSHA), 9, 10, 20-24, 35, 38, 69, 171-176, 181-189, 191-198, 200-204, 206-209, 215-217, 219, 221-223, 249, 251, 255, 257, 260, 271, 273, 274, 276, 279, 318, 390-399, 400
- Directorate of Technical Support, 183
  - Office of Standards Review, 393
- Occupational Safety and Health Review Commission (OSHRC) 10, 181, 182, 189, 191, 192, 209, 257, 391
- Office of Management and Budget (OMB), 183, 195, 202, 219, 220
- Ohio, 317
- Oil, Chemical, and Atomic Workers Union, 193
- oil industry workers, 92
  - 1-3 butadiene, 7, 67, 88, 89, 110, 175, 210, 222
  - 1,3-dichloropropene, 83
  - 1,1,1-trichloroethane (see DDT)
  - "Operation Ranch Hand," 78
  - optical radiation, 94
- Oregon, 206, 237
- organic compounds, 175
  - organic solvents, 81, 82, 89, 110
- Organized Migrants in Community Action v. Brennan*, 222
- organophosphorous pesticides, 182, 197
  - organo-tin compounds, 175
  - oryzalin, 175, 217
  - osteoporosis, 31
- OTA, 101, 258, 260, 263, 401
- ovarian function, 141-144
    - direct indicators, 144
      - laparoscopy
      - laparoscopic ovarian biopsy
      - ultrasonography
    - indirect indicators, 142-144
- paraquat, 269
- parathion, 269
- PBB (polybrominated biphenyls), 7, 58, 78-81, 110, 402
- PCB (polychlorinated biphenyls), 7, 53, 58, 67, 78-81, 110, 169, 170, 175, 204, 354
- pelvic inflammatory disease (PID), 344, 345
  - penicillin, 356
- Pennsylvania, 90, 206, 309
- Pennsylvania Supreme Court, 20
- perchloroethylene, 92
  - Permissible Exposure Limits (PELs), 188, 255
- Peru, 102

- pesticides (see chemical name)  
 reregistration of, 171  
*Phelps Dodge Corp. v. OSHRC*  
 phosphate, 402  
 physical agents, 93-104  
 polio, 355  
 polycyclic aromatic hydrocarbons, 344, 355  
 polyvinyl chloride (PVC), 89  
*Porter v. Lassiter*, 311  
 Pott, Percivall, 35  
 pregnancy, 51, 73, 80, 81, 106, 107, 130, 140, 146, 165, 240, 241  
   conception rate, 51  
   delivery and lactation, 150  
   discrimination on the basis of, 240, 241  
   fertilization, 49, 51  
   implantation, 50, 51, 73, 80, 81, 130, 140, 146, 165  
   increase in blood volume, 51  
   pregnant workers, 106, 107  
   the pregnant woman, 49-51  
 Premanufacture Notification (PMN), 37, 163, 171, 211, 401  
 President Jimmy Carter, 220  
 President Gerald R. Ford, 220  
 President Ronald Reagan, 220  
 procarbazine, 269  
 product liability (see tort liability)  
 Proposed Guidelines for Assessment of Developmental Toxicants, EPA, 9  
 Proposed Interpretive Guidelines on Employment Discrimination and Reproductive Health Hazards, 205  
 puberty, 53, 54  
 Public Citizen Health Research Group, 201, 202  
 Public Health Service, 172, 182, 208  
 pulp and paper work, 92, 93  
 PVC (see polyvinyl chloride)
- Quality of the Workplace Study (1977), 36
- radiation, 4, 6, 7, 11, 31, 46, 93-96, 100, 167, 203, 223-231, 247, 269, 281-287, 345, 347, 355, 356, 405  
   occupational exposure, 223  
   temporary workers, 11, 228-230, 308, 405, 406  
 radiofrequency/microwave radiation, 7, 94, 98, 99, 175, 272  
 Rand Corp., 305  
 Reagan Administration, 10, 183, 209, 392, 395  
 Rebuttable Presumption Against Registration (RPAR), EPA, 201, 202, 215, 404  
 recombinant DNA, 7  
*Reed v. Reed*, 239
- reproductive function:  
   aspects of, 43, 61  
   assessment (measurement) of, 5, 44, 45, 61 (see also female reproductive function) (see also male reproductive function)  
 reproductive endpoints, 44, 165, 167, 290, 365  
   measurement of, 165  
   population estimates of, 165  
 reproductive health protection policies, 263-276  
 reproductive toxicants/toxicity, 5, 6, 57-59, 68, 161, 169, 219  
   classifications, 68  
   gender/species differences, 59  
   mechanisms of action, 68  
   selected examples, 169  
   time frame, 59  
 Research Triangle Park, NC, 172  
 Rhode Island, 206, 311  
 "right-to-know" laws, 206, 207, 396  
 risk:  
   assessment, 7, 8, 31, 37, 161, 393, 395  
   data use in, 163, 164  
   in government agencies, 171  
   characterization, 8, 38, 162  
   management, 7, 8, 38, 161, 395  
   worker perception of, 36  
 Risk Management Council, 221  
 Roche Laboratories, 356  
 Rockville, Maryland, 184  
*Roe v. Wade*, 241, 311, 312, 313, 314, 315, 326, 331  
 rubber, 88, 89, 110  
 Rubber Manufacturers Association, 193  
 rubella, 6, 7, 107, 108, 111, 163, 355  
 Ruckelshaus, William, 221  
 Russia, 74, 88, 89
- Scientific Parameters in Health and the Environment (database), NIH, 171  
 scrotal cancer, 35  
 Secretary of Health and Human Services, 183  
 Secretary of Labor, 181, 183, 190, 191, 192, 194, 195, 393, 394, 396, 400, 404  
 selenium, 69  
 semen, 135-136, 175, 346 (see also sperm)  
   ejaculate, 136  
   laboratory evaluation, 135  
   quality, 135  
 Senate Environment and Public Works Committee, 219  
 Service Employees International Union, 101  
 Seveso, Italy, 32  
 sex discrimination, 11, 16-21, 235-276 (see also

- discriminatory treatment, discriminatory impact)
- Shell Oil Co., 264, 265
- sickle-cell anemia, 147, 154, 344, 347, 355
- silicosis, 281-287, 291
- Silvex (2-[2,4,5-trichlorophenoxy] proprionic acid), 77
- smoking, 31, 32, 61, 73, 87, 94, 101, 129, 162, 167, 197, 345, 350, 351, 357, 365
- Society of the Plastics Industry, Inc. v. OSHA*, 396
- South Carolina, 351
- South Dakota, 351
- Soviet Union, 68
- sperm, 136-140, 153, 343, 346-348, 357 (see also semen)
- cervical mucus penetration, 139
- characteristics, 136-138
- function, 138
- post-coital test, 153
- single-image photomicrography/high speed cinemicrography, 153
- sperm-oocyte interaction, 139
- videomicrography, 153
- zona-free hamster egg penetration test, 140, 153
- spontaneous abortion, 51, 53, 56, 61, 70, 72, 74, 81, 83, 86, 89, 93, 100, 149, 165, 167, 169, 198, 202, 297, 342-345, 346, 356
- Standard Industrial Classification (SIC), (BLS, DOL)
- injury and illness rates, 184
- Status Report of Chemical Activities data retrieval system, (EPA), 173, 219
- sterility (see infertility)
- streptomycin, 356
- stress, 31, 105, 106, 110, 293
- styrene, 7, 81, 82, 88-90, 169
- Sudan, 395
- sudden infant death syndrome, 350
- sulfur, 73
- sulfur dioxide, 69, 73, 93
- Superfund, 171
- Supreme Court, 185, 186, 188, 196, 235, 237, 239, 240, 241, 242, 261, 311, 312, 313, 314, 315, 326, 331, 393, 395, 397
- Justice Brennan, 397
- Justice Marshall, 394
- Justice Powell, 394
- Justice Rehnquist, 394
- Justice Stevens, 393
- Sweden, 68, 73, 92, 93, 102
- Swedish Medical Birth Register, 92, 93
- syphilis, 346, 355
- Taylor Diving & Salvage Co. v. U.S. Department of Labor*, 391, 392
- Tay Sachs disease, 147, 154
- TCDD (see dioxin)
- TCP (2,4,5-trichlorophenol), 77
- teratogens/teratogenesis, 6, 55-57, 60, 62, 73-75, 204, 207, 217, 218, 221, 265, 275, 322, 351, 357, 400, 404
- teratogenicity testing, 171
- tetracyclines, 356
- tetraethyl lead, 69
- Texas, 206
- Texas Independent Ginners Association v. Marshall*, 394, 395
- textile work, 93
- thalidomide, 6, 31, 55, 56, 169, 356
- thiotepa, 256, 269
- thiram, 269
- thorium, 224
- Three Mile Island Nuclear Power Plant, 32
- thyroid suppressants, 356
- Title VII of the Civil Rights Act (see legislation)
- tobacco (see smoking)
- TOK (see nitrophen)
- toluene, 81, 82
- tort liability, 13, 39, 279, 301, 326
- tort remedy (right to pursue), 25
- tort system, 26
- product liability, 304-307
- design defect, 306
- failure to provide, 306
- manufacturing defect, 306
- toxicology studies, 8, 55, 167-170, 205, 245, 252
- general considerations, 168
- dose-response considerations, 170
- Toxics Information Series, EPA, 173
- Toxic Substances Control Act (TSCA) (see legislation)
- toxoplasma gondii, 355
- toxoplasmosis, 109, 111, 355
- trichlorophenol, 32
- trichlorethylene, 7
- tricresylphosphate, 89
- Tris (2,3-dibromopropyl), 402
- Turner syndrome, 147, 154
- 2,4-D, 7, 78, 110, 269
- 2,4,5-T (2,4,5-trichlorophenoxyacetic acid), 77, 78, 110, 269
- use of, 77
- Uganda, 395
- ultrasound:
- exposure to, 7, 99, 100
- imaging of:
- fetal development, 159, 150, 155
- ovarian activity, 144
- peritoneal cavity, 146
- ultraviolet radiation, 7, 94, 96, 97, 98

- United Rubber Workers, 193  
 United Steelworkers of America, 193, 274  
*United Steelworkers of America v. Marshall*, 391, 394, 397  
 uranium, 175, 224, 351
- valproic acid, 164  
 varicella (chicken pox), 109, 111, 355  
 vibration, 69, 94, 104, 110  
 video display terminals (VDTs), 7, 100, 101, 175  
 Vietnam War, 78  
 vinblastine, 269  
 vinyl acetate, 89, 90  
 vinyl bromide, 89  
 vinyl chloride, 7, 88, 89, 90, 92, 170, 185, 197, 269  
     standard, 185  
 vinyl fluoride, 89, 90  
 vinyl halides, 89, 90, 110  
 vinylidene chloride, 89, 90  
 vinylidene fluoride, 89, 90  
 Virginia, 351  
 visible light, 97  
 vitamin D, 356
- Wales, 102  
 Walter Reed Army Medical Center, 269-274  
 Warfarin, 170, 269, 356  
 Western Electric Co., 255  
 West Virginia, 206, 351, 396
- Whorton, Donald, 199  
 Willow Island, West Virginia, 251, 255, 256, 257, 259, 260  
 Wisconsin, 206  
 women workers:  
     historical perspective, 34  
     history of protective legislation, 235-237  
     married, with children 34, 35  
     risks to, 330  
 Workers' Compensation, 4, 12, 13, 17, 24-26, 38, 39, 279, 298, 301, 306, 316  
     exclusivity of remedy doctrine, 13, 280, 294, 295  
     dual capacity exception to, 14, 295  
     intentional tort exception, 14, 295  
     job disability, 289-291, 297  
     job relatedness (causation), 291, 293, 297  
 World War II, 356  
*Wright v. Olin Corp.*, 249, 250, 251
- X-rays, 7, 36, 37, 94-97, 100, 223, 245, 247, 248, 356, 390  
     diagnostic use in obstetrics, 150  
     occupational exposure, 223  
 xylene, 81, 82
- Yusho (rice oil disease), 80
- zinc, 73, 93, 188, 356  
*Zuniga v. Kleberg County Hospital*, 248

0

LIBRARY  
 OFFICE OF TECHNOLOGY ASSESSMENT  
 CONGRESS OF THE UNITED STATES  
 WASHINGTON, D.C. 20540