## LEVEL I HIGH-TECHNOLOGY INDUSTRIES

## 3254 Pharmaceutical and Medicine Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing biological and medicinal products; (2) processing (i.e., grading, grinding, and milling) botanical drugs and herbs; (3) isolating active medicinal principals from botanical drugs and herbs; and (4) manufacturing pharmaceutical products intended for internal and external consumption in such forms as ampoules, tablets, capsules, vials, ointments, powders, solutions, and suspensions.

## 3341 Computer and Peripheral Equipment Manufacturing

This industry comprises establishments primarily engaged in manufacturing and/or assembling electronic computers, such as mainframes, personal computers, workstations, laptops, and computer servers; and computer peripheral equipment, such as storage devices, printers, monitors, input/output devices and terminals. Computers can be analog, digital, or hybrid. Digital computers, the most common type, are devices that do all of the following: (1) store the processing program or programs and the data immediately necessary for the execution of the program; (2) can be freely programmed in accordance with the requirements of the user; (3) perform arithmetical computations specified by the user; and (4) execute, without human intervention, a processing program that requires the computer to modify its execution by logical decision during the processing run. Analog computers are capable of simulating mathematical models and comprise at least analog, control, and programming elements.

## 3342 Communications Equipment Manufacturing

This industry comprises establishments engaged in manufacturing wire telephone and data communications equipment. These products may be standalone or board-level components of a larger system. Examples of products made by these establishments are central office switching equipment, cordless telephones (except cellular), PBX equipment, telephones, telephone answering machines, LAN modems, multi-user modems, and other data communications equipment, such as bridges, routers, and gateways.

This industry also comprises establishments engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting & receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.

# 3344 Semiconductor and Other Electronic Component Manufacturing

This industry comprises establishments primarily engaged in manufacturing semiconductors and other components for electronic applications. Examples of products made by these establishments are capacitors, resistors, microprocessors, bare and loaded printed circuit boards, electron tubes, electronic connectors, and computer modems.

# 3345 Navigational, Measuring, Electromedical, and Control Instruments Manufacturing

This industry comprises establishments primarily engaged in manufacturing navigational, measuring, electromedical, and control instruments. Examples of products made by these establishments are aeronautical instruments, appliance regulators and controls (except switches), laboratory analytical instruments, navigation and guidance systems, and physical properties testing equipment.

# 3364 Aerospace Product and Parts Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing complete aircraft, missiles, or space vehicles; (2) manufacturing aerospace engines, propulsion units, auxiliary equipment or parts; (3) developing and making prototypes of aerospace products; (4) aircraft conversion (i.e., major modifications to systems); and (5) complete aircraft or propulsion systems overhaul and rebuilding (i.e., periodic restoration of aircraft to original design specifications).

### 5112 Software Publishers

This industry comprises establishments primarily engaged in computer software publishing or publishing and reproduction. Establishments in this industry carry out operations necessary for producing and distributing computer software, such as designing, providing documentation, assisting in installation, and providing support services to software purchasers. These establishments may design, develop, and publish, or publish only.



## 5161 Internet Publishing and Broadcasting

This industry comprises establishments engaged in publishing and/or broadcasting content on the Internet exclusively. These establishments do not provide traditional (non-Internet) versions of the content that they publish or broadcast. Establishments in this industry provide textual, audio, and/or video content of general or specific interest on the Internet.

### 5179 Other Telecommunications

This industry comprises establishments primarily engaged in (1) providing specialized telecommunications applications, such as satellite tracking, communications telemetry, and radar station operations; or (2) providing satellite terminal stations and associated facilities operationally connected with one or more terrestrial communications systems and capable of transmitting telecommunications to or receiving telecommunications from satellite systems.

### 5181 Internet Service Providers and Web Search Portals

This industry comprises establishments known as Internet service providers or known as Web search portals. Establishments in this industry provide clients access to the Internet or operate web sites that use a search engine to provide Internet search services. Establishments in this industry generally provide related services, such as web hosting, web page design, and related advice and assistance. Web search portals often provide additional Internet services, such as e-mail, connections to other web sites, auctions, news, and other limited content, and serve as a home base for Internet users.

## 5182 Data Processing, Hosting, and Related Services

This industry comprises establishments primarily engaged in providing infrastructure for hosting or data processing services. These establishments may provide specialized hosting activities, such as web hosting, streaming services or application hosting, provide application service provisioning, or may provide general time-share mainframe facilities to clients. Data processing establishments provide complete processing from data supplied by clients or provide automated data processing and data entry services.

## 5413 Architectural, Engineering, and Related Services

### Architectural Services (541310)

This industry comprises establishments primarily engaged in planning and designing residential, institutional, leisure, commercial, and industrial buildings and structures by applying knowledge of design, construction procedures, zoning regulations, building codes, and building materials.

### Landscape Architectural Services (541320)

This industry comprises establishments primarily engaged in designing the development of land areas for projects, such as parks and other recreational areas; airports; highways; hospitals; schools; land subdivisions; and commercial, industrial, and residential areas, by applying knowledge of land characteristics, location of buildings and structures, use of land areas, and design of landscape projects.

#### Engineering Services (541330)

This industry comprises establishments primarily engaged in applying physical laws and principles of engineering in the design, development, and utilization of machines, materials, instruments, structures, processes, and systems. The assignments undertaken by these establishments may involve any of the following activities: provision of advice, preparation of feasibility studies, preparation of preliminary and final plans and designs, provision of technical services during the construction or installation phase, inspection and evaluation of engineering projects, and related services.

#### Drafting Services (541340)

This industry comprises establishments primarily engaged in drawing detailed layouts, plans, and illustrations of buildings, structures, systems, or components from engineering and architectural specifications.

#### Building Inspection Services (541350)

This industry comprises establishments primarily engaged in providing building inspection services. These establishments typically evaluate all aspects of the building structure and component systems and prepare a report on the physical condition of the property, generally for buyers or others involved in real estate transactions. Building inspection bureaus and establishments providing home inspection services are included in this industry.

### Geophysical Surveying and Mapping Services (541360)

This industry comprises establishments primarily engaged in gathering, interpreting, and mapping geophysical data. Establishments in this industry often specialize in locating and measuring the extent of subsurface resources, such as oil, gas, and minerals, but they may also conduct surveys for engineering purposes. Establishments in this industry use a variety of surveying techniques depending on the purpose of the survey, including magnetic surveys, gravity surveys, seismic surveys, or electrical and electromagnetic surveys.



### Surveying and Mapping (except Geophysical) Services (541370)

This industry comprises establishments primarily engaged in performing surveying and mapping services of the surface of the earth, including the sea floor. These services may include surveying and mapping of areas above or below the surface of the earth, such as the creation of view easements or segregating rights in parcels of land by creating underground utility easements.

#### Testing Laboratories (541380)

This industry comprises establishments primarily engaged in performing physical, chemical, and other analytical testing services, such as acoustics or vibration testing, assaying, biological testing (except medical and veterinary), calibration testing, electrical and electronic testing, geotechnical testing, mechanical testing, nondestructive testing, or thermal testing. The testing may occur in a laboratory or on-site.

### 5415 Computer Systems Design and Related Services

This industry comprises establishments primarily engaged in providing expertise in the field of information technologies through one or more of the following activities: (I) writing, modifying, testing, and supporting software to meet the needs of a particular customer; (2) planning and designing computer systems that integrate computer hardware, software, and communication technologies; (3) on-site management and operation of clients' computer systems and/or data processing facilities; and (4) other professional and technical computer-related advice and services.

## 5417 Scientific Research and Development Services

This industry group comprises establishments engaged in conducting original investigation undertaken on a systematic basis to gain new knowledge (research) and/or the application of research findings or other scientific knowledge for the creation of new or significantly improved products or processes (experimental development). The industries within this industry group are defined on the basis of the domain of research; that is, on the scientific expertise of the establishment.

### LEVEL 2 HIGH-TECHNOLOGY INDUSTRIES

## 1131 Timber Tract Operations

This industry is primarily engaged in the operation of timber tracts for the purpose of selling standing timber.

# 1132 Forest Nurseries and Gathering of Forest Products

This industry comprises establishments primarily engaged in (1) growing trees for reforestation and/or (2) gathering forest products, such as gums, barks, balsam needles, rhizomes, fibers, Spanish moss, ginseng, and truffles.

### 2111 Oil and Gas Extraction

This industry comprises establishments primarily engaged in operating and/or developing oil and gas field properties and establishments primarily engaged in recovering liquid hydrocarbons from oil and gas field gases. Such activities may include exploration for crude petroleum and natural gas; drilling, completing, and equipping wells; operation of separators, emulsion breakers, desilting equipment, and field gathering lines for crude petroleum and natural gas; and all other activities in the preparation of oil and gas up to the point of shipment from the producing property. This industry includes the production of crude petroleum, the mining and extraction of oil from oil shale and oil sands, the production of natural gas, sulfur recovery from natural gas, and the recovery of hydrocarbon liquids from oil and gas field gases. Establishments in this industry operate oil and gas wells on their own account or for others on a contract or fee basis.

### 2211 Electric Power Generation, Transmission and Distribution

This industry group comprises establishments primarily engaged in generating, transmitting, and/or distributing electric power. Establishments in this industry group may perform one or more of the following activities: (I) operate generation facilities that produce electric energy; (2) operate transmission systems that convey the electricity from the generation facility to the distribution system; and (3) operate distribution systems that convey electric power received from the generation facility or the transmission system to the final consumer.



### 3251 Basic Chemical Manufacturing

This industry group comprises establishments primarily engaged in manufacturing chemicals using basic processes, such as thermal cracking and distillation. Chemicals manufactured in this industry group are usually separate chemical elements or separate chemically-defined compounds.

# 3252 Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing

Resin and Synthetic Rubber Manufacturing (32521)

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing synthetic resins, plastics materials, and nonvulcanizable elastomers and mixing and blending resins on a custom basis; (2) manufacturing noncustomized synthetic resins; and (3) manufacturing synthetic rubber.

#### Artificial and Synthetic Fibers and Filaments Manufacturing (32522)

This industry comprises establishments primarily engaged in (1) manufacturing cellulosic (i.e., rayon and acetate) and noncellulosic (i.e., nylon, polyolefin, and polyester) fibers and filaments in the form of monofilament, filament yarn, staple, or tow or (2) manufacturing and texturing cellulosic and noncellulosic fibers and filaments.

## 3332 Industrial Machinery Manufacturing

Sawmill and Woodworking Machinery Manufacturing (33321)

This industry comprises establishments primarily engaged in manufacturing sawmill and woodworking machinery (except handheld), such as circular and band sawing equipment, planing machinery, and sanding machinery.

### Plastics and Rubber Industry Machinery Manufacturing (33322)

This industry comprises establishments primarily engaged in manufacturing plastics and rubber products making machinery, such as plastics compression, extrusion and injection molding machinery, and tire building and recapping machinery & equipment.

#### Other Industrial Machinery Manufacturing (33329)

This industry comprises establishments primarily engaged in manufacturing industrial machinery (except agricultural and farm-type, construction, mining, sawmill and woodworking, and plastics and rubber products making machinery).

# 3333 Commercial and Service Industry Machinery Manufacturing

This industry comprises establishments primarily engaged in manufacturing commercial and service machinery, such as automatic vending machinery, commercial laundry and dry-cleaning machinery, office machinery, photographic and photocopying machinery, optical instruments and machinery, automotive maintenance equipment (except mechanic's handtools), industrial vacuum cleaners, and commercial-type cooking equipment.

# 3343 Audio and Video Equipment Manufacturing

This industry comprises establishments primarily engaged in manufacturing electronic audio and video equipment for home entertainment, motor vehicle, public address and musical instrument amplifications. Examples of products made by these establishments are video cassette recorders, televisions, stereo equipment, speaker systems, household-type video cameras, jukeboxes, and amplifiers for musical instruments and public address systems.

# 3346 Manufacturing and Reproducing Magnetic and Optical Media

This industry comprises establishments primarily engaged in (1) manufacturing optical and magnetic media, such as blank audio tape, blank video tape, and blank diskettes and/or (2) mass duplicating (i.e., making copies) audio, video, software, and other data on magnetic, optical, and similar media.

# 4234 Professional and Commercial Equipment and Supplies Merchant Wholesalers

This industry group comprises establishments primarily engaged in the merchant wholesale distribution of photographic equipment and supplies; office, computer, and computer peripheral equipment; and medical, dental, hospital, ophthalmic, and other commercial and professional equipment and supplies.



## 5416 Management, Scientific, and Technical Consulting Services

### Management Consulting Services (54161)

This industry comprises establishments primarily engaged in providing advice and assistance to businesses and other organizations on management issues, such as strategic and organizational planning; financial planning and budgeting; marketing objectives and policies; human resource policies, practices, and planning; production scheduling; and control planning.

### Environmental Consulting Services (54162)

This industry comprises establishments primarily engaged in providing advice and assistance to businesses and other organizations on environmental issues, such as the control of environmental contamination from pollutants, toxic substances, and hazardous materials. These establishments identify problems (e.g., inspect buildings for hazardous materials), measure and evaluate risks, and recommend solutions. They employ a multidisciplined staff of scientists, engineers, and other technicians with expertise in areas, such as air and water quality, asbestos contamination, remediation, and environmental law. Establishments providing sanitation or site remediation consulting services are included in this industry.

#### Other Scientific and Technical Consulting Services (54169)

This industry comprises establishments primarily engaged in providing advice and assistance to businesses and other organizations on scientific and technical issues (except environmental).

### LEVEL 3 HIGH-TECHNOLOGY INDUSTRIES

## 3241 Petroleum and Coal Products Manufacturing

#### Petroleum Refineries (32411)

This industry comprises establishments primarily engaged in refining crude petroleum into refined petroleum. Petroleum refining involves one or more of the following activities: (1) fractionation; (2) straight distillation of crude oil; and (3) cracking.

### Asphalt Paving, Roofing, and Saturated Materials Manufacturing (32412)

This industry comprises establishments primarily engaged in (1) manufacturing asphalt and tar paving mixtures and blocks and roofing cements and coatings from purchased asphaltic materials and/or (2) saturating purchased mats and felts with asphalt or tar from purchased asphaltic materials.

### Other Petroleum and Coal Products Manufacturing (32419)

This industry comprises establishments primarily engaged in manufacturing petroleum products (except asphalt paving, roofing and saturated materials) from refined petroleum or coal products made in coke ovens not integrated with a steel mill.

# 3253 Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing

### Fertilizer Manufacturing (32531)

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing nitrogenous or phosphatic fertilizer materials; (2) manufacturing fertilizers from sewage or animal waste; (3) manufacturing nitrogenous or phosphatic materials and mixing with other ingredients into fertilizers; and (4) mixing ingredients made elsewhere into fertilizers.

#### Pesticide and Other Agricultural Chemical Manufacturing (32532)

This industry comprises establishments primarily engaged in the formulation and preparation of agricultural and household pest control chemicals (except fertilizers).

# 3255 Paint, Coating, and Adhesive Manufacturing

### Paint and Coating Manufacturing (32551)

This industry comprises establishments primarily engaged in (1) mixing pigments, solvents, and binders into paints and other coatings, such as stains, varnishes, lacquers, enamels, shellacs, and water repellant coatings for concrete and masonry, and/or (2) manufacturing allied paint products, such as putties, paint and varnish removers, paint brush cleaners, and frit.

#### Adhesive Manufacturing (32552)

This industry comprises establishments primarily engaged in manufacturing adhesives, glues, and caulking compounds.



## 3259 Other Chemical Product and Preparation Manufacturing

This industry group comprises establishments primarily engaged in manufacturing chemical products (except basic chemicals; resins, synthetic rubber, cellulosic and noncellulosic fibers and filaments; pesticides, fertilizers, and other agricultural chemicals; pharmaceuticals and medicines; paints, coatings, and adhesives; soaps and cleaning compounds; and toilet preparations).

## 3336 Engine, Turbine, and Power Transmission Equipment Manufacturing

This industry comprises establishments primarily engaged in manufacturing turbines, power transmission equipment, and internal combustion engines (except automotive gasoline and aircraft).

## 3339 Other General Purpose Machinery Manufacturing

#### Pump and Compressor Manufacturing (33391)

This industry comprises establishments primarily engaged in manufacturing pumps and compressors, such as general purpose air and gas compressors, nonagricultural spraying and dusting equipment, general purpose pumps and pumping equipment (except fluid power pumps and motors), and measuring and dispensing pumps.

### Material Handling Equipment Manufacturing (33392)

This industry comprises establishments primarily engaged in manufacturing material handling equipment, such as elevators and moving stairs; conveyors and conveying equipment; overhead traveling cranes, hoists, and monorail systems; and industrial trucks, tractors, trailers, and stacker machinery.

### All Other General Purpose Machinery Manufacturing (33399)

This industry comprises establishments primarily engaged in manufacturing general purpose machinery (except ventilation, heating, air-conditioning, and commercial refrigeration equipment; metal working machinery; engines, turbines, and power transmission equipment; pumps and compressors; and material handling equipment).

## 4861 Pipeline Transportation of Crude Oil

This industry comprises establishments primarily engaged in the pipeline transportation of crude oil.

## 4862 Pipeline Transportation of Natural Gas

This industry comprises establishments primarily engaged in the pipeline transportation of natural gas from processing plants to local distribution systems.

# 4869 Other Pipeline Transportation

This industry group comprises establishments primarily engaged in the pipeline transportation of products (except crude oil and natural gas).

### 5171 Wired Telecommunications Carriers

This industry group comprises establishments primarily engaged in operating, maintaining or providing access to facilities for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies.

# 5172 Wireless Telecommunications Carriers (except Satellite)

This industry group comprises establishments primarily engaged in operating, maintaining or providing access to facilities for the transmission of voice, data, text, sound, and video using wireless telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies.

#### 5173 Telecommunications Resellers

This industry comprises establishments primarily engaged in purchasing access and network capacity from owners and operators of the networks and reselling wired and wireless telecommunications services (except satellite) to businesses and households. Establishments in this industry resell telecommunications; they do not operate and maintain telecommunications switching and transmission facilities.



### 5174 Satellite Telecommunications

This industry comprises establishments primarily engaged in providing point-to-point telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications.

## 5211 Monetary Authorities-Central Bank

This industry comprises establishments primarily engaged in performing central banking functions, such as issuing currency, managing the Nation's money supply and international reserves, holding deposits that represent the reserves of other banks and other central banks, and acting as a fiscal agent for the central government.

### 5232 Securities and Commodity Exchanges

This industry comprises establishments primarily engaged in furnishing physical or electronic marketplaces for the purpose of facilitating the buying and selling of stocks, stock options, bonds, or commodity contracts.

## 5511 Management of Companies and Enterprises

This industry comprises (I) establishments primarily engaged in holding the securities of (or other equity interests in) companies and enterprises for the purpose of owning a controlling interest or influencing the management decisions or (2) establishments (except government establishments) that administer, oversee, and manage other establishments of the company or enterprise and that normally undertake the strategic or organizational planning and decisionmaking role of the company or enterprise. Establishments that administer, oversee, and manage may hold the securities of the company or enterprise.

## 5612 Facilities Support Services

This industry comprises establishments primarily engaged in providing operating staff to perform a combination of support services within a client's facilities. Establishments in this industry typically provide a combination of services, such as janitorial; maintenance; trash disposal; guard and security; mail routing; reception; laundry; and related services to support operations within facilities. These establishments provide operating staff to carry out these support activities; but, are not involved with or responsible for the core business or activities of the client. Establishments providing facilities (except computer and/or data processing) operation support services and establishments operating correctional facilities (i.e., jails) on a contract or fee basis are included in this industry.

# 8112 Electronic and Precision Equipment Repair and Maintenance

This industry group comprises establishments primarily engaged in repairing electronic equipment, such as computers and communications equipment, and highly specialized precision instruments. Establishments in this industry group typically have staff skilled in repairing items having complex, electronic components.

