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# IC Comparison and Reconciliation of SIC and NAICS Industry Codes Used to Define Knowledge-Based Industries (KBIs)



Prepared for Industry Canada by  
E. Wayne Clendenning & Associates  
May 2000

Research Paper prepared for the Small Business Policy Branch as part of the Small and  
Medium-Sized Enterprise (SME) Financing Data Initiative

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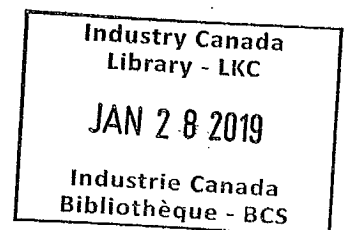
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## INTRODUCTION

In 1996, based on research undertaken by Industry Canada and the Business Development Bank of Canada (BDC) and consultations with the Canadian Bankers Association (CBA), a series of 1980 SIC industry codes (SIC codes) were developed to be used as indicators for measuring bank lending to knowledge-based industries (KBIs) in Canada. The purpose of developing these SIC code indicators was to enable Industry Canada, the House of Commons Industry Committee and the CBA to monitor the volume of bank lending being provided to the KBIs included under these codes. At that time, although there were a number of shortcomings in the coverage of KBIs under these codes, it was felt that they were a starting point for measuring lending to KBIs. However, it was recommended that the list of codes should be reviewed regularly and revised in detail when the new harmonized North American codes, to be developed under the North American Free Trade Agreement (NAFTA), were implemented in Canada. In March 1998, the NAICS Canada codes (NAICS codes) were published and the purpose of this study is to compare and reconcile SIC codes used to define KBIs to the equivalent NAICS codes as a first step towards developing a series of NAICS codes that could be used for defining KBIs more generally.



## DEVELOPMENT OF THE CURRENT SIC CODES USED AS INDICATORS FOR KBI BANK LENDING

Since there is no consensus definition of KBIs, Industry Canada proposed the use of a two-tiered categorization of industries that would be appropriate for selecting SIC codes as indicators for bank lending to KBIs, including:

- Tier I - a narrow band of science and technology-based firms, composed of knowledge producers; and
- Tier II - a broad band of "high knowledge" firms which, based on measures of R & D and knowledge worker inputs, could be considered to be business innovators and high-knowledge users.

To select a narrow bands of firms, SIC codes were reviewed at the four-digit level to identify science and technology-based industries that had been identified in a previous Industry Canada (Lee/Has) study and other industry studies. Based on these studies, SIC codes were determined for the following industries: computers, semiconductors, software, biotechnology, telecommunications, advanced materials, environmental services, aerospace, office equipment, electrical machinery, pharmaceutical, scientific instruments, electronics instrumentation, telecommunications software, systems integration and medical devices. This selection of SIC codes was then cross-checked against the SIC codes of some 70 Canadian public companies identified by brokerage houses as being either high technology or biotechnology / life sciences firms. This cross-check basically confirmed the original selection of Tier I SIC codes.

In order to select a broad band of firms, the previous Industry Canada study was again used as a starting point by classifying the high-knowledge industries identified in the study by SIC codes. These SIC codes were then reviewed to ensure that they identified high-knowledge firms that would be eligible for SME bank lending. This review resulted in the deletion of two major groups - Educational Services and Health and Social Services (which are primarily in the public sector) - and the partial deletion of the Other Business Services category.

Together, the Tier I and Tier II industries, at that time, were comprised of approximately 34,000 firms. This two-tiered categorization was subject to the limitations of any SIC code-based approach, which classifies industries according to outputs as opposed to inputs. The selection of codes for both the narrow and broader bands of industries was subjective, even though those selected for the broad band were based on objective data obtained from the Industry Canada study. Because of this, undoubtedly some KBIs were excluded and some non-KBIs were included in the two tiers of SIC codes.

The two-tiered categorization was then reviewed by the CBA subcommittee on knowledge-

based lending from the perspective of identifying those SIC codes that have a high concentration of high growth firms in the science and technology sectors and were believed to have difficulty in accessing capital. The subcommittee then excluded SIC codes that contained firms that have traditionally been able to obtain bank financing, in order to increase the accuracy and relevance of the data as indicators for bank lending. On this basis they concluded that all but one of the Tier I list of SIC codes suggested by Industry Canada should be included as indicators of bank lending.

After an analysis of the Tier II SIC codes put forward by Industry Canada, the CBA subcommittee excluded many of these SIC codes on the basis that they captured traditional industries and that the emerging parts of these industries were classified elsewhere under other SIC codes. After discussions, Industry Canada and the CBA concluded that a list of 20 Tier I SIC codes captured the bulk of KBIs, with the exception of the advanced materials industry. Because of the large number of SIC codes involved in defining this industry and the small number of firms covered under each SIC code it was decided to leave this industry out of the list of KBI industries until it could be dealt with when the harmonized North American NAICS codes came into effect and further revisions could be undertaken.

## THE CURRENT TIER I AND TIER II SIC CODES USED TO DEFINE KBIs

Table I below provides a listing of both the Tier I and Tier II SIC codes currently used to define KBIs, which will be the basis for the comparison and reconciliation with the new NAICS codes using the Concordance Tables developed by Statistics Canada for showing the relationship between the two codes.

**Table I**

<b>Tier I and Tier II SIC Codes and Descriptions Used to Define KBIs</b>	
<b>SIC Code</b>	<b>Industry Classification</b>
<b>Tier I Codes</b>	
0239	Other Services Incidental to Agriculture
3211	Aircraft and Aircraft Parts Industry
3341	Record Player, Radio and Television Receiver Industry
3351	Telecommunication Equipment Industry
3352	Electronic Parts and Components Industry
3359	Other Communication and Electronic Equipment Industry
3361	Electronic Computing and Peripheral Equipment Industry
3362	Electronic Office, Store and Business Machine Industry
3369	Other Office, Store and Business Machine Industries
3381	Communications and Energy Wire and Cable Industry
3741	Pharmaceutical and Medicine Industry
3911	Indicating, Recording and Controlling Instruments Industry
3912	Other Instruments and Related Products Industry
4814	Cable Television Industry
4821	Telecommunication Carriers Industry
4839	Other Telecommunications Industries
7721	Computer Services
7759	Other Scientific and Technical Services
9611	Motion Picture and Video Production

9619	Other Motion Picture, Audio and Video Services
<b>Tier II Codes</b>	
0231	Agricultural Management and Consulting Services
3111	Agricultural Implement Industry
3121	Commercial Refrigeration and Air Conditioning Equipment Industry
3191	Compressor, Pump and Industrial Fan Industry
3192	Construction and Mining Machinery and Materials Handling Equipment Industry
3193	Sawmill and Woodworking Machinery Industry
3194	Turbine and Mechanical Power Transmission Equipment Industry
3199	Other Machinery and Electrical Equipment Industries
3371	Electrical Transformer Industry
3372	Electrical Switchgear and Protective Equipment Industry
3379	Other Electrical Industrial Equipment Industries
3611	Refined Petroleum Products Industry (Except Lubricating Oil and Grease)
3612	Lubricating Oil and Grease Industry
3699	Other Petroleum and Coal Products Industries
3711	Industrial Inorganic Chemical Industries
3712	Industrial Organic Chemical Industries
3721	Chemical Fertilizer and Fertilizer Materials Industry
3722	Mixed Fertilizer Industry
3729	Other Agricultural Chemical Industries
3731	Plastic and Synthetic Resin Industries
3791	Printing Ink Industry
3792	Adhesives Industry
3799	Other Chemical Products Industries
3913	Clock and Watch Industry
3914	Ophthalmic Goods Industry
4611	Natural Gas Pipeline Transport Industry



4612	Crude Oil Pipeline Transport Industry
4619	Other Pipeline Transport Industries
4911	Electric Power Systems Industry
7751	Offices of Architects
7752	Offices of Engineers

## STATISTICS CANADA CONCORDANCE TABLES

The Concordance Tables developed by Statistics Canada show the relationship between the SIC and NAICS codes, with the first table showing the relationship of NAICS codes to SIC codes and the second table showing the relationship of SIC codes to NAICS codes. The two tables, taken together, provide a cross-reference between the two industrial classifications. These concordances are first shown at a high level of aggregation, relating Sectors in NAICS to Divisions in SIC. This information allows users to see which activities have moved into and out of the categories of each classification, when compared to the other classification at this broad level of aggregation. The tables are also provided at the lowest level of aggregation, namely the 4-digit level in the SIC and the 6-digit level in NAICS. These tables highlight the differences and similarities between the most detailed industry classes of the two classifications and provide information that is useful when converting data from one classification to the other.

The tables show that NAICS codes are substantially different from the SIC codes, with only 220 classes at the lowest level of detail remaining the same in the two classifications. Though some SIC classes were simply split or combined, very often particular activities from different SIC codes were removed and recombined into new NAICS codes. There are essentially four different situations that have occurred, as follows:

- The SIC and NAICS classes are identical, with only the title being changed;
- The class in one classification is exactly equivalent to two classes in the other classification;
- A class in one classification is equivalent to part of a class in the other classification; and
- A class in one classification is linked to more than one class in the other classification.

All of these situations are likely to be encountered when comparing and reconciling the Tier I and Tier II SIC codes used to define KBIs to the equivalent NAICS codes. The similarities and differences between the two codes will have to be determined for each of the SIC codes and the NAICS codes will have to be reconciled to the SIC codes through taking into account the splitting and recombining of the current SIC codes into various NAICS codes.

## COMPARISON OF THE TIER I AND TIER II SIC CODES USED TO DEFINE KBIS TO THE EQUIVALENT NAICS CODES

In the comparison of the Tier I and Tier II SIC codes used to define KBIs to the equivalent NAICS codes, presented in Appendices A and B, only 5 of the SIC codes are identical to the equivalent NAICS codes and none of the SIC codes are exactly equivalent to two NAICS codes. All of the other SIC codes are either equivalent to part of a NAICS code or are linked to more than one NAICS code. In many cases, the SIC codes are disaggregated into a number of components which are then distributed across a number of NAICS codes and combined with components of other SIC codes into new NAICS codes. In other cases, the SIC code goes completely into the equivalent NAICS code but does not make up the entire NAICS code, which also includes components from other SIC codes.

In essence, the current SIC codes used to define KBIs have been broken down into a finer level of activities that are then recombined into a number of the equivalent NAICS codes that include all activities related to a particular industry. This process provides a more accurate industrial composition for the NAICS codes and removes peripheral activities that may have been included in the SIC codes. As a result, the NAICS codes are more concisely focussed on one industry classification and represent that industry more completely and accurately.

For example, the SIC code E3211 representing the aircraft and aircraft parts industry is largely included in the NAICS code 336410 representing aerospace products and parts manufacturing, with the exception of three components covering aircraft hardware, aircraft fluid pumps and aircraft lighting which were reallocated to three other NAICS codes. Similarly, the SIC code E3359 for other electronic equipment industries was broken down into eight separate activities all of which were reallocated to different NAICS codes, where they were combined with other similar activities. Complete details of the realignment of the Tier I SIC codes into the equivalent NAICS codes are shown in Appendix A; while those for the Tier II SIC codes are presented in Appendix B.

## RECONCILIATION OF THE EQUIVALENT NAICS CODES WITH THE TIER I AND TIER II SIC CODES USED TO DEFINE KBIs

In order to obtain a complete picture of the relationships between the equivalent NAICS codes and the Tier I and Tier II SIC codes used to define KBIs, reconciliation of the NAICS codes with the current SIC codes is provided in Appendix C. In this reconciliation, all components of the equivalent NAICS codes are listed for each NAICS code, including both components transferred from the existing KBI SIC codes and components transferred from other non-KBI SIC codes. This provides a map of where all the components of the existing KBI SIC codes are now located in the equivalent NAICS codes and shows how they have been re-combined into new industrial groupings. Most of the recombining has involved the transfer of the major activity included in the KBI SIC code completely into a similarly-named NAICS code, with additional related activities being added to the NAICS code from other KBI SIC codes.

For example, the NAICS code 334210 covering telephone apparatus manufacturing includes the telecommunications equipment industry component of the KBI SIC code E3351 plus the facsimile machine component of KBI SIC code E3359. Meanwhile, the microwave transmission equipment component of E3351 was transferred to NAICS code 334220 (radio and TV broadcasting and wireless communications equipment manufacturing) and the small computer modems component of E3351 was transferred to NAICS code 334410 (semi-conductor and other electronic component manufacturing).

In addition, a number of the equivalent NAICS codes combine components from KBI SIC codes with components from SIC codes that were not included in the Tier I and Tier II KBI SIC codes. The activities covered in these non-KBI SIC components are related to the KBI SIC code activities in the industry represented by the NAICS code but are generally not considered to have a high KBI content. For example, NAICS code 333310 (commercial and service industry machinery manufacturing) is made up of four components from five different KBI SIC codes along with one component (commercial water heaters) from one non-KBI SIC codes. As a result, although the NAICS code is still made up predominantly of KBI components it also has a non-KBI component. It is the relative weighting of the KBI and non-KBI components that will determine if a NAICS code will or will not be considered for use in defining KBIs.

## NAICS CODES FOR ADVANCED MATERIALS PRODUCERS

In the development of the SIC codes to define KBIs it was found that the advanced materials producer category cut across many SIC codes and was difficult to identify under a manageable number of SIC codes. In fact, 40 firms were identified in this category by Statistics Canada and the Advanced Materials Branch of Industry Canada, which were spread across 25 SIC codes. Unfortunately for confidentiality reasons the names of these firms could not be revealed as part of this analysis and they were excluded from the SIC codes used to define KBIs. At that time, it was hoped that a solution could be found that would provide for inclusion of this category in the SIC codes used to define KBIs when these 25 SIC codes could be correlated to the equivalent NAICS codes.

In comparing the 25 SIC codes covering the firms in the advanced materials category it was found that most of these SIC codes were disaggregated across a number of NAICS codes. As a result, the problem of tracking the few advanced materials firms included under each SIC code to the new NAICS codes became even more difficult and is impossible without knowing the names of the individual firms. This means that the transformation to the NAICS codes, rather than solving this problem, has made it even more difficult as many more codes are now involved. Consequently, this study has not been able to identify NAICS codes that would enable the inclusion of the advanced materials category into the NAICS codes to be used for defining KBIs. This matter will again have to be dealt with by organizations that know the identity of the specific firms in the category and can, therefore, track these firms to the appropriate NAICS codes.

## ANALYSIS OF THE KBI CONTENT OF THE EQUIVALENT NAICS CODES

In Appendix D, the NAICS codes, that include all the components of the existing Tier I and Tier II KBI SIC codes, are analyzed to determine their relative KBI and non-KBI content as a first step in determining the NAICS codes that will be chosen for use in defining KBIs. As part of this analysis, Statistics Canada prepared a breakdown of each NAICS code into KBI and non-KBI components based on employment and number of firms covered in the underlying SIC codes making up each NAICS code. These data, presented in Appendix C, provided an assessment of the relative importance of KBI and non-KBI components in each NAICS code in terms of employment and number of firms involved in each of these types of components. The KBI components analyzed in each NAICS code were based on the original SIC codes used to identify KBIs; while other SIC codes now included in each NAICS code were considered to be the non-KBI components of each NAICS code. No attempt was made by Statistics Canada to define new SIC codes that could be considered as identifiers of KBIs. In order to do this, specialized industrial knowledge is required which is beyond the scope of this study.

Based on Statistics Canada employment and number of firms data, it was determined that, of the total of 108 NAICS codes analyzed, over half, 62 codes, were made up totally of KBI activities; 17 codes had a majority of KBI content; 3 codes had approximately equal KBI and non-KBI content; and 26 codes had a majority of non-KBI content. The NAICS codes considered to have a majority of KBI content involved more employment and firms in their KBI components than in their non-KBI components. The NAICS codes considered to have equal KBI and non-KBI content involved relatively equal employment and numbers of firms in both their KBI and non-KBI components. In the case of NAICS codes considered to have a majority of non-KBI content, employment and numbers of firms in their KBI content components were outweighed significantly by employment and numbers of firms in their the non-KBI content components.

## RECOMMENDED NAICS CODES TO BE USED FOR DEFINING KBIs

In choosing the NAICS codes to be used for defining KBIs the prime criteria was the relative KBI content of the various NAICS codes that contained all of the components of the existing Tier I and Tier II KBI SIC codes. Those codes that contained only components from the existing KBI SIC codes were clearly the first choices for inclusion in the list of NAICS codes to be used for defining KBIs, as they included the vast majority of the KBI content of the existing KBI SIC codes. The codes that had a majority of KBI content were also chosen for defining KBIs as the non-KBI content was relatively insignificant in these codes and was outweighed in both relative size and importance by the KBI content components.

The most difficult codes to decide upon were those with approximately equal KBI and non-KBI content. However, in the case of all of these codes, the KBI content was either judged to outweigh the non-KBI content sufficiently or the non-KBI content was considered to be sufficiently complimentary to the KBI content to warrant including all of them for defining KBIs. The NAICS codes that had a majority of non-KBI content were excluded from the list of codes to be used for defining KBIs, either because their KBI components were relatively insignificant or the number and importance of the non-KBI components far outweighed that of the KBI components, even though some of the KBI components were relatively significant.

The only exception to this approach was in the cases of Pay and Specialty Television and Post-Production and Other Motion Picture and Video Industries, both of which included dominant non-KBI components that appeared to be closely linked to their KBI components and probably should have been disaggregated as KBI components in the original SIC codes. Although these could have been excluded from the list of NAICS KBI codes it seemed appropriate to include them because of the similarities between the KBI and non-KBI activities included under the NAICS codes for these industries.

The 82 recommended NAICS codes to be used for defining KBIs are presented in Table II below.

**Table II**

<b>Recommended NAICS Codes to be Used for Defining KBIs</b>	
NAICS Code	Industry Classification
NAICS Codes Equivalent to Tier I SIC Codes	
325410	Pharmaceutical and Medicine Manufacturing
333310	Commercial and Service Industry Machinery Manufacturing
334110	Computer and Peripheral Equipment Manufacturing

334210	Telephone Apparatus Manufacturing
334220	Radio and Television Broadcasting and Wireless Communications
334290	Other Communications Equipment Manufacturing
334310	Audio and Video Equipment Manufacturing
334410	Semi-Conductor and Other Electronic Component Manufacturing
334511	Navigational and Guidance Instruments Manufacturing
334512	Measuring, Medical and Controlling Devices Manufacturing
335920	Communication and Energy Wire and Cable Manufacturing
336410	Aerospace Products and Parts Manufacturing
511210	Software Publishers
512110	Motion Picture and Video Production
512190	Post-Production and Other Motion Picture and Video Industries
513210	Pay and Specialty Television
513220	Cable and Other Program Distribution
513310	Wired Communications Carriers
513320	Wireless Communications Carriers (Except Satellite)
513330	Telecommunications Resellers
513340	Satellite Communications
513390	Other Telecommunications
514210	Data Processing Services
541360	Geophysical Surveying and Mapping Services
541370	Surveying and Mapping (Except Geophysical) Services
541380	Testing Laboratories
541510	Computer Systems Design and Related Services
541620	Environmental Consulting Services
541690	Other Scientific and Technical Consulting Services
541710	Research and Development in the Physical, Engineering and Life Sciences
<b>NAICS Codes Equivalent to Tier II SIC Codes</b>	



221111	Hydro-Electric Power Generation
221112	Fossil-Fuel Electric Power Generation
221113	Nuclear Power Generation
221119	Other Electric Power Generation
221121	Electric Bulk Power Transmission and Control
221122	Electric Power Distribution
324110	Petroleum Refineries
324121	Asphalt Paving Mixture and Block Manufacturing
324190	Other Petroleum and Coal Products Manufacturing
325110	Petrochemical Manufacturing
325120	Industrial Gas Manufacturing
325130	Synthetic Dye and Pigment Manufacturing
325181	Alkali and Chlorine Manufacturing
325189	All Other Basic Inorganic Chemical Manufacturing
325190	All Other Basic Organic Chemical Manufacturing
325210	Resin and Synthetic Rubber Manufacturing
325313	Chemical Fertilizer (except Potash) Manufacturing
325314	Mixed Fertilizer Manufacturing
325320	Pesticide and Other Agricultural Chemical Manufacturing
325520	Adhesive Manufacturing
325599	All Other Miscellaneous Chemical Product Manufacturing
325910	Printing Ink Manufacturing
325920	Explosives Manufacturing
325991	Custom Compounding of Purchased Resins
325999	All Other Miscellaneous Chemical Product Manufacturing
332991	Ball and Roller Bearing Manufacturing
333110	Agricultural Implement Manufacturing
333120	Construction Machinery Manufacturing

333130	Mining and Oil and Gas Field Machinery Manufacturing
33210	Sawmill and Woodworking Machinery Manufacturing
333220	Rubber and Plastics Industry Machinery Manufacturing
333291	Paper Industry Machinery Manufacturing
333299	All Other Industrial Machinery Manufacturing
333413	Industrial and Commercial Fan and Blower and Air Purification Equipment
333416	Heating Equipment and Commercial Refrigeration Equipment Manufacturing
333611	Turbine and Turbine Generator Sets Units Manufacturing
333619	Other Engine and Power Transmission Equipment Manufacturing
333910	Pump and Compressor Manufacturing
333920	Material Handling Equipment Manufacturing
333990	All Other General-Purpose Machinery Manufacturing
335311	Power Distribution and Specialty Transformers Manufacturing
335312	Motor and Generator Manufacturing
335315	Switchgear and Switchboard, and Relay and Industrial Control Apparatus
336320	Motor Vehicle and Electronic Equipment Manufacturing
486110	Pipeline Transportation of Crude Oil
486210	Pipeline Transportation of Natural Gas
486910	Pipeline Transportation of Refined Petroleum Products
486990	All Other Pipeline Transportation
541310	Architectural Services
541320	Landscape Architectural Services
541330	Engineering Services
541340	Drafting Services

## CONCLUSIONS

The recommended NAICS codes to be used for defining KBIs cover essentially the same industrial classifications and activities as the current Tier I and Tier II SIC codes but have recombined them into more codes that more concisely represent the activities in each of the industry classifications. In effect, the classifications have been disaggregated into more detailed and accurate groupings of activities that cover all activities that should be included in each classification.

## APPENDIX A

### Comparison of Tier I SIC Codes Used to Define KBIs to the Equivalent NAICS Codes

Tier I SIC Codes Used for Defining KBIs Compared to the Equivalent NAICS Codes		
SIC Codes	NAICS Codes	Transferred Activities
· A0239 - Other Services Incidental to Agriculture	· 541710 - Research and Development in the Physical, Engineering and Life Sciences	· Agriculture research and development services
· E3211 - Aircraft and Aircraft Parts Industry	· 332510 - Hardware Manufacturing · 333990 - All Other General-Purpose Machinery Manufacturing · 336320 - Motor Vehicle Electrical and Electronic Equipment Manufacturing · 336410 - Aerospace Products and Parts Manufacturing	· Aircraft Hardware manufacturing · Aircraft fluid power pumps manufacturing · Aircraft lighting equipment manufacturing
· E3341 - Record Players, Radio and TV Receivers Industry	· 334310 - Audio and Video Equipment Manufacturing	· CD players, radio and TV receivers and recording devices manufacturing
· E3351 - Telecommunications Equipment Industry	· 334210 - Telephone Apparatus Manufacturing · 334220 - Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing · 334410 - Semiconductor and Other Electronic Component Manufacturing	· All except facsimile machines manufacturing · Microwave transmission equipment manufacturing · Small computer modems manufacturing
· E3352 - Electronic Parts and Components Industry	· 334220 - Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing · 334410 - Semiconductor and	· Satellite parts and components manufacturing

SIC Codes	NAICS Codes	Transferred Activities
	<ul style="list-style-type: none"> <li>Other Electronic Component Manufacturing</li> <li>· 336320 - Motor Vehicle Electrical and Electronic Equipment Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· All except small computer modems manufacturing</li> <li>· Electronic motor vehicle components manufacturing</li> </ul>
· E3359 - Other Electronic Equipment Industries	<ul style="list-style-type: none"> <li>· 333310 - Commercial and Service Industry Machinery Manufacturing</li> <li>· 333990 - All Other General-Purpose Machinery Manufacturing</li> <li>· 334210 - Telephone Apparatus Manufacturing</li> <li>· 334220 - Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing</li> <li>· 334290 - Other Communications Equipment Manufacturing</li> <li>· 334310 - Audio and Video Equipment Manufacturing</li> <li>· 334511 - Navigational and Guidance Instruments Manufacturing</li> <li>· 334512 - Measuring, Medical and Controlling Devices Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Electronic teaching machines (including flight simulators) manufacturing</li> <li>· Electronic beam and laser welding machines and equipment manufacturing</li> <li>· Facsimile machines manufacturing</li> <li>· Radio and TV broadcasting equipment (including satellite dishes) manufacturing</li> <li>· Alarm apparatus (e.g. security and fire); intercom systems and equipment manufacturing</li> <li>· Microphones, music distribution apparatus, musical instrument amplifiers, and public address systems manufacturing</li> <li>· Radar and sonar equipment manufacturing</li> <li>· Electronic process control equipment manufacturing</li> </ul>
· E3361 - Electronic Computers and Peripheral Equipment	· 334110 - Computer and Peripheral Equipment Manufacturing	· All except point-of-sale (POS) and automated teller (ATM) machines manufacturing
· E3362 - Electronic Office, Store and Business Machine Industry	· 333310 - Commercial and Service Industry Machinery Manufacturing	· Accounting, calculating and adding machines and cash registers manufacturing

SIC Codes	NAICS Codes	Transferred Activities
	<ul style="list-style-type: none"> <li>· 333990 - All Other General-Purpose Machinery Manufacturing</li> <li>· 334110 - Computer and Peripheral Equipment Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Electronic scales and balances (except laboratory) manufacturing</li> <li>· Point-of-sale (POS) and automated teller (ATM) machines manufacturing</li> </ul>
· E3369 - Other Office, Store and Business Machine Manufacturing	<ul style="list-style-type: none"> <li>· 333310 - Commercial and Service Industry Machinery Manufacturing</li> <li>· 333990 - All Other General-Purpose Machinery Manufacturing</li> <li>· 339940 - Office Supplies (except Paper) Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Coin-operated machines; photostatic and blueprint equipment manufacturing</li> <li>· Non-electronic scales and balances manufacturing</li> <li>· Pencil sharpeners, staplers and similar office equipment manufacturing</li> </ul>
· E3381 - Communication and Energy Wire and Cable Industry	<ul style="list-style-type: none"> <li>· 331317 - Aluminum Rolling, Drawing, Extruding and Alloying</li> <li>· 331420 -Copper Rolling, Drawing, Extruding and Alloying</li> <li>· 335920 - Communication and Energy Wire and Cable Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Insulated aluminum electrical wire, made in wire drawing mills</li> <li>· Insulated copper electrical wiring, made in wire drawing mills</li> </ul>
· E3741 - Pharmaceutical and Medicine Industry	<ul style="list-style-type: none"> <li>· 325410 - Pharmaceutical and Medicine Manufacturing</li> <li>· 339110 - Medical Equipment and Supplies Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· All except acetylsalicylic acid manufacturing</li> <li>· Dental impression compounds, adhesives and gels manufacturing</li> </ul>
· E3911 - Indicating and Recording Instruments Industry	<ul style="list-style-type: none"> <li>· 332910 - Metal Valve Manufacturing</li> <li>· 334512 - Measuring, Medical and Controlling Devices Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Solenoid valves manufacturing</li> <li>· Indicating, recording and controlling instruments manufacturing.</li> </ul>
· E3912 - Other Instruments and Related Products	<ul style="list-style-type: none"> <li>· 325999 - All Other Miscellaneous Chemical Product Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Photographic chemicals; sensitized photographic film, plates and paper manufacturing</li> </ul>

SIC Codes	NAICS Codes	Transferred Activities
	<ul style="list-style-type: none"> <li>· 333310 - Commercial and Service Industry Machinery Manufacturing</li> <li>· 334511 - Navigational and Guidance Instruments Manufacturing</li> <li>· 334512 - Measuring, Medical and Controlling Devices Manufacturing</li> <li>· 339110 - Medical Equipment and Supplies Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Optical instruments and lenses; photographic equipment manufacturing</li> <li>· Search, detection, navigation, guidance and similar equipment (except electronic) manufacturing</li> <li>· Professional and scientific instruments, X-ray apparatus and tubes; electronic medical equipment manufacturing</li> <li>· Laboratory equipment; surgical, medical and dental instruments (except electronic); sutures; medical atomizers; sterilizers; iron lungs manufacturing</li> </ul>
· H4814 - Cable Television Industry	<ul style="list-style-type: none"> <li>· 513210 - Pay and Specialty Television</li> <li>· 513220 - Cable and Other Program Distribution</li> </ul>	<ul style="list-style-type: none"> <li>· Pay television service</li> <li>· Cable and direct-to-home satellite television service</li> </ul>
· H4821 - Telecommunications Carriers Industry	<ul style="list-style-type: none"> <li>· 513310 - Wired Telecommunications Carriers</li> <li>· 513320 - Wireless Telecommunications Carriers (except Satellite)</li> <li>· 513330 - Telecommunications Resellers</li> <li>· 513340 - Satellite Telecommunications</li> <li>· 513390 - Other Telecommunications</li> </ul>	<ul style="list-style-type: none"> <li>· All except paging service</li> <li>· Telecommunications services (e.g. satellite tracking, communications telemetry, radar station operation)</li> </ul>

SIC Codes	NAICS Codes	Transferred Activities
<ul style="list-style-type: none"> <li>H4839 - Other Telecommunications Industries</li> </ul>	<ul style="list-style-type: none"> <li>513220 - Cable and Other Program Distribution</li> <li>513320 - Wireless Telecommunications Carriers (except satellite)</li> <li>513390 - Other Telecommunications</li> </ul>	<ul style="list-style-type: none"> <li>Closed-circuit television service</li> <li>Paging service</li> <li>Piped in music</li> </ul>
<ul style="list-style-type: none"> <li>M7721 - Computer Services</li> </ul>	<ul style="list-style-type: none"> <li>511140 - Database and Directory Publishers</li> <li>511210 - Software Publishers</li> <li>514210 - Data Processing Services</li> <li>532420 - Office Machinery and Equipment Rental and Leasing</li> <li>541510 - Computer Systems Design and Related Services</li> </ul>	<ul style="list-style-type: none"> <li>Electronic database publishing</li> <li>Computer rental and leasing service</li> </ul>
<ul style="list-style-type: none"> <li>M7759 - Other Scientific and Technical Services</li> </ul>	<ul style="list-style-type: none"> <li>541320 - Landscape Architectural Services</li> <li>541340 - Drafting Services</li> <li>541360 - Geophysical Surveying and Mapping Services</li> <li>541370 - Surveying and Mapping (except Geophysical) Services</li> <li>541380 - Testing Laboratories</li> <li>541620 - Environmental Consulting Services</li> <li>541690 - Other Scientific and Technical Consulting Services</li> <li>541710 - Research and Development in the Physical,</li> </ul>	<ul style="list-style-type: none"> <li>Land geophysical surveying (e.g. seismic drilling)</li> <li>Land and marine surveying and cartographic services</li> <li>Testing laboratories (e.g. assaying; food testing; mechanical testing; x-ray inspection services)</li> <li>Scientific consulting services (e.g. chemical; geological; security; services)</li> </ul>



SIC Codes	NAICS Codes	Transferred Activities
	<ul style="list-style-type: none"> <li>Engineering and Life Sciences</li> <li>· 541720 - Research and Development in the Social Sciences and Humanities</li> <li>· 541940 - Veterinary Services</li> <li>· 541990 - Other Professional, Scientific and Technical Services</li> </ul>	<ul style="list-style-type: none"> <li>· Physics, engineering, and biological science research and development services</li> <li>· Social science research (commercial) services</li> <li>· Veterinary testing services</li> <li>· Scientific and technical services (e.g. oceanography; weather forecasting; quantity surveying services)</li> </ul>
<ul style="list-style-type: none"> <li>· R9611 - Motion Picture and Video Production</li> </ul>	<ul style="list-style-type: none"> <li>· 512110 - Motion Picture and Video Production</li> <li>· 561310 - Employment Placement Agencies</li> <li>· 711510 - Independent Artists, Writers and Performers</li> </ul>	<ul style="list-style-type: none"> <li>· Motion Picture Casting Agencies</li> <li>· Freelance directors and producers, motion picture and television</li> </ul>
<ul style="list-style-type: none"> <li>· R9619 - Other Motion Picture, Audio and Video Services</li> </ul>	<ul style="list-style-type: none"> <li>· 512190 - Post-Production and Other Motion Picture and Video Industries</li> </ul>	<ul style="list-style-type: none"> <li>· Other motion picture, audio and video services (e.g. video tape and film libraries; motion picture booking agencies)</li> </ul>

## APPENDIX B

### Comparison of Tier II SIC Codes Used to Define KBIs to the Equivalent NAICS Codes

Tier II SIC Codes Used for Defining KBIs Compared to the Equivalent NAICS Codes		
SIC Codes	NAICS Codes	Transferred Activities
· A0231 - Agricultural Management and Consulting Services	· 115110 - Support Activities for Crop Production · 541690 - Other Scientific and Technical Consulting Services	· Farm management service  · Agricultural consulting services
· E3111 - Agricultural Implement Industry	· 332329 - Other Ornamental and Architectural Products Manufacturing · 333110 - Agricultural Implement Manufacturing · 333920 - Material Handling Equipment Manufacturing	· Cattle holders for milking; metal corrals  · All except, horticultural and residential lawn care machinery  · Agricultural conveyers
· E3121 - Commercial Refrigeration Equipment Industry	· 333416 - Heating Equipment and Commercial Refrigeration Manufacturing · 336390 - Other Motor Vehicle Parts Manufacturing	· Commercial refrigeration units, water cooling towers and air conditioning units (except automotive)  · Automotive-type air conditioning equipment
· E3191 - Compressor Pump and Industrial Fan Industry	· 333413 - Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing · 333910 - Pump and Compressor Manufacturing	· Industrial fans and blowers  · All except turbine, measuring and dispensing pumps
· E3192 - Construction, Mining and Handling Machinery	· 332999 - All Other Miscellaneous Fabricated Metal Product Manufacturing · 333120 - Construction Machinery Manufacturing · 333130 - Mining and Oil and Gas Field Machinery	· Metal pallets and skids

SIC Codes	NAICS Codes	Transferred Activities
	<ul style="list-style-type: none"> <li>Manufacturing</li> <li>· 333299 - All Other Industrial Machinery Manufacturing</li> <li>· 333920 - Material Handling Equipment Manufacturing</li> <li>· 336120 - heavy-duty Truck Manufacturing</li> <li>· 336211 - Motor Vehicle Body Manufacturing</li> <li>· 336510 - Railroad Rolling Stock Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· All except mine rail cars</li> <li>· Petroleum refinery machinery</li> <li>All except: agricultural conveyers; industrial hand trucks and tractors, carts and dollies; coffin lowering devices</li> <li>Complete street sweepers, made on own chassis</li> <li>· Street sweepers assembled on purchased chassis</li> <li>· Track laying and tamping equipment</li> </ul>
· E3193 - Sawmill and Woodworking Machinery	<ul style="list-style-type: none"> <li>· 333210 - Sawmill and Woodworking Machinery Manufacturing</li> <li>· 333299 - All Other Industrial Machinery Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Lumber and veneer dryers</li> </ul>
· E3194 - Turbine and Power Transmission Equipment	<ul style="list-style-type: none"> <li>· 333611 - Turbine and Turbine Generator Set Unit Manufacturing</li> <li>· 333619 - Other Engine and Power Transmission Equipment Manufacturing</li> <li>· 333910 - Pump and Compressor Manufacturing</li> <li>· 333990 - All Other General Purpose Machinery Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· All except turbine generator sets</li> <li>· Speed changers, drives and gears; plain bearings</li> <li>· Turbine pumps</li> <li>· Fluid power pumps, motors, cylinders and actuators</li> </ul>
· E3199 - Other Machinery and Equipment Industries	<ul style="list-style-type: none"> <li>· 332991 - Ball and Roller Bearing Manufacturing</li> <li>· 333110 - Agricultural Implement Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Horticultural and residential lawn care</li> </ul>

SIC Codes	NAICS Codes	Transferred Activities
	· 333220 - Rubber and Plastics Industry Machinery Manufacturing	machinery
	· 333291 - Paper Industry Machinery Manufacturing	
	· 333299 - All Other Industrial Machinery Manufacturing	
	· 333310 - Commercial and Service Industry Machinery Manufacturing	· All except petroleum refinery, cement batching plant, and slag mixing machinery; lumber and veneer dryers
	· 333413 - Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing	· Automotive maintenance equipment; commercial laundry equipment; service industry machinery; water treatment equipment; carnival and amusement equipment (except coin operated) · Air purification equipment
	· 333519 - Other Metalworking Machinery Manufacturing	
	· 333619 - Other Engine and Power Transmission Equipment Manufacturing	· Metal cutting and forming machinery; rolling mill machinery; hopper feed devices; rotary index tables; machine tools attachments
	· 333910 - Pump and Compressor Manufacturing	· Outboard motors; thrusters for ships; internal combustion engines (except motor vehicle gasoline)
	· 333920 - Material Handling Equipment Manufacturing	
	· 333990 - All Other General Purpose Machinery Manufacturing	· Measuring and dispensing pumps
		· Industrial hand trucks; carts and dollies; wheelbarrows

SIC Codes	NAICS Codes	Transferred Activities
	<ul style="list-style-type: none"> <li>· 335990 - All Other Electrical Equipment and Component Manufacturing</li> <li>· 336120 - Heavy Duty Truck Manufacturing</li> <li>· 336211 - Motor Vehicle Body Manufacturing</li> <li>· 336310 - Motor Vehicle Gasoline Engine and Engine Parts Manufacturing</li> <li>· 339990 - All Other Miscellaneous Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· General industrial machinery (e.g. packaging machinery, power hand tools, industrial furnaces and ovens, ultrasonic welding machines)</li> <li>· Garage door opener kits</li> <li>· Fire fighting vehicles made on own chassis</li> <li>· Fire fighting vehicles, assembled on purchased chassis</li> <li>· Pistons, piston rings, valves and carburetors (except motor vehicle and aircraft)</li> <li>· Coin operated amusement devices</li> </ul>
· E3371 - Electrical Transformer Industry	· 335311 - Power, Distribution and Specialty Transformers Manufacturing	
· E3372 - Electrical Switchgear and Protective Equipment	<ul style="list-style-type: none"> <li>· 335315 - Switchgear and Switchboard Apparatus Manufacturing</li> <li>· 335990 - All Other Electrical Equipment and Component Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Switchgear and switchboard apparatus</li> <li>· Capacitors (except electronic)</li> </ul>
· E 3379 - Other Electrical Industrial Equipment	<ul style="list-style-type: none"> <li>· 333611 - Turbine and Turbine Generator Set Unit Manufacturing</li> <li>· 333990 - All Other General Purpose Machinery Manufacturing</li> <li>· 335312 - Motor and Generator Manufacturing</li> <li>· 335315 - Switchgear and Switchboard, Relay and</li> </ul>	<ul style="list-style-type: none"> <li>· Turbine generator sets</li> <li>· Arc welding apparatus</li> <li>· Electric motors and generators</li> </ul>

SIC Codes	NAICS Codes	Transferred Activities
	<ul style="list-style-type: none"> <li>Industrial Control Apparatus Manufacturing</li> <li>· 335930 - Wiring Device Manufacturing</li> <li>· 335990 - All Other Electrical Equipment and Component Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Relays and industrial controls</li> <li>· Poleline hardware</li> <li>· Electrical industrial apparatus (e.g. battery chargers)</li> </ul>
· E3611 - Petroleum Products Industry (Except Lubricating Oil and Grease)	· 324110 - Petroleum Refineries (except Lub Oil and Grease)	
· E3612 - Lubricating Oil and Grease Industry	· 324190 - Other Petroleum and Coal Products Manufacturing	· Lubricating oils and greases
· E3699 - Other Petroleum and Coal Products Industries	<ul style="list-style-type: none"> <li>· 324121 - Asphalt Paving Mixture and Block Manufacturing</li> <li>· 324122 - Asphalt Shingle and Coating Material Manufacturing</li> <li>· 324190 - Other Petroleum and Coal Products Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Asphalt roofing cements and coating compounds</li> <li>· All except, lubricating oils and greases; fireplace logs</li> </ul>
· E3711 - Industrial Inorganic Chemicals Industry	<ul style="list-style-type: none"> <li>· 325120 - Industrial Gas Manufacturing</li> <li>· 325130 - Synthetic Dye and Pigment Manufacturing</li> <li>· 325181 - Alkali and Chlorine Manufacturing</li> <li>· 325189 - All Other Basic Inorganic Chemical Manufacturing</li> <li>· 325313 - Chemical Fertilizer (except Potash) Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Inorganic industrial gases</li> <li>· Inorganic dyes and pigments</li> <li>· Ammonia, nitric acid, phosphoric acid and dicalcium phosphate</li> </ul>
· E3712 - Industrial Organic Chemicals	· 325110 - Petrochemical Manufacturing	

SIC Codes	NAICS Codes	Transferred Activities
	<ul style="list-style-type: none"> <li>· 325120 - Industrial Gas Manufacturing</li> <li>· 325130 - Synthetic Dye and Pigment Manufacturing</li> <li>· 325190 - Other Basic Organic Chemical Manufacturing</li> <li>· 325210 - Resin and Synthetic Rubber Manufacturing</li> <li>· 325313 - Chemical Fertilizer (except Potash) Manufacturing</li> <li>· 325410 - Pharma-ceutical and Medicine Manufacturing</li> <li>· 325610 - Soap and Cleaning Compound Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Acetylene and fluorocarbons</li> <li>· Synthetic organic dyes and pigments</li> <li>· Organic basic chemicals</li> <li>· Synthetic rubbers</li> <li>· Non-fertilizer grade urea</li> <li>· Acetylsalicylic acid</li> <li>· Glycerin, crude and refined from fats (except synthetic)</li> </ul>
· E3721 - Chemical Fertilizer and Fertilizer Materials Industry	<ul style="list-style-type: none"> <li>· 325313 - Chemical Fertilizer (except Potash) Manufacturing</li> <li>· 325314 - Mixed Fertilizer Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· All except: ammonia, nitric acid, phosphoric acid, dicalcium phosphate and non-fertilizer grade urea</li> <li>· Mixing potting soil, and mixing manure, sand and compost</li> </ul>
· E3722 - Mixed Fertilizer Industry	<ul style="list-style-type: none"> <li>· 325314 - Mixed Fertilizer Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Chemical fertilizer, mixing</li> </ul>
· E3729 - Other Agricultural Chemical Industries	<ul style="list-style-type: none"> <li>· 325320 - Pesticide and Other Agricultural Chemical Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· All except home and garden herbicides, fungicides, pesticides, rodenticides and insecticides</li> </ul>
· E3731 - Plastic and Synthetic Resin Industry	<ul style="list-style-type: none"> <li>· 325210 - Resin and Synthetic Rubber Manufacturing</li> <li>· 325991 - Custom Compounding of Purchased Resins</li> </ul>	<ul style="list-style-type: none"> <li>· All except synthetic rubbers</li> </ul>
· E3791 - Printing Ink Industry	<ul style="list-style-type: none"> <li>· 325910 - Printing Ink Manufacturing</li> </ul>	

SIC Codes	NAICS Codes	Transferred Activities
	<ul style="list-style-type: none"> <li>· 325999 - All Other Miscellaneous Chemical Product Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· Writing and drawing inks</li> </ul>
<ul style="list-style-type: none"> <li>· E3792 - Adhesives Industry</li> </ul>	<ul style="list-style-type: none"> <li>· 325520 - Adhesive Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· All except gypsum based patching plaster</li> </ul>
<ul style="list-style-type: none"> <li>· E3799 - Other Chemical Products Industries</li> </ul>	<ul style="list-style-type: none"> <li>· 311940 - Seasoning and Dressing Manufacturing</li> <li>· 324122 - Asphalt Shingle and Coating Material Manufacturing</li> <li>· 324190 - Other Petroleum and Coal Products Manufacturing</li> <li>· 325190 - Other Basic Organic Chemical Manufacturing</li> <li>· 325320 - Pesticide and Other Agricultural Chemical Manufacturing</li> <li>· 325520 - Adhesive Manufacturing</li> <li>· 325610 - Soap and Cleaning Compound Manufacturing</li> <li>· 325920 - Explosives Manufacturing</li> <li>· 325999 - All Other Miscellaneous Chemical Product Manufacturing</li> <li>· 327990 - All other Non-Metallic Mineral Product Manufacturing</li> <li>· 332999 - All Other Miscellaneous Fabricated</li> </ul>	<ul style="list-style-type: none"> <li>· Table salt</li> <li>· Roofing pitch, made from purchased coal tar</li> <li>· Fireplace logs</li> <li>· Wood distillates, oils and extracts, coal tar distillation, synthetic perfume materials, artificial sweeteners</li> <li>· Home and garden herbicides, fungicides, pesticides, rodenticides and insecticides</li> <li>· Patching plaster (except gypsum based)</li> <li>· Polishes, waxes and laundry starches</li> <li>· Chemical products (e.g. activated charcoal, automotive chemicals, boiler compounds, defoamers, distilled water, foundry supplies)</li> <li>· Kitty litter</li> </ul>



SIC Codes	NAICS Codes	Transferred Activities
	Metal Product Manufacturing	· Ammunition
· E3913 - Clock and Watch Industry	· 334512 - Measuring, Medical and Controlling Devices Manufacturing	· Clocks, watches and timing devices
· E3914 - Ophthalmic Goods Industry	· 339110 - Medical Equipment and Supplies Manufacturing	· Ophthalmic goods
· G4611 - Natural Gas Pipeline Transport Industry	· 486210 - Pipeline Transportation of Natural Gas · 488990 - Other Support Activities for Transportation	· Liquification and regasification of natural gas for purpose of transport
· G4612 - Crude Oil Pipeline Transport Industry	· 486110 - Pipeline Transportation of Crude Oil	
· G4619 - Other Pipeline Transport Industry	· 486910 - Pipeline Transportation of Refined Petroleum Products · 486990 - All Other Pipeline Transportation	
· H4911 - Electric Power Systems Industry	· 221111 - Hydro- Electric Power Generation · 221112 - Fossil-Fuel Electric Power Generation · 221113 - Nuclear Electric Power Generation · 221119 - Other Electric Power Generation · 221121 - Electric Bulk Power Transmission and Control · 221122 - Electric Power Distribution · 561730 - Landscape Services	· Power line, clearing

SIC Codes	NAICS Codes	Transferred Activities
		services
· M7751 - Offices of Architects	· 541310 - Architectural Services	
· M7752 - Offices of Engineers	· 541330 - Engineering Services	

## APPENDIX C

### Reconciliation of the Equivalent NAICS Codes With Tier I and Tier II SIC Codes Used to Define KBIs

NAICS Codes Reconciled With Tier I and Tier II SIC Codes Used to Define KBIs		
NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
· 541710 - Research and Development in the Physical, Engineering and Life Sciences	· A0239 - Other Services Incidental to Agriculture  · M7759 - Other Scientific and Technical Services (Physics, engineering and biological sciences R & D)  <b>(Employment - 94%) (No. of firms - 1,611)</b>	· B0321 - Services Incidental to Fishing (Fishery R & D)  · P8693 - Health Care Research Agencies  <b>(Employment - 6%) (No. of firms - 209)</b>
· 336410 - Aerospace Products and Parts Manufacturing	· E3211 - Aircraft and Aircraft Parts Industry  <b>(Employment - 100%) (No. of firms - 505)</b>	
· 334310 - Audio and Video Equipment Manufacturing	· E3341 - Record Players, Radio and TV Receivers Industry  · E3359 - Other Electronic Equipment Industries (Microphones, music distribution apparatus, musical instrument amplifiers, public address systems)  <b>(Employment - 100%) (No. of firms - 137)</b>	
· 334210 - Telephone Apparatus Manufacturing	· E3351 - Telecommunication Equipment Industry  · E3359 - Other Electronic Equipment Industries (Facsimile machines)  <b>(Employment - 100%) No. of firms - 136)</b>	

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
· 334410 - Semi-conductor and Other Electronic Component Manufacturing	· E3352 - Electronic Parts and Components Industry  · E3351 - Telecommunications Equipment Industry (Small computer modems)  <b>(Employment - 100%)</b> <b>(No. of firms - 794)</b>	
· 334110 - Computer and Peripheral Equipment Manufacturing	· E3361 - Electronic Computers and Peripheral Equipment  · E3362 - Electronic Office, Store and Business Machine Industry (Point-of-sale (POS) and automated teller (ATM) machines)  <b>(Employment - 100%)</b> <b>(No. of firms - 489)</b>	
· 335920 - Communication and Energy Wire and Cable Manufacturing	· E3381 - Communication and Energy Wire and Cable Industry  <b>(Employment - 100%)</b> <b>No. of firms - 140)</b>	
· 325410 - Pharmaceutical and Medicine Manufacturing	· E3741 - Pharmaceutical and Medicine Industry  · E3712 - Industrial Organic Chemicals (Acetylsalicylic acid)  <b>(Employment - 100%)</b> <b>(No. of firms - 490)</b>	
· 334512 - Measuring, Medical and Controlling Devices Manufacturing	· E3911 - Indicating and Recording Instruments Industry  · E3912 - Other Instruments and Related Products (Professional and scientific instruments; x-ray apparatus and tubes; electronic medical equipment)	· E3051 - Upholstery and Coil Spring Industry (Hair springs and instrument springs)

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	<ul style="list-style-type: none"> <li>· E3913 - Clock and Watch Industry</li> <li>· E3359 - Other Electronic Equipment Industries (Electronic process control equipment)</li> </ul> <p><b>(Employment - 100%)</b> <b>(No. of firms - 1,161)</b></p>	
<ul style="list-style-type: none"> <li>· 333310 - Commercial and Service Industry Machinery Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· E3199 - Other Machinery and Equipment Industry (Automotive maintenance equipment; service industry machinery; carnival and amusement equipment, except coin-operated)</li> <li>· E3359 - Other Electronic Equipment Industries (Electronic teaching machines, including flight simulators)</li> <li>· E3362 - Electronic Office, Store and Business Machine Industry (Accounting, calculating and adding machines and cash registers)</li> <li>· E3369 - Other Office, Store and Business Machine Industry (Coin-operated machines; photostatic and blueprint equipment)</li> <li>· E3912 - Other Instruments and Related Products (Optical instruments and lenses; photographic equipment)</li> </ul> <p><b>(Employment - 100%)</b> <b>(No. of firms - 726)</b></p>	<ul style="list-style-type: none"> <li>· E3071 - Heating Equipment Industry (Commercial water heaters)</li> </ul>

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
		(Employment - N/A) (No. of firms - 1)
<ul style="list-style-type: none"> <li>· 336120 - Heavy Duty Truck Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· E3192 - Construction Mining and Handling Machinery (Complete street sweepers on own chassis)</li> <li>· E3199 - Other Machinery and Equipment Industries (Fire Fighting vehicles on own chassis)</li> </ul> <p>(Employment - 4%) (No. of firms - 13)</p>	<ul style="list-style-type: none"> <li>· E3231 - Motor Vehicle Industry (Tractors for semi-trailers, buses and special purpose vehicles on own chassis)</li> </ul> <p>(Employment - 96%) (No. of firms - 44)</p>
<ul style="list-style-type: none"> <li>· 336211 - Motor Vehicle Body Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· E3192 - Construction, Mining and Handling Machinery ( Street sweepers assembled on purchased chassis)</li> <li>· E 3199 - Other Machinery and Equipment Industries (Fire fighting vehicles assembled on purchased chassis)</li> </ul> <p>(Employment - 10%) (No. of firms - 33)</p>	<ul style="list-style-type: none"> <li>· E3231 - Motor Vehicle Industry (Passenger car bodies)</li> <li>· E3241 - Truck and Bus Body Industry</li> <li>· E3299 - Other Transportation Equipment Industries (Kit cars and components)</li> </ul> <p>(Employment - 90%) (No. of firms - 245)</p>
<ul style="list-style-type: none"> <li>· 336510 - Railroad Rolling Stock Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· E3192 - Construction, Mining and Handling Machinery (Track laying and tamping equipment)</li> </ul> <p>(Employment - 0%) (No. of firms - 8)</p>	<ul style="list-style-type: none"> <li>· E3261 - Railroad Rolling Stock Industry (All except: cast forged wheels; railway hardware, diesel engines and parts; mine-cars)</li> </ul> <p>(Employment - 100%) (No. of firms - 97)</p>
<ul style="list-style-type: none"> <li>· 336390 - Other Motor Vehicle Parts Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· E3121 - Commercial Refrigeration Equipment Industry (Automotive-type air conditioning equipment)</li> </ul>	<ul style="list-style-type: none"> <li>· E3255 - Motor Vehicle Wheel and Brake Industry (Wheel rims and associated rings, weights and spacers)</li> </ul>

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	<p>(Employment - 0%) No. of firms - 4)</p>	<ul style="list-style-type: none"> <li>· E3259 - Other Motor Vehicle Accessories and Parts (Other motor vehicle parts)</li> <li>· I5529 - Other Motor Vehicle Parts and Accessories Wholesale (Automotive parts)</li> </ul> <p>(Employment - 100%) (No. of firms - 293)</p>
<ul style="list-style-type: none"> <li>· 332329 - Other Ornamental and Architectural Products Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· E3111 - Agricultural Implement Industry (Cattle holders for milking; metal corrals)</li> </ul> <p>(Employment - 0%) No. of firms - 9)</p>	<ul style="list-style-type: none"> <li>· E3039 - Other Ornamental and Architectural Metal Products (All except: metal moulding and ornamental trim; and metal partitions)</li> <li>· E3049 - Other Stamped and Pressed Metal Products (Expanded metal lath, stamping)</li> </ul> <p>(Employment - 100%) (No. of firms - 1,187)</p>
<ul style="list-style-type: none"> <li>· 332999 - All Other Miscellaneous Fabricated Metal Product Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· E3192 - Construction, Mining and Handling Machinery (Metal pallets and skids)</li> <li>· E3799 - Other Chemical Products Industries (Ammunition)</li> </ul>	<ul style="list-style-type: none"> <li>· E1719 - Misc. Leather and Allied Products Industries</li> <li>· E2799 - Other Converted Paper Products Industries</li> <li>· E2999 - Other Metal Rolling, Casting and Extruding</li> <li>· E3049 - Other Stamped and Pressed Metal Products</li> <li>· E3061 - Basic Hardware Industry</li> <li>· E3062 - Metal Dies, Moulds and Patterns Industry</li> </ul>

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	<p>(Employment - 9%) (No. of firms - 31)</p>	<ul style="list-style-type: none"> <li>· E3069 - Other Hardware and Cutlery Industries</li> <li>· E3099 - Other Metal Fabricating Industries</li> <li>· E3761 - Soap and Cleaning Compounds Industry</li> </ul> <p>(Employment - 91%) (No. of firms - 761)</p>
<ul style="list-style-type: none"> <li>· 333299 - All Other Industrial Machinery Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· E3192 - Construction, Mining and Handling Machinery (Petroleum refinery machinery)</li> <li>· E3193 - Sawmill and Woodworking Machinery (Lumber and veneer dryers)</li> <li>· E3199 - Other Machinery and Equipment Industries (All except: petroleum refinery, cement batching plant and slag mixing machinery; lumber and veneer dryers)</li> </ul> <p>(Employment - 100%) (No. of firms - 518)</p>	<ul style="list-style-type: none"> <li>· E3321 - Major Appliances - Electric and Non-Electric (Household sewing machines)</li> </ul> <p>(Employment - N/A) (No. of firms - N/A)</p>
<ul style="list-style-type: none"> <li>· 333619 - Other Engine and Power Transmission Equipment Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· E3194 - Turbine and Power Transmission Equipment (Speed changers, drives and gears; plain bearings)</li> <li>· E3199 - Other Machinery and Equipment Industries (Outboard motors; thrusters for ships; internal combustion engines, except motor vehicle gasoline)</li> </ul>	<ul style="list-style-type: none"> <li>· E3081 - Machine Shop Industry (Diesel and gasoline engine rebuilding, except motor vehicle)</li> <li>· E3251 - Motor Vehicle Engine and Engine Parts Industry (Diesel engines and parts for vehicles)</li> <li>· E3261 - Railroad Rolling Stock Industry (Diesel engines and parts for</li> </ul>



NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	<p>(Employment - 59%) (No. of firms - 101)</p>	<p>locomotives)</p> <p>(Employment - 41%) (No. of firms - 86)</p>
<p>335990 - All Other Electrical Equipment and Component Manufacturing</p>	<ul style="list-style-type: none"> <li>· E3199 - Other Machinery and Equipment Industries (Garage door opener kits)</li> <li>· E3372 - Electrical Switchgear and Protective Equipment (Capacitors, except electronic)</li> <li>· E3379 - Other Electrical Industrial Equipment (Electrical industrial apparatus e.g. battery chargers)</li> </ul> <p>(Employment - 39%) (No. of firms - 167)</p>	<ul style="list-style-type: none"> <li>· E3399 - Other Electrical Products Industries (Other electrical equipment and supplies (door chimes; carbon and graphite products)</li> </ul> <p>(Employment - 61%) (No. of firms - 67)</p>
<p>336310 - Motor Vehicle Gasoline Engine and Engine Parts Manufacturing</p>	<ul style="list-style-type: none"> <li>· E3199 - Other Machinery and Equipment Industries (Pistons, piston rings, valves and carburetors, except motor vehicles and aircraft)</li> </ul> <p>(Employment - 2%) (No. of firms - 11)</p>	<ul style="list-style-type: none"> <li>· E3081 - Machine Shop Industry (Motor vehicle gasoline engine rebuilding)</li> <li>· E3251 - Motor Vehicle Engine and Engine Parts Industry (All except: starters, generators, alternators and distributors; diesel engines; power steering pumps)</li> <li>· I5529 - Other Motor Vehicle Parts and Accessories Wholesale (Water pump, fuel pump and carburetor rebuilding)</li> </ul> <p>(Employment - 98%) (No. of firms - 248)</p>
<p>335312 - Motor and Generator Manufacturing</p>	<ul style="list-style-type: none"> <li>· E3379 - Other Electrical Industrial Equipment (Electric motors and generators)</li> </ul>	<ul style="list-style-type: none"> <li>· R9941 - Electric Motor Repair (Armature rewinding)</li> </ul>

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	<b>(Employment - 84%) (No. of firms - 96)</b>	<b>(Employment - 16%) (No. of firms - 150)</b>
· 335930 - Wiring Device Manufacturing	· E3379 - Other Electrical Industrial Equipment (Poleline hardware)  <b>(Employment - 7%) (No. of firms - 8)</b>	· E3392 - Non-Current Carrying Wiring Devices Industry  · E3399 - Other Electrical Products Industries (Current carrying wiring devices)  <b>(Employment - 93%) (No. of firms - 97)</b>
· 513210 - Pay and Specialty Television	· H4814 - Cable Television Industry (Pay television service)  <b>(Employment - 15%) (No. of firms - 32)</b>	· H4812 - Television Broadcasting Industry (Specialty television)  <b>(Employment - 85%) (No. of firms - 19)</b>
· 513220 - Cable and Other Program Distribution	· H4814 - Cable Television Industry (Cable and direct-to-home satellite television)  · H4839 - Other Telecommunications Industries (Closed-circuit television)  <b>(Employment - 100%) (No. of firms - 717)</b>	
· 513310 - Wired Telecommunications Carriers	· H4821 - Telecommunications Carriers Industry (Wired carriers)  <b>(Employment - 100%) (No. of firms - 479)</b>	
· 513320 - Wireless Communications Carriers (except Satellite)	· H4821 - Telecommunications Carriers Industry (Wireless carriers)  · H4839 - Other Telecommunications Industries (Paging service)	

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	<b>(Employment - 100%) (No. of firms - 468)</b>	
· 511210 - Software Publishers	· M7721 - Computer Services (Software publishing)  <b>(Employment - 100%) (No. of firms - 1,053)</b>	
· 514210 - Data Processing Services	· M7721 - Computer Services (Data processing services)  <b>(Employment - 100%) (No. of firms - 763)</b>	
· 541510 - Computer Systems Design and Related Services	· M7721 - Computer Services (Computer professional services e.g. computer programming, computer facility management, computer system design, computer system integration, computer consultants)  <b>(Employment - 100%) (No. of firms - 32,768)</b>	
· 512110 - Motion Picture and Video Production	· R9611 - Motion Picture and Video Production  <b>(Employment - 100%) (No. of firms - 5,633)</b>	
· 512190 - Post-Production and Other Motion Picture and Video Industries	· R9619 - Other Motion Picture, Audio and Video Services  <b>(Employment - 26%) (No. of firms - 511)</b>	· R9613 - Motion Picture Labs and Video Production Facilities (Film and video post-production services, except video cassette reproduction)  <b>(Employment - 74%) (No. of firms - 699)</b>
· 513340 - Satellite Telecommunications	· H4821 - Telecommunications Carriers Industry (Satellite telecommunications, including satellite service resellers)	

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
333990 - All Other General-Purpose Machinery Manufacturing	<p>(Employment - 100%) (No. of firms - 120)</p> <ul style="list-style-type: none"> <li>· E3199 - Other Machinery and Equipment Industries (General industrial machinery)</li> <li>· E3194 - Turbine and Power Transmission Equipment (Fluid power pumps, motors, cylinders and actuators)</li> <li>· E3211 - Aircraft and Aircraft Parts Industry (Aircraft fluid power pumps)</li> <li>· E3359 - Other Electronic Equipment Industries (Electron beam and laser welding machines and equipment)</li> <li>· E3362 - Electronic Office, Store and Business Machine Industry (Electronic scales and balances)</li> <li>· E3369 - Other Office, Store and Business Machine Industry (Non-electronic scales and balances)</li> <li>· E3379 - Other Electrical Industrial Equipment (Arc welding apparatus)</li> </ul> <p>(Employment - 88%) (No. of firms - 933)</p>	<ul style="list-style-type: none"> <li>· E3059 - Other Wire Products (Coated electrodes or cored wire for arc welding)</li> <li>· E3069 - Other Hardware and Cutlery Industries (Gas welding apparatus)</li> <li>· E3071 - Heating Equipment Industry (Fuel oil tanks)</li> <li>· E3099 - Other Metal Fabricating Industries (Industrial bellows)</li> </ul> <p>(Employment - 12%) (No. of firms - 73)</p>
334220 - Radio and Television Broadcasting and Wireless Communications	<ul style="list-style-type: none"> <li>· E3351 - Telecommunications Equipment Industry (Microwave transmission equipment)</li> </ul>	

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	<ul style="list-style-type: none"> <li>· E3352 - Electronic Parts and Components Industry (Satellite parts and components)</li> <li>· E3359 - Other Electronic Equipment Industries (Radio and TV broadcast equipment, including satellite dishes)</li> </ul> <p><b>(Employment - 100%)</b> <b>(No. of firms - 169)</b></p>	
<ul style="list-style-type: none"> <li>· 334290 - Other Communications Equipment Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· E3359 - Other Electronic Equipment Industries (Alarm apparatus, intercom systems and equipment)</li> </ul> <p><b>(Employment - 63%)</b> <b>(No. of firms - 89)</b></p>	<ul style="list-style-type: none"> <li>· E3331 - Lighting Fixture Industry (Street-lighting controlling equipment)</li> <li>· E3399 - Other Electrical Products Industries (Signaling apparatus, street and railway signals)</li> </ul> <p><b>(Employment - 37%)</b> <b>No. of firms - 44)</b></p>
<ul style="list-style-type: none"> <li>· 334511 - Navigational and Guidance Instruments Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>· E3359 - Other Electronic Equipment Industries (Radar and sonar equipment)</li> <li>· E3912 - Other Instruments and Related Products (Search, detection, navigation, and similar equipment, except electronic)</li> </ul> <p><b>(Employment - 100%)</b> <b>(No. of firms - 259)</b></p>	
<ul style="list-style-type: none"> <li>· 511140 - Database and Directory Publishers</li> </ul>	<ul style="list-style-type: none"> <li>· M7721 - Computer Services (Electronic database publishing)</li> </ul>	<ul style="list-style-type: none"> <li>· E2831 - Book Publishing Industry (Directories, publishing only)</li> <li>· E2849 - Other Combined Publishing and Printing (Directories, publishing and printing)</li> <li>· M7799 - Other Business Services (Mailing list)</li> </ul>

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	(Employment - 14%) (No. of firms - 42)	compilers) (Employment - 86%) (No. of firms - 152)
· 541310 - Architectural Services	· M7751 - Offices of Architects  (Employment - 100%) (No. of firms - 4,369)	
· 541330 - Engineering Services	· M7752 - Offices of Engineers  (Employment - 100%) (No. of firms - 18,793)	
· 541320 - Landscape Architectural Services	· M7759 - Other Scientific and Technical Services (Industrial development consulting; golf course design; garden planning)  (Employment - 100%) (No. of firms - 654)	
· 541340 - Drafting Services	· M7759 - Other Scientific and Technical Services (Drafting services)  (Employment - 100%) (No. of firms - 1,430)	
· 541360 - Geophysical Surveying and Mapping Services	· M7759 - Other Scientific and Technical Services (Land Geophysical surveying)  (Employment - 100%) (No. of firms - 1,603)	· G4513 - Non-Scheduled Air Transport, Specialty (Air-borne geophysical surveying)  (Employment - N/A) (No. of firms - N/A)
· 541370 - Surveying and Mapping (except Geophysical) Services	· M7759 - Other Scientific and Technical Services (Land and marine surveying and cartographic services)  (Employment - 99%) (No. of firms - 1,345)	· G4513 - Non-Scheduled Air Transport, Specialty (Air-borne non-geophysical surveying)  (Employment - 1%) (No. of firms - 16)
· 541380 - Testing	· M7759 - Other Scientific and	· A0229 - Other Services

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
Laboratories	Technical Services (Assaying, food testing, mechanical testing, x-ray inspection)  <b>(Employment - 98%)</b> <b>(No. of firms - 5,838)</b>	Incidental to Agricultural Crops (Soil and seed testing)  P8684 - Public Health Laboratories (Testing of environmental health hazards; air, water and soil)  <b>(Employment - 2%)</b> <b>(No. of firms - 51)</b>
541620 - Environmental Consulting Services	M7759 - Other Scientific and Technical Services (Environmental consulting)  <b>(Employment - 100%)</b> <b>(No. of firms - 1,143)</b>	
541690 - Other Scientific and Technical Consulting Services	M7759 - Other Scientific and Technical Services (Scientific consulting services, chemical; geological; security; safety consulting)  A0231 - Agricultural Management and Consulting Services (livestock, breeding, agronomy, agrology consulting)  <b>(Employment - 64%)</b> <b>(No. of firms - 3,559)</b>	M7799 - Other Business Services (Economic consulting)          <b>(Employment - 36%)</b> <b>(No. of firms - N/A)</b>
541720 - Research and Development in the Social Sciences and Humanities	M7759 - Other Scientific and Technical Services (Social science research, commercial)	M7799 - Other Business Services (Economic research)  O8599 - Other Educational Services (Education research)  P8694 - Social Service Planning & Advocacy Agencies (Social science Research, non-commercial)

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	(Employment - 35%) (No. of firms - 138)	(Employment - 65%) (No. of firms - 444)
· 541940 - Veterinary Services	· M7759 - Other Scientific and Technical Services (Veterinary testing)  (Employment - 1%) (No. of firms - 5)	· A0211 - Veterinary Services  (Employment - 99%) (No. of firms - 3,434)
· 541990 - All Other Professional, Scientific and Technical Services	· M7759 - Other Scientific and Technical Services (Oceanography; weather forecasting; quantity surveying)  (Employment - 30%) (No. of firms - 289)	· M7799 - Other Business Services (Arbitration services; trustee in bankruptcy services)  (Employment - 70%) (No. of firms - 573)
· 336320 - Motor Vehicle Electrical and Electronic Equipment Manufacturing	· E3211 - Aircraft and Aircraft Parts Industry (Aircraft lighting equipment)  · E3352 - Electronic Parts and Components Industry (Electronic components, motor vehicle)  (Employment - 80%) (No. of firms - 5)	· E3251 - Motor Vehicle Engine and Engine Parts Industry (Starters, generators, alternators and distributors)  · E3252 - Motor Vehicle Wiring Assemblies Industry  · E3391 - Battery Industry (Battery straps and cables)  · E3399 - Other Electrical Products Industries (Vehicle lighting equipment for boats, ships and trains)  · I5529 - Other Motor Vehicle Parts and Access. Whlse (Electrical automotive parts rebuilding)  (Employment - 20%) (No. of firms - 177)
· 339940 - Office Supplies (except paper) Manufacturing	· E3369 - Other Office, Store and Business Machine Industries (Pencil sharpeners,	· E2692 - Hotel and Restaurant Furniture Industries (Blackboards,



NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	staplers and similar equipment)  <b>(Employment - 6%)</b> <b>(No. of firms - 31)</b>	wood) · E3999 - Other Manufactured Products Industries (Pens, pencils; art goods; marking devices; carbon paper; inked ribbons)  <b>(Employment - 94%)</b> <b>(No. of firms - 235)</b>
· 332510 - Hardware Manufacturing	· E3211 - Aircraft and Aircraft Parts Industry (Aircraft hardware)          <b>(Employment - 1%)</b> <b>(No. of firms - 4)</b>	· E3061 - Basic Hardware Industry (all, except turnbuckles and rope fittings)  · E3069 - Other Hardware and Cutlery Industries (Hand cuffs)  · E3259 - Other Motor Vehicle Access. And Parts (Motor vehicle hardware)  · E3261 - Railroad Rolling Stock Industry (Railway hardware)  <b>(Employment - 99%)</b> <b>(No. of firms - 220)</b>
· 331317 - Aluminum Rolling, Drawing, Extruding and Alloying	· E3381 - Communications and Energy Wire and Cable Industries (Insulated aluminum electrical wire, made in wire-drawing mills)  <b>(Employment - 6%)</b> <b>(No. of firms - 5)</b>	· E2961 - Aluminum Rolling, Casting and Extruding (Rolling, drawing, extruding and alloying purchased aluminum)    <b>(Employment - 94%)</b> <b>(No. of firms - 115)</b>
· 331420 - Copper Rolling, Drawing Extruding and Alloying	· E3381 - Communications and Energy Wire and Cable Industries (Insulated copper electrical wire, made in wire-drawing mills)  <b>(Employment - 47%)</b>	· E2971 - Copper Rollin, Casting and Extruding (All except: casting; forging; grinding castings for the trade)

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	(No. of firms - 14)	(Employment - 53%) (No. of firms - 40)
339110 - Medical Equipment and Supplies Manufacturing	<ul style="list-style-type: none"> <li>· E3741 - Pharmaceutical and Medicine Industry (Dental impressions compounds, adhesives and gels)</li> <li>· E3912 - Other Instruments and Related Products (Laboratory equipment; surgical, medical and dental instruments, except electronic; sutures, medical atomizers; sterilizers; iron lungs)</li> <li>· E3914 - Ophthalmic Goods Industry</li> </ul>	<ul style="list-style-type: none"> <li>· E1599 - Other Rubber Products Industries (Inflatable life preservers and window shades)</li> <li>· E1699 - Other Plastic Industries (Ear stoppers; plastic hard hats; plastic welders' hoods; plastic life preservers)</li> <li>· E1994 - Hygiene Products of Textile Materials (All, except textile diapers; textile sanitary products; dental floss)</li> <li>· E2492 - Occupational Clothing Industry (Clothing designed to protect workers from hazardous situations)</li> <li>· E2493 - Glove Industry (Textile Gloves designed to protect workers from hazardous situations)</li> <li>· E2692 - Hotel and Restaurant Furniture (Laboratory furniture)</li> <li>· E3099 - Other Metal Fabricating Industries (Safety hats of metal)</li> <li>· E3922 - Precious Metal Secondary Refining Industry (Precious metal, dental alloys and amalgams)</li> <li>· E3931 - Sporting Goods Industry (Ear and nose plugs)</li> <li>· E3999 - Other Manufacture Products Industries (Wheel chairs; trusses; surgical</li> </ul>

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	(Employment - 37%) (No. of firms - 603)	belts and supports; artificial limbs; artificial teeth and dentures)  (Employment - 63%) (No. of firms - 1,527)
· 325999 - All Other Miscellaneous Chemical Product Manufacturing	· E3791 - Printing Ink Industry (Writing and drawing inks)  · E3912 - Other Instruments and Related Products (Photographic chemicals; sensitized photographic film, plates and paper)  · E3799 - Other Chemical Products Industries (Miscellaneous chemical products)  (Employment - 100%) (No. of firms - 512)	· E3761 - Soap and Cleaning Compounds industry (Recycling services for degreased solvents)  · E2791 - Coated and Treated Paper Industry (Blueprint and whiteprint sensitized paper)  (Employment - 0%) (No. of firms - 5)
· 332910 - Metal Valve Manufacturing	· E3911 - Indicating and Recording Instruments Industries (Solenoid valves)	· E1521 - Rubber Hose And Belting Industry (Hose and tube assemblies)  · E3069 - Other Hardware and Cutlery Industries (Lawn sprinklers)  · E3071 - Heating Equipment Industry (Steam traps)  · E3091 - Metal Plumbing Fixtures and Fittings Industry (All, except sanitary ware)  · E3092 - Metal Valve Industry  · E3099 - Other Metal Fabricating Industries

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	<p>(Employment - 4%) (No. of firms - 8)</p>	<p>(Fluid power hose and metal tube fittings; hose nozzles and couplings)</p> <p>(Employment - 96%) (No. of firms - 222)</p>
<p>333110 - Agricultural Implement Manufacturing</p>	<ul style="list-style-type: none"> <li>· E3111 - Agricultural Implement Industry (All except: cattle holders for milking; metal corrals; agricultural conveyers)</li> <li>· E3199 - Other Machinery and Equipment Industries (Horticultural and residential lawn care machinery)</li> </ul> <p>(Employment - 100%) (No. of firms - 589)</p>	
<p>333920 - Material Handling Equipment Manufacturing</p>	<ul style="list-style-type: none"> <li>· E2581 - Coffin and Casket Industry (Coffin lowering devices)</li> <li>· E3111 - Agricultural Implement Industry (Agricultural conveyers)</li> <li>· E3192 - Construction Mining and Handling Machinery (Elevators, moving stairways, conveying equipment, industrial cranes, hoists and monorail systems, industrial type trucks)</li> <li>· E3199 - Other Machinery and Equipment Industries (Industrial hand trucks; carts and dollies, wheelbarrows)</li> </ul> <p>(Employment - 100%) (No. of firms - 932)</p>	
<p>333416 - Heating Equipment and Commercial Refrigeration Equipment Manufacturing</p>	<ul style="list-style-type: none"> <li>· E3121 - Commercial Refrigeration Equipment Industry (All except automotive air conditioning equipment)</li> </ul>	<ul style="list-style-type: none"> <li>· E3071 - Heating Equipment Industry (All except: steam traps; commercial water heaters; blowers for warm air)</li> </ul>

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	<p>(Employment - 49%) (No. of firms - 246)</p>	<p>heating; fuel oil tank filters)</p> <ul style="list-style-type: none"> <li>E3321 - Major Appliances (Window-type air conditioners)</li> </ul> <p>(Employment - 51%) (No. of firms - 300)</p>
<ul style="list-style-type: none"> <li>333413 - Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>E3191 - Compressor Pump and Industrial Fan Industry (Industrial fans and blowers)</li> <li>E3199 - Other Machinery and Equipment Industries (Air purification equipment)</li> </ul> <p>(Employment - 95%) (No. of firms - 427)</p>	<ul style="list-style-type: none"> <li>E3071 - Heating Equipment Industry (Blowers for warm air heating equipment)</li> </ul> <p>(Employment - 5%) (No. of firms - N/A)</p>
<ul style="list-style-type: none"> <li>333910 - Pump and Compressor Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>E3191 - Compressor, Pump and Industrial Fan Industry (All except industrial fans and blowers)</li> <li>E3194 - Turbine and Power Transmission Equipment (Turbine pumps)</li> <li>Other Machinery and Equipment Industries (Measuring and dispensing pumps)</li> </ul> <p>(Employment - 92%) (No. of firms - N/A)</p>	
<ul style="list-style-type: none"> <li>333130 - Mining and Oil and Gas Field Machinery Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>E3192 - Construction Mining and Handling Machinery (Mining, oil and gas field machinery)</li> </ul> <p>(Employment - 100%) (No. of firms - 290)</p>	<ul style="list-style-type: none"> <li>E3261 - Railroad Rolling Stock Industry (Mine rail cars)</li> </ul> <p>(Employment - 0%) (No. of firms - 3)</p>
<ul style="list-style-type: none"> <li>333120 - Construction</li> </ul>	<ul style="list-style-type: none"> <li>E3192 - Construction Mining</li> </ul>	

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
Machinery Manufacturing	and Handling Machinery (Construction and forestry machinery)  <b>(Employment - 100%)</b> <b>(No. of firms - 264)</b>	
· 333611 - Turbine and Turbine Generator Set Unit Manufacturing	· E3194 - Turbine and Power Transmission Equipment (All except turbine generator sets)  · E3379 - Other Electrical Industrial Equipment (Turbine generator sets)  <b>(Employment - 100%)</b> <b>(No. of firms - 95)</b>	
· 333291 - Paper Industry Machinery Manufacturing	· E3199 - Other Machinery and Equipment Industries (Pulp and paper machinery)  <b>(Employment - 100%)</b> <b>(No. of firms - 87)</b>	
· 333220 - Rubber and Plastics Industry Machinery Manufacturing	· E3199 - Other Machinery and Equipment Industries (Rubber and plastics machinery)  <b>(Employment - 100%)</b> <b>(No. of firms - 59)</b>	
· 333210 - Sawmill and Woodworking Machinery Manufacturing	· E3193 - Sawmill and Wood working Machinery (All except lumber and veneer dryers)  <b>(Employment - 100%)</b> <b>(No. of firms - 244)</b>	
· 332991 - Ball and Roller Bearing Manufacturing	· E3199 - Other Machinery and Equipment Industries (Ball and roller bearings)  <b>(Employment - 100%)</b> <b>(No. of firms - 30)</b>	
· 333519 - Other Metalworking Machinery Manufacturing	· E3199 - Other Machinery and Equipment Industries (Metal cutting and forming)	· E3062 - Metal Dies, Moulds and Patterns Industry (Metalworking)

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	machinery; rolling mill machinery; hopper feed devices; rotary index tables; machine tool attachments)  <b>(Employment - 34%)</b> <b>(No. of firms - 439)</b>	dies)  E3069 - Other Hardware and Cutlery Industries (Taps and reamers; jigs; stamping punches)  <b>(Employment - 66%)</b> <b>(No. of firms - 678)</b>
335311 - Power, Distribution and Specialty Transformers Manufacturing	E3371 - Electrical Transformer Industry  <b>(Employment - 100%)</b> <b>(No. of firms - 140)</b>	
335315 - Switchgear and Switchboard, and Relay and Industrial Control Apparatus Manufacturing	E3372 - Electrical Switchgear and Protective Equipment (Switchgear and switchboard apparatus)  E3379 - Other Electrical Industrial Equipment (Relays and industrial controls)  <b>(Employment - 100%)</b> <b>(No. of firms - 311)</b>	
324110 - Petroleum Refineries	E3611 - Petroleum Products (Except lub oil and grease)  <b>(Employment - 100%)</b> <b>(No. of firms - 320)</b>	
324190 - Other Petroleum and Coal Products Manufacturing	E3612 - Lubricating Oil and Grease Industry  E3699 - Other Petroleum and Coal Products (All except: paving mixtures and blocks; asphalt roofing cements and coating compounds)  E3799 - Other Chemical Products Industries (Fireplace logs)  <b>(Employment - 100%)</b> <b>(No. of firms - 104)</b>	
324121 - Asphalt Paving	E3699 - Other Petroleum and	

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
Mixture and Block Manufacturing	Coal Products Industries (Asphalt paving mixtures and blocks)  <b>(Employment - 100%) (No. of firms - 139)</b>	
· 324122 - Asphalt Shingle and Coating Material Manufacturing	· E3699 - Other Petroleum and Coal Products Industry (Asphalt roofing cement and coating compounds)  · E3799 - Other Chemical Products Industries (Roofing pitch, made from purchased coal tar)  <b>(Employment - 2%) No. of firms - 12)</b>	· E2721 - Asphalt Roofing Industry   <b>(Employment - 98%) (No. of firms - 32)</b>
· 325110 - Petrochemical Manufacturing	· E3712 - Industrial Organic Chemicals (Acyclic hydrocarbons and cyclic aromatic hydrocarbons)  <b>(Employment - 100%) (No. of firms - 9)</b>	
· 325120 - Industrial Gas Manufacturing	· E3711 - Industrial Inorganic Chemicals (Inorganic industrial gases)  · E3712 - Industrial Organic Chemicals (Acetylene and fluorocarbons)  <b>(Employment - 100%) · (No. of firms - 70)</b>	
· 325130 - Synthetic Dye and Pigment Manufacturing	· E3711 - Industrial Inorganic Chemicals (Inorganic dyes and pigments)  · E3712 - Industrial Organic Chemicals (Synthetic organic dyes and pigments)  <b>(Employment - 100%)</b>	



NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	(No. of firms - 41)	
· 325181 - Alkali and Chlorine Manufacturing	· E3711 - Industrial Inorganic Chemicals (Alkalis and chlorine)  (Employment - 100%) (No. of firms - 18)	
· 325189 - All Other Basic Inorganic Chemical Manufacturing	· E3711 - Industrial Inorganic Chemicals (Inorganic basic chemicals)  (Employment - 100%) (No. of firms - 147)	
· 325190 - Other Basic Organic Chemical Manufacturing	· E3712 - Industrial Organic Chemicals (Organic base chemicals)  · E3799 - Other Chemical Products Industries (Wood distillates; oils and extracts; coal tar distillates; synthetic perfume materials; artificial sweeteners)  (Employment - 100%) (No. of firms - 129)	E1121 - Distillery Products Industry (Ethyl alcohol for non-beverage use)
· 325210 - Resin and Synthetic Rubber Manufacturing	· E3712 - Industrial Organic Chemicals (Synthetic rubbers)  · E3731 - Plastic and Synthetic Resin Industry (All except: custom compounders of purchased resins and producers of resins from recycled plastics)  (Employment - 100%) (No. of firms - 190)	
· 325313 - Chemical Fertilizer (except Potash) Manufacturing	· E3711 - Industrial Inorganic Chemicals (Ammonia, nitric acid, phosphoric acid and dicalcium phosphate)  · E3712 - Industrial Organic	

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	Chemicals (Non-fertilizer grade urea)  · E3721 - Chemical Fertilizer Industry (All except mixing potting soils and mixing manure, sand and compost)  <b>(Employment - 100%)</b> <b>(No. of firms - 70)</b>	
· 325314 - Mixed Fertilizer Manufacturing	· E3721 - Chemical Fertilizer Industry (Mixing potting soils and mixing manure, sand and compost)  · E3722 - Mixed Fertilizer Industry (Chemical fertilizer, mixing)  <b>(Employment - 100%)</b> <b>(No. of firms - 211)</b>	
· 325320 - Pesticide and Other Agricultural Chemical Manufacturing	· E3729 - Other Agricultural Chemical Industries (All except home and garden herbicides, fungicides, pesticides, rodenticides and insecticides)  · E3799 - Other Chemical Products (Home and garden herbicides, fungicides, pesticides, rodenticides and insecticides)  <b>(Employment - 100%)</b> <b>(No. of firms - 46)</b>	
· 325520 - Adhesive Manufacturing	· E3792 - Adhesives Industry  · E3799 - Other Chemical Products Industries (Patching plaster, except gypsum based)  <b>(Employment - 100%)</b> <b>(No. of firms - 98)</b>	
· 325610 - Soap and Cleaning Compound Manufacturing	· E3712 - Industrial Inorganic Chemicals (Glycerin, crude	· E3761 - Soap and Cleaning Compounds Industry (All

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	and refined from fats (except synthetic) · E3799 - Other Chemical Products Industries (Polishes, waxes and laundry starches) <b>(Employment - 15%)</b> <b>(No. of firms - 79)</b>	except soap impregnated steel wool pads and recycling services for degreased solvents) · E3771 - Toilet Preparations Industry (Toothpaste) <b>(Employment - 85%)</b> <b>(No. of firms - 320)</b>
· 325910 - Printing Ink Manufacturing	· E3791 - Printing Ink Industry (All except writing and drawing inks) <b>(Employment - 100%)</b> <b>(No. of firms - 77)</b>	
· 325920 - Explosives Manufacturing	· E3799 - Other Chemical Products Industries (Explosives) <b>(Employment - 100%)</b> <b>(No. of firms - 43)</b>	
· 325991 - Custom Compounding of Purchased Resins	· E3731 - Plastic and Synthetic Resin Industry (Custom compounding of purchased resins made from recycled plastics) <b>(Employment - 100%)</b> <b>(No. of firms - 47)</b>	
· 486110 - Pipeline Transportation of Crude Oil	· G4612 - Crude Oil Pipeline Transport Industry <b>(Employment - 100%)</b> <b>(No. of firms - 100)</b>	
· 486210 - Pipeline Transportation of Natural Gas	· G4611 - Natural Gas Pipeline Transport Industry (All except liquification and regasification of natural gas for purpose of transport) <b>(Employment - 100%)</b> <b>(No. of firms - 104)</b>	
· 486910 - Pipeline Transportation of Refined	· G4619 - Other Pipeline Transport Industries (Refined	

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
Petroleum Products	petroleum products)  (Employment - 100%) (No. of firms - 33)	
486990 - All Other Pipeline Transportation	G4619 - Other Pipeline Transport Industries (Coal and slurry pipeline transportation)  (Employment - 100%) (No. of firms - 37)	
488990 - Other Support Activities for Transportation	G4611 - Natural Gas Pipeline Transport Industry (Liquification and regasification of natural gas for purposes of transport)  (Employment - 1%) (No. of firms - 3)	G4599 - Other Service Industries Incremental to Transportation (Services to transportation)  (Employment - 99%) (No. of firms - 1,360)
221111 - Hydro-Electric Power Generation	H4911 - Electric Power Systems Industry (Hydro-electric power generation)  (Employment - 100%) (No. of firms - 165)	
221112 - Fossil-Fuel Electric Power Generation	H4911 - Electric Power Systems Industry (Generating electricity using thermal processes, except nuclear)  (Employment - 100%) (No. of firms - 43)	
221113 - Nuclear Electric Power Generation	H4911 - Electric Power Systems Industry (Nuclear power)  (Employment - N/A) (No. of firms - N/A)	
221119 - Other Electric Power Generation	H4911 - Electric Power Systems Industry (Solar, wind, photovoltaic, tidal and other electric power generation)	

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	<p>(Employment - 100%) (No. of firms - 21)</p>	
<p>221121 - Electric Bulk Power Transmission and Control</p>	<p>H4911 - Electric Power Systems Industry (Electric power transmission)</p> <p>(Employment - 100%) (No. of firms - 39)</p>	
<p>221122 - Electric Power Distribution</p>	<p>H4911 - Electric Power Systems Industry (Electric power distribution)</p> <p>(Employment - 100%) (No. of firms - 414)</p>	
<p>513330 - Telecommunications Resellers</p>	<p>H4821 - Telecommunication Carriers Industry (Telecommunication resellers, except satellite service resellers)</p> <p>(Employment - 100%) (No. of firms - 275)</p>	
<p>513390 - Other Telecommunications</p>	<p>H4821 - Telecommunication Carriers Industry (Satellite tracking, communications telemetry, radar station operation)</p> <p>H4839 - Other Telecommunication Industries (Piped in music)</p> <p>(Employment - 100%) (No. of firms - 30)</p>	
<p>532420 - Office Machinery and Equipment Rental and Leasing</p>	<p>M7721 - Computer Services (Computer rental and leasing)</p>	<p>K7124 - Financial Leasing Companies (Office machinery and equipment, except computers, financial leasing)</p> <p>R9913 - Office Furniture and Machinery Rental and Leasing</p>

NAICS Codes	KBI SIC Codes Included	Non-KBI SIC Codes Included
	<b>(Employment - 25%) (No. of firms - 161)</b>	<b>(Employment - 75%) (No. of firms - 483)</b>
· 561310 - Employment Placement Agencies	· R9611 - Motion Picture and Video Production (Motion picture casting agencies)  <b>(Employment - 2%) (No. of firms - 55)</b>	· M7711 - Employment Agencies (All, except executive search consulting)  · R9639 - Other Theatrical and Staged Entertainment Services (Theatrical casting agencies)  <b>(Employment - 98%) (No. of firms - 1,598)</b>
· 711510 - Independent Artists, Writers and Performers	· R9611 - Motion Picture and Video Production (Freelance directors and producers, motion pictures and television)  <b>(Employment - 21%) (No. of firms - 560)</b>	· R9631 - Entertainment Production Companies and Artists (Independent performing artists and live-performance producers)  · R9639 - Other Theatrical and Staged Services Entertainment Services (Independent costume and set designers)  · R9999 - Other Services (Independent authors, virtual artists, journalists, broadcaster and lecturers)  <b>(Employment - 79%) (No. of firms - 3,427)</b>

## APPENDIX D

### Analysis of the KBI Content of the NAICS Codes Equivalent to Tier I and Tier II SIC Codes Used to Define KBIs

#### KBI and Non-KBI Content of NAICS Codes Equivalent to Tier I and Tier II SIC Codes Used to Define KBIs

NAICS Code	All KBI	Majority KBI	Equal KBI & Non-KBI	Majority Non-KBI
<b>NAICS Codes Equivalent to Tier I SIC Codes</b>				
541710 - Research & Development in the Physical, Engineering & Life Sciences		X		
336410 - Aerospace Products & Parts Manufacturing	X			
334310 - Audio and Video Equipment Manufacturing	X			
334210 - Telephone Apparatus Manufacturing	X			
334410 - Semi-Conductor and Other Electronic Component Manufacturing	X			
334110 - Computer and Peripheral Equipment Manufacturing	X			
335920 - Communication and Energy Wire and Cable Manufacturing	X			
325410 - Pharmaceutical and Medicine Manufacturing	X			
334512 - Measuring, Medical and Controlling Devices Manufacturing		X		
333310 - Commercial and Service Industry Machinery Manufacturing		X		

NAICS Code	All KBI	Majority KBI	Equal KBI & Non-KBI	Majority Non-KBI
513210 - Pay and Specialty Television			X	
513220 - Cable and Other Program Distribution	X			
513310 - Wired Communications Carriers	X			
513320 - Wireless Communications Carriers (Except Satellite)	X			
511210 - Software Publishers	X			
514210 - Data Processing Services	X			
541510 - Computer Systems Design and Related Services	X			
512110 - Motion Picture and Video Production	X			
512190 - Post- Production and Other Motion Picture and Video Industries			X	
513340 - Satellite Telecommunications	X			
333990 - All Other General-Purpose Machinery Manufacturing		X		
334220 - Radio and Television Broadcasting and Wireless Communications	X			
334290 - Other Communications Equipment Manufacturing		X		
334511 - Navigational and Guidance Instruments Manufacturing	X			



NAICS Code	All KBI	Majority KBI	Equal KBI & Non-KBI	Majority Non-KBI
511140 - Database and Directory Publishers				X
541320 - Landscape Architectural Services	X			
541340 - Drafting Services	X			
541360 - Geophysical Surveying and Mapping Services		X		
541370 - Surveying and Mapping (Except Geophysical) Services		X		
541380 - Testing Laboratories		X		
541620 Environmental Consulting Services	X			
541690 Other Scientific and Technical Consulting Services		X		
541720 - Research and Development in Social Sciences and Humanities				X
541940 - Veterinary Services				X
541990 - All Other Professional, Scientific and Technical Services				X
336320 - Motor Vehicle Electrical and Electronic Equipment Manufacturing		X		
339940 - Office Supplies (Except Paper) Manufacturing			X	
332510 - Hardware Manufacturing				X

NAICS Code	All KBI	Majority KBI	Equal KBI & Non-KBI	Majority Non-KBI
331317 - Aluminum Rolling, Drawing, Extruding and Alloying				X
331420 - Copper Rolling, Drawing, Extruding and Alloying				X
339110 - Medical Equipment and Supplies Manufacturing				X
325999 - All Other Miscellaneous Chemical Product Manufacturing		X		
332910 - Metal Valve Manufacturing				X
513330 - Telecommunications Resellers	X			
513390 - Other Telecommunications	X			
532420 - Office Machinery and Equipment Rental and Leasing				X
561310 - Employment Placement Agencies				X
711510 - Independent Artists, Writers and Performers				X
NAICS Code	All KBI	Majority KBI	Equal KBI & Non-KBI	Majority Non-KBI
NAICS Codes Equivalent to Tier II SIC Codes				
221111 - Hydro-Electric Power Generation	X			
221112 - Fossil-Fuel Electric Power Generation	X			
221113 - Nuclear Power				

NAICS Code	All KBI	Majority KBI	Equal KBI & Non-KBI	Majority Non-KBI
Generation	X			
221119 - Other Electric Power Generation	X			
221121 - Electric Bulk Power Transmission and Control	X			
221122 - Electric Power Distribution	X			
336120 - Heavy Duty Truck Manufacturing				X
336211 - Motor Vehicle Body Manufacturing				X
336510 - Railroad Rolling Stock Manufacturing				X
336390 - Other Motor Vehicle Parts Manufacturing				X
332329 - Other Ornamental and Architectural Products Manufacturing				X
332999 - All Other Miscellaneous Fabricated Metal Product Manufacturing				X
333299 - All Other Industrial Machinery Manufacturing		X		
333619 - Other Engine and Power Transmission Equipment Manufacturing		X		
335990 - All Other Electrical Equipment and Component Manufacturing				X

NAICS Code	All KBI	Majority KBI	Equal KBI & Non-KBI	Majority Non-KBI
336310 - Motor Vehicle Gasoline Engine and Engine Parts Manufacturing				X
335312 - Motor and Generator Manufacturing		X		
335930 - Wiring Device Manufacturing				X
333110 - Agricultural Implement Manufacturing	X			
333920 - Material Handling Equipment Manufacturing	X			
333416 - Heating Equipment and Commercial Refrigeration Equipment Manufacturing			X	
333413 - Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing		X		
333910 - Pump and Compressor Manufacturing	X			
333130 - Mining and Oil and Gas Field Machinery Manufacturing		X		
333120 - Construction Machinery Manufacturing	X			
333611 - Turbine and Turbine Generator Sets Units Manufacturing	X			
333291 - Paper Industry Machinery Manufacturing	X			
333220 - Rubber and Plastics Industry Machinery Manufacturing	X			

NAICS Code	All KBI	Majority KBI	Equal KBI & Non-KBI	Majority Non-KBI
333210 - Sawmill and Woodworking Machinery Manufacturing	X			
332991 Ball and Roller Bearing Manufacturing	X			
333519 - Other Metalworking Machinery Manufacturing				X
335311 - Power Distribution and Specialty Transformers Manufacturing	X			
335315 - Switchgear and Switchboard, and Relay and Industrial Control Apparatus Manufacturing	X			
324110 - Petroleum Refineries	X			
324190 - Other Petroleum and Coal Products Manufacturing	X			
324121 - Asphalt Paving Mixture and Block Manufacturing	X			
324122 - Asphalt Shingle and Coating Material Manufacturing				X
325110 - Petrochemical Manufacturing	X			
325120 - Industrial Gas Manufacturing	X			
325130 - Synthetic Dye and Pigment Manufacturing	X			
325181 - Alkali and Chlorine Manufacturing	X			
325189 - All Other Basic Inorganic Chemical				

NAICS Code	All KBI	Majority KBI	Equal KBI & Non-KBI	Majority Non-KBI
Manufacturing	X			
325190 - Other Basic Organic Chemical Manufacturing	X			
325210 - Resin and Synthetic Rubber Manufacturing	X			
325313 - Chemical Fertilizer (except Potash) Manufacturing	X			
325314 - Mixed Fertilizer Manufacturing	X			
325320 - Pesticide and Other Agricultural Chemical Manufacturing	X			
325520 - Adhesive Manufacturing	X			
325999 - All Other Miscellaneous Chemical Product Manufacturing		X		
325610 - Soap and Cleaning Compound Manufacturing				X
325910 - Printing Ink Manufacturing	X			
325920 - Explosives Manufacturing	X			
325991 Custom Compounding of Purchased Resins	X			
486110 - Pipeline Transportation of Crude Oil	X			
486210 - Pipeline Transportation of Natural Gas	X			

NAICS Code	All KBI	Majority KBI	Equal KBI & Non-KBI	Majority Non-KBI
486910 - Pipeline Transportation of Refined Petroleum Products	X			
486990 - All Other Pipeline Transportation	X			
488990 - Other Support Activities for Transportation				X
541310 - Architectural Services	X			
541330 - Engineering Services	X			

