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OMB Control Number: 0694-0119
Expiration Date: 31 December 2014

DEFENSE INDUSTRIAL BASE ASSESSMENT:
Strategic Materials - Rare Earth Elements - Dysprosium, Erbium, Neodymium, Terbium, Ytterbium

SCOPE OF ASSESSMENT

The U.S. Department of Commerce, Bureau of Industry and Security (BIS), Office of Technology Evaluation (OTE), in coordination with the Defense Logistics Agency (DLA) is conducting an industrial base survey and assessment of the supply chains associated with select critical and strategic materials required for key defense systems and platforms. This particular survey is focused on the Rare Earth Element (REE) industry, specifically the organizations and value chain supporting Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium-related products and services.

The primary goal of this assessment is to assist the defense community in understanding the health and competitiveness of critical material suppliers, and identify specific issues and challenges facing the industry. Consequently, agencies will be better informed to develop targeted planning and acquisition strategies to ensure the availability of the materials supply chain to support critical defense missions and programs.

RESPONSE TO THIS SURVEY IS REQUIRED BY LAW

A response to this survey is required by law (50 U.S.C. app. Sec. 2155). Failure to respond can result in a maximum fine of $10,000, imprisonment of up to one year, or both. Information furnished herewith is deemed confidential and will not be published or disclosed except in accordance with Section 705 of the Defense Production Act of 1950, as amended (50 U.S.C App. Sec. 2155). Section 705 prohibits the publication or disclosure of this information unless the President determines that its withholding is contrary to the national defense. Information will not be shared with any non-government entity, other than in aggregate form. The information will be protected pursuant to the appropriate exemptions from disclosure under the Freedom of Information Act (FOIA), should it be the subject of a FOIA request.

Not withstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number.

BURDEN ESTIMATE AND REQUEST FOR COMMENT

Public reporting burden for this collection of information is estimated to average 14 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information to BIS Information Collection Officer, Room 6883, Bureau of Industry and Security, U.S. Department of Commerce, Washington, D.C. 20230, and to the Office of Management and Budget, Paperwork Reduction Project (OMB Control No. 0694-0119), Washington, D.C. 20503.

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Important Note:
Select drop-down menus in the survey are based on responses to previous sections.

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Section I: General Instructions

A	Your organization is required to complete this survey using an Excel template, which can be downloaded from the U.S. Department of Commerce, Bureau of Industry and Security (BIS) website: www.bis.doc.gov/REESurvey. At your request, survey support staff will e-mail the Excel survey template directly to your organization. For your convenience, a PDF version of the survey is available on the BIS website to aid internal data collection. **Do not submit the PDF version of your organization's response to BIS.**
B	Respond to every question and carefully read the complete instructions for each section and subsection. This will help you distinguish more broad/aggregate REE-related questions versus more REE specific questions dealing strictly with Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium-related products and services. Surveys that are not fully completed will be returned for completion. Use comment boxes to provide any information to supplement responses provided in the survey form. Make sure to record a complete answer in the cell provided, even if the cell does not appear to expand to fit all the information. **Do not copy and paste responses within this survey.** Survey inputs should be made manually, by typing in responses or by use of a drop-down menu. The use of copy and paste can corrupt the survey template. If your survey response is corrupted as a result of copy and paste responses, a new survey will be sent to you for immediate completion.
C	**Do not disclose any classified information in this survey form.**
D	If information is not available from your organization's records in the form requested, you may furnish estimates.
E	Questions related to this survey should be directed to BIS survey staff at **REESurvey@bis.doc.gov** or by calling survey support staff and team lead Jason Bolton at (202) 482-7808. E-mail is the preferred method of contact.
F	Upon completion, review, and certification of this Excel survey, transmit the survey via e-mail attachment to: **REESurvey@bis.doc.gov**. Be sure to retain a copy for your records.
G	For questions related to the overall scope of this industrial base assessment, contact: Brad Botwin, Director, Industrial Studies Office of Technology Evaluation, Room 1093 U.S. Department of Commerce, BIS 1401 Constitution Avenue, NW Washington, DC 20230

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Section II: Definitions

Term	Definition
Alloy	A metal made by combining two or more metallic elements to give, for example, greater strength or resistance to corrosion.
Application	Integration/use of a REE-related material or product into/with a final good or service. This end use or application typically occurs downstream within the REE value chain.
Applied Research	Systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met. This activity includes work leading to the production of useful materials, devices and systems or methods, including design, development, and improvement of prototypes and new processes.
Authorizing Official	Executive officer of the organization or business unit or other individual who has the authority to execute this survey on behalf of the organization.
Basic Research	Systematic, scientific study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and of observable facts.
Capacity Utilization Rate	The percent of an organization's potential output that is actually being used in current production, given the current number of shifts in operation.
Captive/Internal Capability	Capability retained within the organization, typically referred to as captive or internal capability.
Commercial and Government Entity (CAGE) Code	Commercial and Government Entity (CAGE) Code identifies companies doing or wishing to do business with the U.S. Federal Government. The code is used to support mechanized government systems and provides a standardized method of identifying a given facility at a specific location. Find CAGE codes at: http://www.logisticsinformationservice.dla.mil/BINCS/begin_search.aspx
Component	Any raw material, substance, piece, part, software, firmware, labeling, or assembly which is intended to be included as part of the finished, packaged, and labeled device.
Customer	An entity to which an organization directly delivers the product or service that the facility produces. A customer may be another company or another facility owned by the same parent organization. The customer may be the end user for the item but often will be an intermediate link in the supply chain, adding additional value before transferring the item to yet another customer.
Data Universal Numbering System (DUNS)	A nine-digit numbering system that uniquely identifies an individual business. Find DUNS numbers at: http://fedgov.dnb.com/webform
Direct Support	Product/service is provided by your organization directly to the specified customer, not through a third party (for example, prime contractor or distributor).
Distributor/Distribution	An entity that buys noncompeting products or product lines, warehouses them, and resells them to retailers or directly to the end users or customers.

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Electromagnetic Separation	A milling method that separates rare earth bearing minerals from other materials within the mined ore using magnetic principals.
Electro-Transport Processing	REE refining technique also known as "Electron Transfer" in which electrons move from one atom or a molecule to another.
End Use	The final application for which a product or service is intended or to which it is placed. This end use or application typically occurs downstream within the REE value chain.
Exploration	The process of locating ore to mine. This activity is an involved process that frequently utilizes prospecting services and constitutes a preliminary (upstream) step in the REE value chain.
Extraction	Mining or removal of materials and ores from the ground. There are two general types of extraction: sub-surface (deep) and surface.
Facility	A building or the minimum complex of buildings or parts of buildings in which a company operates to serve a particular function, producing revenue and incurring costs for the company. A facility may produce an item of tangible or intangible property or may perform a service. It may encompass a floor or group of floors within a building, a single building, or a group of buildings or structures. Often, a facility is a group of related locations at which company employees work, together constituting a profit-and-loss center for the company, and it may be identified by a unique DUNS number.
Federally Funded Research and Development Center (FFRDC)	Federally Funded Research and Development Centers receive financing from the U.S. federal government and are administered by universities and corporations.
Financing	The providing of capital for REE-related business activities, specifically for the exploration or extraction of REEs.
Finished Product	Any product, or accessory to any product, that emerges from the manufacturing process which is suitable for use or capable of functioning, whether or not it is packaged or labeled.
Floatation Process/Froth Floatation	A process that selectively separates materials that lack an affinity for water (hydrophobic materials) from those that have an affinity for water (hydrophilic materials) using chemicals, compressed air, and water.
Full Time Equivalent (FTE) Employee	Employee who works for 40 hours in a normal work week. Convert part-time personnel to "full-time equivalents" by measuring their weekly work hours as a fraction of 40 hours, where two part-time employees working 20 hours per week would constitute one full-time equivalent.
Fractional Crystallization	A process that separates components of a solution (based on their different solubilities) by evaporating the solution until the component that is least soluble crystalizes and can be removed in its pure form from the solvent mixture.
Gravity Concentration	A process that separates materials of different specific gravity. Through a viscous fluid, this method exploits the variance in the material's gravity-driven movement. For this separation process to be successful, there has to exist a distinct difference between the gangue and the mineral.
Harmonized Tariff Schedule	10 digit codes used by the World Customs Organization in order to identify different products for international trade. The United States HTS code are used when importing goods into the United States.
Hydrometallurgy	A common extraction process that separates rare earth ore from mineral concentrates by using basic or acidic solutions in order to selectively dissolve and precipitate desired metals from a powder form that has been preprocessed. The specific method used depends on the metal that will be recovered, but options include selective precipitation, solvent extraction, leaching, among others.

Indirect Support	Third party (e.g., prime contractor or distributor) product/service sale and/or support to a specified party.
Inorganic Purified Compound	Compounds with no carbon-hydrogen (C-H) bonds. Inorganic Purified Compounds contain no impurities as a result of a refining/purification process.
Ion Exchange	A process in which fluid containing the wanted elements is mixed with elutriant and then poured over a resin. Molecules are separated on the basis of their affinity split between the resin and the elutriant.
Laser Gain	Material used as an amplification medium which transfers part of its energy to the emitted electromagnetic radiation. This material is a laser component that increases strength of the laser.
Manufacturer/Manufacturing	An organization that uses labor and capital to convert raw materials and/or components into finished or semi-finished goods. For the purpose of this survey, manufacturing includes integration and assembly.
Manufacturing Material	Any material or substance used in or used to facilitate the manufacturing process, a concomitant constituent, or a byproduct constituent produced during the manufacturing process, which is present in or on the finished device/product.
Material	A substance, element, or component of which something is made, can be made, or used in performing a particular activity.
Metallurgy	The process of extracting a metal from its ore and then modifying that metal for use. This process produces alloys intended for sale or distribution.
Milling/Beneficiation	Processes that remove the mineral ore from its host material. These processes include: floatation separators, electrical/magnetic separators, and gravity separators.
Mixed Compounds	To include: Concentrate; Chloride; Carbonate; Nitrate; Inorganic Rare-Earth Compounds; Organic Rare-Earth Compounds; Fluoride; Hydroxide; Oxide; Sulfate; and Rare-Earth Garnet.
Mixed Metals	To include: Mischmetal; Rare Earth Silicide; Rare Earth Metal; Mixed Metal Rare Earth Alloy; Didymium; Lanthanum Silicide; and Cerium Silicide.
North American Industry Classification System (NAICS) Code	North American Industry Classification System (NAICS) codes identify the category of product(s) or service(s) provided by your organization. Find NAICS codes at: http://www.census.gov/epcd/www/naics.html
Ore	A naturally occurring rock and/or mineral from which valuable materials are extracted. To include: Bastnaesite; Monazite; Xenotime; Eudialyte; Britholyte; Ancylite; Allanite; Churchite; Limorite; Kaisonite; Fergusonite; and Apatite.
Organic Purified Compounds	Compounds with at least one carbon-hydrogen (C-H) bond, with few exceptions. Organic Purified Compounds contain no impurities as a result of a refining/purification process.
Precious Metals	A classification of metals that have high economic value and/or are considered to be rare. Most commonly gold, silver, platinum, and palladium.
Processing	A complex process that involves the separation and concentration of REEs from the host material/ore, reducing it to a pure metal in order to create a usable REE product.
Product/Process Development	The process of designing/conceptualizing and developing a product prior to its production for customers.

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Purified Metals	Metals that have no impurities as a result of a refining or purification process. To include: Lanthanum; Cerium; Praseodymium; Neodymium; Samarium; Europium; Gadolinium; Terbium; Dysprosium; Holmium; Erbium; Thulium; Ytterbium; Lutetium; Scandium, Yttrium; and Radioactive isotopes.
REE-Related	Maintaining a direct or indirect relationship or affiliation with any of the 17 REEs, to include the support of or participation in the REE value chain (e.g., financing, exploration, extraction, refining, processing, metallurgy, manufacturing, distribution, recycling/reclaim, substitution, research and development, and end use/application).
Primary/Original Source	The country of origin, meaning the country of initial mineral extraction or process step.
Programs	Includes, but is not limited to, acquisition categories (ACATs) and/or major defense acquisition programs (MDAPs).
Rare Earth Element (REE)	A category that includes element numbers 57-71 of the periodic table (Lanthanum, Cerium, Praseodymium, Neodymium, Promethium, Samarium, Europium, Gadolinium, Terbium, Dysprosium, Holmium, Erbium, Thulium, and Ytterbium) as well as Yttrium (39) and Scandium (21).
Recycling/Reuse/Recapture/Reclaim	Safely removing REE and REE-related inputs from finished goods for reuse in new products. For the purposes of this survey, REE recycling, reuse, recapture, and reclaim are used interchangeably.
REE Country of Origin	REE Country of Origin is the country location of the mine and/or initial supplier from which the REE contained in the REE Compound/Material Type was originally sourced.
Refining	Isolating individual REEs from Rare Earth Ores that have already been separated from waste products.
Research and Design	Experimenting with and engineering new parts, chemicals, or processes essential to REE-related products/services that fall in other steps of the REE value chain.
Service	An intangible product (contrasted to a good, which is a tangible product). Services typically cannot be stored or transported, are instantly perishable, and come into existence at the time they are bought and consumed.
Single Source	An organization that is designated as the only accepted source for the supply of parts, components, materials, or services, even though other sources with equivalent technical know-how and production capability may exist.
Small Business	Refer to the Small Business Administration's definitions for size requirements and disadvantaged small business qualifications. For size qualifications refer to: http://www.sba.gov/content/small-business-size-standards. For disadvantaged businesses refer to: http://www.sba.gov/content/disadvantaged-businesses.
Sole Source	An organization that is the only source for the supply of parts, components, materials, or services. No alternative U.S. or non-U.S. based suppliers exist other than the current supplier.
Solvent Extraction	Also known as liquid-liquid extraction, this method separates compounds by utilizing their relative solubilities within two immiscible liquids, usually an organic solvent and water.
STEM	STEM stands for Science, Technology, Engineering and Mathematics.
Sublimation	REE refinement technique in which REEs are transitioned directly from their solid states to a gaseous state which removes physical impurities.
Substitution	The act of replacing one REE or REE-related input with another REE/REE-related or non-REE related input.

Supplier	An entity from which your organization obtains inputs. A supplier may be another firm with which you have a contractual relationship, or it may be another facility owned by the same parent organization. The inputs may be goods or services.
Vacuum Casting	REE refinement technique that utilizes electric currents to melt metal within a vacuum.
United States	The "United States" or "U.S." includes the 50 states, Puerto Rico, the District of Columbia, the island of Guam, the Trust Territories, and the U.S. Virgin Islands.
Unalloyed Metal	A metal in its pure form, not combined with any other substance.
Utilization Rate	The fraction of an organization's potential output that is actually being used in current production, where potential output is based on a 7 day-a-week, 3x8-hour shift production schedule [100% utilization rate equals no downtime with full employment].
Zone Refining	A process to remove impurities within a material through ultra-purification techniques. This process uses pure inert atmosphere or high vacuum in order to prevent impurities from being picked up by the metal from the gaseous atmosphere.

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Section 1.a: Organization Information

A	From the dropdown, select the description that best identifies your organization:		
B	From the dropdown, indicate whether this survey response captures the operations of your whole organization or that of an individual business unit/division. Your organization may provide one corporate-level, consolidated response but all activities related to your Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium-related business lines must be reflected in the response. Note: All data in this survey response must be reported at the same organizational level.		

C	Provide the following information for the level at which your organization is responding to this survey.	
	Company/Organization Name	
	Business Unit/Division Name (if applicable)	
	Street Address	
	City	
	State	
	Country	
	Zip Code	
	Website	
	Phone Number	
	Primary DUNS Code for this Level (nine-digit number with no dashes)	
D	Provide the following information for your parent company, if applicable.	
	Company/Organization Name	
	Street Address	
	City	
	State	
	Country	
	Postal Code/Zip Code	
	Primary DUNS Code for Parent Company (nine-digit number with no dashes)	

E	From the dropdown, indicate whether your organization is publicly traded or privately held?		

F — Point of Contact regarding this survey:

Name	Title	Phone Number	E-mail Address	State

Comments:	

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Section 1.b: Organization Information

A

Identify all the market segments that your organization currently serves. **Populates dropdown in 2.B**

Consumer goods		
Construction/Building		
Electronics		
Batteries		
Lasers		
Magnets		
Optics/Sensors		
Semiconductors		
Other electronics (specify)		
Engineering		
Food/Agriculture		
Healthcare/Medical		
Industrial		
Chemical		
Energy/Power generation		
Flares		
Lamps/Bulbs		
Petrochemical		
Other industrial (specify)		
Marine Technology		
Materials		
Research and Development		
Telecommunication		
Transportation		
Aerospace		
Automotive		
Ships		
Rail		
Other transportation (specify)		
Space		
Launch		
Satellites		
Science		
Other space (specify)		
Other (specify)		

B

Identify all the defense-related market segments that your organization currently serves.

Aircraft		
Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR)		
Electronics		
Energy		
Ground Vehicles		
Missiles		
Research and Development		
Ships (surface and underwater)		
Space		
Other (specify)		

Comments:

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Section 1.c: Organization Information

A

From the list of REE value chain steps, select all applicable to your organization's business lines and/or current capabilities. (see definitions)

Identify as "primary" the single step representing your largest business line, by revenue, and/or current capability.

Then, identify as "additional" any other business lines and/or current capabilities related to the REE value chain.

Lastly, briefly describe both your primary and additional business line and/or current capability selections.

Financing		Processing		Recycling/Reclaim	
Exploration		Metallurgy		Substitution	
Extraction		Manufacturing		Research and Development	
Refining		Distribution		End Use/Application	
"Primary" (description)					
"Additional" (descriptions)					

B

Indicate whether your organization works with any of the identified REEs, whether in a mineral or precursor form (e.g., crystalline, powder, granules, or solution) or in an intermediate or final material application (e.g., alloy, laser gain, magnet, dopant, optical amplifier, etc.).

Cerium		Lanthanum		Scandium	
Dysprosium		Lutetium		Terbium	
Erbium		Neodymium		Thulium	
Europium		Praseodymium		Ytterbium	
Gadolinium		Promethium		Yttrium	
Holmium		Samarium		Other (specify)	
Other (description)					

C

Indicate whether your organization's current business lines and/or current capabilities support any of the identified REE application areas.

Alloys		Fiber		Nuclear	
Battery		Fiber Optics		Phosphors	
Carbon Arc Electrodes		Gain/Laser Medium		Polishing Powders	
Catalysts (e.g., cracking)		Garnet		Thick Films	
Cathode Ray Tubes		Glass Additives		Thin Films	
Cement		Klystrons		Traveling Wave Tubes	
Ceramics		Lamps/Bulbs		Other 1 (specify)	
Coatings		Light-Emitting Diodes		Other 2 (specify)	
Crystals (laser/non-laser)		Magnets and Magnet Powders		Other 3 (specify)	
Dopant		Metallurgical Additives		Other 4 (specify)	
Other 1 (description)					
Other 2 (description)					
Other 3 (description)					
Other 4 (description)					

D

Is your organization considered a small business as defined by the Small Business Administration? (see definitions)

For information on SBA's small business size standards, see: http://www.sba.gov/category/navigation-structure/contracting/contracting-officials/eligibility-size-standards

If yes, specify the type of small business (e.g., minority-owned, 8(a), etc.)

E

Provide the following identification codes, as applicable to your organization. (see definitions)

*Find your Commercial and Government Entity (CAGE) Codes at: http://www.logisticsinformationservice.dla.mil/BINCS/begin_search.aspx

**Find your North American Industry Classification System (NAICS) codes at: http://www.census.gov/epcd/www/naics.html

***Find your Harmonized Tariff Schedule (HTS) codes for REE-related imports and exports at: http://hts.usitc.gov/ or http://www.census.gov/foreign-trade/schedules/b/2014/

Commercial and Government Entity (CAGE) Code(s)*		Primary NAICS (6-digit) Code(s)**		Primary Harmonized Tariff Schedule Code(s) used for REE-related Imports and Exports (10-digit)***	
				Imports	Exports

Comments:	

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Section 1.d: Organization Information

Identify all of your organization's U.S. and non-U.S. facilities with REE-related operations.

Provide the facility's name, location, and primary business line and/or current capability. Then, document the relevant REEs corresponding to each facility's operations.

Lastly, if applicable, specify any changes in REE-related operations that may impact the facility over the next five years.

		Location			Operations							Outlook	
	Facility Name (write-in)	City (write-in)	State	Country	Business Line/Current Capability (primary if multiple)	Dysprosium	Erbium	Neodymium	Terbium	Ytterbium	Other REE	Any operational changes anticipated over the next five years?	If yes, provide a brief explanation (write-in)
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2													
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Section 2.a: Products and Services Related to Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium

Describe all your organization's products and services related to Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium. These include finished items sold to external customers and semi-finished materials/inputs/precursors produced internally for sale and/or related production purposes.

For example, if your organization produces laser diodes but also the Erbium- or Ytterbium-doped laser gain crystal host material used for laser diode manufacture, both the laser diode and the laser media need be reported.

For each product/service you provide, record the Product/Service Name, whether a Product or Service, Type of Product/Service, and if you are a Sole Source. (see definitions)

Then, identify the relevant REE within each reported Product/Service, the REE Ore/Compound/Material Type (Ore, Mixed Compound, Inorganic Purified Compound, Organic Purified Compound, Purified Metal, Unknown, etc.) and the REE Refinement/Production Method, if applicable. (see definitions)

Note: If more than 30 REE-related products/services are offered by your organization, provide either a representative sample or the 30 most significant by revenue contribution.

	Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium-related Product/Service											
	Product/Service Name (write-in)	Product or Service	Type of Product/Service	Sole Source	Dysprosium	Erbium	Neodymium	Terbium	Ytterbium	Other REE	REE Ore/Compound/ Material Type (primary if multiple)	REE Refinement/ Production Method (primary if multiple)
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Section 2.b: Products and Services Related to Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium *continued*

Describe all your organization's products and services related to Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium by both End Use and Production and/or Distribution.

For each product/service indicate Sector End Use, Market Segment Served, Material Application, and provide a written description of End Use/Application.

Lastly, if applicable, provide the Average Annual and Maximum Annual Product Production and/or Distribution in both Number of Units and Kilograms. If figures are typically maintained in either Number of Units or Kilograms, and not both, either measurement is acceptable.

Note: Maximum Annual Production and/or Distribution assumes current capacity with no additional investments in property, plant, or equipment (PP&E) nor significant increases in personnel.

	Erbium, Neodymium, Terbium, and Ytterbium-Related Product/Service		End Use of Product/Service				Product Production and/or Distribution			
							Average Annual, since 2012		Maximum Annual	
	Product/Service Name **Populated from 2.A**	Type of Product/Service **Populated from 2.A**	Sector End Use (primary if multiple)	Market Segment Served (primary if multiple) **Populated from 1.B.a**	Material Application (primary if multiple) **Populated from 1.C.c**	End Use/Application Description (write-in)	Number of Units (write-in)	in Kilograms (write-in)	Number of Units (write-in)	In Kilograms (write-in)
1										
2										
3										
4										
5										
6										
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Section 3.a: Suppliers for Business Lines Related to Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium

Describe your organization's suppliers and inputs supporting your Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium-related business lines. Data should correspond to supplier procurements made since 2012.

Record the External Supplier's Name, Input Type, REE Ore/Compound/Material Type (Ore, Mixed Compound, Inorganic Purified Compound, Organic Purified Compound, Purified Metal, Unknown, etc.), and Input Description.

Then, provide up to five Dysprosium, Erbium, Neodymium, Terbium, and/or Ytterbium-related Products or Services associated with the reported input.

Note: Do not report internal, "same name" suppliers.
Note: If an individual supplier provides multiple inputs and/or supports more than five products or services, record the supplier name and corresponding information in an additional line.
Note: If more than 20 suppliers are used by your organization to support said products or services, provide either a representative sample or the 20 most significant by cost or value add.

	Supplier Name and Input Information				Product/Service Related to Input				
	External Supplier Name	Input Type	REE Ore/Compound/ Material Type (primary if multiple)	Input Description (write-in)	Product/Service 1 **Populated from 2.A**	Product/Service 2 **Populated from 2.A**	Product/Service 3 **Populated from 2.A**	Product/Service 4 **Populated from 2.A**	Product/Service 5 **Populated from 2.A**
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

Comments:	

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Section 3.b: Suppliers for Business Lines Related to Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium *continued*

Describe your organization's suppliers and inputs supporting your Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium-related business lines. Data should correspond to supplier procurements made since 2012.

Record the supplier's State and Country of location, REE Country of Origin, if known, and Supplier Type. (see definitions)

Then, indicate whether the supplier is a Single/Sole Source and if an Alternative Supplier is available.

Note: REE Country of Origin is the country location of the mine and/or initial supplier from which the REE contained in the REE Compound/Material Type was originally sourced. Leave blank if unknown.

	Supplier Name and Input Information **Populated from 3.A**				Additional Supplier Information					
	External Supplier Name	Input Type	REE Ore/Compound/ Material Type	Input Description (write-in)	Supplier State	Supplier Country	REE Country of Origin (primary if multiple)	Supplier Type	Single/Sole Source	Alternative Supplier
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

Comments:

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Section 3.c: Inventory of Inputs Supporting Business Lines Related to Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium

Record the inventories of inputs corresponding to your organization's Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium-related business lines.

By Input Type and/or REE Compound/Material Type currently maintained in inventory, record the Number of Weeks of Inventory Currently Maintained, Number of Weeks Current Inventory would Last if Operating at 100% Capacity Utilization Rate, and Number of Weeks Required to Return Inventory to Current Levels if Suddenly Exhausted.

Then, indicate whether or not a Supply Disruption (since 2012) has occurred for each reported input.

Note: The Number of Weeks Required to Return Inventory to Current Levels if Suddenly Exhausted would occur at normal market prices and without preferential access to material.

	Input Information **Populated from 3.A**			Inventory Levels (in weeks)			Supply Disruption	
	Input Type	REE Ore/Compound/ Material Type	Input Description	Number of Weeks of Inventory Currently Maintained	Number of Weeks Current Inventory would Last if Operating at 100% Capacity Utilization Rate	Number of Weeks Required to Return Inventory to Current Levels if Suddenly Exhausted	Supply Disruption? (since 2012)	If yes, provide a brief description. (write-in)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

Comments:	

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Section 3.d: Inputs and Sourcing of Materials

A | Does your organization utilize any of the identified materials in support of its Dysprosium, Erbium, Neodymium, Terbium, and/or Ytterbium-related business lines? If no, proceed to Section 4.

B

If yes, indicate whether or not each critical material supports your REE or Non-REE-Related business lines, in addition to your specific Dysprosium, Erbium, Neodymium, Terbium, Ytterbium and/or Other REE-related business lines.

Then, for each material indicate if you are Concerned about Material's Availability to Support Ongoing Operations and whether or not Supply Disruption (since 2012) has occurred.

Finally, identify both the Type and Location of the material's Direct/Immediate Source while also declaring the Primary/Original Source. (see definitions)

Material	Operational Use							Sourcing Problems		Direct/Immediate Source		Primary/Original Source (country)
	Supports REE or Non-REE-Related Business Lines?	Dysprosium	Erbium	Neodymium	Terbium	Ytterbium	Other REE	Concerned about Material's Availability to Support Ongoing Operations?	Supply Disruption? (since 2012)	Type	Location (country)	
Aluminum												
Ceramics (specify)												
Composites (specify)												
Cobalt												
Copper												
Gallium												
Gold												
Iron												
Lead												
Lanthanides (specify)												
Lithium												
Magnesium												
Molybdenum												
Nickel												
Niobium												
Palladium												
Platinum												
Rare Earth Elements (REE)												
Silicon												
Silver												
Steel - Alloys (specify)												
Steel - Carbon (specify)												
Steel - Stainless (specify)												
Steel - Tool (specify)												
Tantalum												
Tin												
Titanium												
Tungsten												
Vanadium												
Zinc												
Zirconium												
Other 1 (specify)												
Other 2 (specify)												
Other 3 (specify)												

C | Describe your concerns over the availability of such critical materials as well as any steps your organization has recently taken to minimize future disruptions and/or risks to supply.

Comments:

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Section 4.a: U.S. Government Defense and Non-Defense Participation

Describe your organization's dependency on U.S. Government defense and non-defense demand for the sustainment of its REE-related products and services, to include Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium-related products and services.

A

How vulnerable are your REE-related business lines to variability in:	Type of Business Line: REE-related	Type of Business Line: Non-REE-related	Comments
U.S. Government defense demand?			
U.S. Government non-defense demand?			
Non-government demand?			

If there is a sudden or steep decline in U.S. Government demand for REE-related products and/or services, can your organization readily convert its relevant government business lines to commercial ones?	
Estimate the percentage of your current U.S. Government REE-related products and/or services that are readily compatible with non-government business lines.	

B

Does your organization consider itself dependent upon U.S. Government programs for its continued viability? Explain your response.	
Explanation:	
If your organization's REE-related business lines support Department of Defense (DOD) programs, whether directly or indirectly, are those business lines integrated or separate from your commercial-based operations? Explain your response.	
Explanation:	
Is your organization capable of simultaneously supporting DOD and commercial requirements? Explain your response.	
Explanation:	

C

Identify the impacts that a sudden decrease or increase in U.S. Government demand, whether direct or indirect, for your REE-related business lines would have on your organization.

Business Operation	Impact of decreased U.S. Government demand for your organization's REE-related business lines	Impact of increased U.S. Government demand for your organization's REE-related business lines
Capital expenditures		
Number of key REE-related production machinery/equipment		
Number of personnel with key skills		
Number of REE-related product/service lines		
Organization viability or solvency		
Product/service development cost		
Product/service price		
Pursuit of non-U.S. customers		
Pursuit of REE-related operations in non-U.S. locations		
Pursuit of U.S. Government contracts		
Pursuit of U.S.-located customers		
Research and Development expenditures		
Sales-based revenue		
Other 1 (specify)		
Other 2 (specify)		

D

From 2010-2014, has your organization received a rated order (DO or DX) from a U.S. Government agency and/or affiliated contractor? A rated order means a prime contract, a subcontract, or a purchase order in support of an approved program issued in accordance with the provisions of the Defense Priorities and Allocation System (DPAS) regulations (15 CFR part 700).	

Comments:	

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Section 4.b: U.S. Government Defense and Non-Defense Participation

A | Since 2010, has your organization directly or indirectly supported any U.S. Government agencies or programs in any capacity? If directly, indirectly, or both, complete subsections B and C. If no, proceed to Section 5. |

B | From the list of U.S. Government agencies, select those your organization has supported since 2010. If you support an additional agency, identify said agency in "Other."

U.S. Air Force		U.S. Intelligence Community (e.g., CIA, NGA, NRO, NSA)		Department of Energy (DOE)		
U.S. Army		Missile Defense Agency (MDA)		Defense Logistics Agency (DLA)		
U.S. Marine Corps		National Aeronautics and Space Administration (NASA)		Other Agency 1		
U.S. Navy		National Oceanic and Atmospheric Administration (NOAA)		Other Agency 2		

C | Identify the specific U.S. Government Programs/Systems your organization has supported since 2010 with its Dysprosium, Erbium, Neodymium, Terbium, and/or Ytterbium-related business lines.

Record both the Government Program/System Name and the corresponding Agency Name. Make sure to spell out all acronyms, when applicable.

Then, provide up to six products/services affiliated with your Dysprosium, Erbium, Neodymium, Terbium, and/or Ytterbium-related business lines.

Note: If unsure of the specific U.S. Government Programs/System Name or Agency Name, provide as much information as possible.

	Government Program/System Name (write-in)	Agency Name **Populated from 4.b.B**	Product/Service 1 **Populated from 2.A**	Product/Service 2 **Populated from 2.A**	Product/Service 3 **Populated from 2.A**	Product/Service 4 **Populated from 2.A**	Product/Service 5 **Populated from 2.A**	Product/Service 6 **Populated from 2.A**
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
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18								
19								
20								

Comments:

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Section 5.a: Challenges and Organizational Outlook - Issues

A

Identify the issues impacting your organization's REE-related business lines, indicating whether currently, in the future, or both, to include its Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium-related business lines.

Then, rank the top five issues (1 = Most Important; 5 = Least Important) by writing in numbers 1-5 next to only the leading five issues. Each number should be recorded only once and placed next to a "Current," "Future," or "Both" response.

Lastly, provide an explanation of your top five issues.

	Type of Issue	Impact?	Rank Top 5	Explanation
1	Aging equipment, facilities, or infrastructure			
2	Availability of capital			
3	Domestic competition			
4	Environmental regulations/remediation			
5	Export controls/ITAR			
6	Foreign competition			
7	Government purchasing volatility			
8	Government regulatory burden			
9	Healthcare			
10	Illegal rare earth mining/smuggling			
11	Labor availability			
12	Labor costs			
13	Material price volatility			
14	New production methods			
15	Non-U.S. material availability			
16	Non-U.S. supplier reliability			
17	Patent infringement			
18	Pension costs			
19	Proximity to customers			
20	Proximity to suppliers			
21	Reduction in U.S. government demand			
22	REE design-out/substitution			
23	Qualifications/certifications			
24	Quality of inputs			
25	Research and development costs			
26	Taxes			
27	U.S. material availability			
28	U.S. supplier reliability			
29	Worker/skills retention			
30	Other (specify)			

Comments:	

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Section 5.b: Challenges and Organizational Outlook - Competitiveness

Describe your organization's competitiveness and any challenges to the sustainment of its REE-related business lines, to include its Dysprosium, Erbium, Neodymium, Terbium, and/or Ytterbium-related business lines.

A — Identify key actions your organization has taken and is planning to take to improve its overall competitiveness. Explain your selections.

		Actions Taken Since 2010	
		Action	Explanation
1	i		
	ii		
	iii		

		Actions Planned for Next Five Years	
		Action	Explanation
2	i		
	ii		
	iii		

B

1	Does your organization face any supply chain constraints related to the procurement of REEs or REE-related product/services?	
	If yes, do you foresee such supply chain constraints affecting your organization's future operations? Explain your responses.	
	Explanation:	
2	Do you anticipate that an increase in the supply or ready availability of U.S. mined REEs will make your organization more competitive in the marketplace? Explain your response.	
	Explanation:	
3	If both domestic and non-U.S. aggregate demand for REEs and REE-related products/services increases, will your organization benefit? Explain your response.	
	Explanation:	

C — How would the following scenarios affect the sustainment of your organization's REE-related business lines? Rank 1 -5 the impact of each scenario on your ability to maintain your REE-related business lines (1 = Negative Long-Term Impact; 5 = Positive Long-Term Impact). Explain your selections.

1	Elimination/softening by China of its export quota restrictions regarding REEs and REE-related products:		Explanation:	
2	Imposition of more stringent production controls on China's REE-related mining practices:		Explanation:	
3	Prosecution of companies distributing and/or using illegally produced REE-related materials:		Explanation:	
4	Increase in both U.S. imports and overall supply of REEs and REE-related products:		Explanation:	
5	Decrease in the number of U.S. located suppliers for REEs and REE-related products:		Explanation:	
6	Rules/regulations adopted by the U.S. Government requiring industry's recycling of REEs and REE-related products:		Explanation:	
7	Increase by the U.S. Government of both type and volume of REEs and REE-related products identified for stockpiling:		Explanation:	

D — For application in your organization's current operations, indicate whether you expect an Increase, Decrease, or No Change in the availability of each REE in the next 12-24 months.

Cerium		Lanthanum		Scandium	
Dysprosium		Lutetium		Terbium	
Erbium		Neodymium		Thulium	
Europium		Praseodymium		Ytterbium	
Gadolinium		Promethium		Yttrium	
Holmium		Samarium		Other	
Other (description)					

Comments:

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Section 5.c: Challenges and Organizational Outlook - Recycling

Recycling and Use of Recycled Rare Earth Elements

The safe removal of REE and REE-related inputs from finished goods for reuse in new products, also known as recycling, is a process of increasing relevance in the REE supply chain.

For the purposes of this survey, "recycle" includes reuse, recapture, and reclaim.

Respond to the following question concerning your organization's REE-related recycling practices.

A	1	Does your organization recycle REEs or REE-related products?	
	2	If no, does your organization plan to recycle REEs or REE-related products in the next 5 years?	
	3	If no, identify the primary constraint prohibiting your organization's recycling of REEs or REE-related products. Explain your selection.	
		Explanation:	
	4	If no, indicate the feasibility of recycling REEs or REE-related products. Rank feasibility 1-5, where 1 = Feasible/Evident; 5 = Impossible/Not Applicable.	

Use of Recycled Rare Earth Elements

B	1	Does your organization use recycled REEs or REE-related products within your operations?	
	2	If no, does your organization plan to use recycled REEs or REE-related products in the next 5 years?	
	3	If no, identify the primary constraint prohibiting your organization's use of recycled REEs or REE-related products. Explain your selection.	
		Explanation:	
	4	If no, indicate the feasibility of using recycled REEs or REE-related products in your current business lines. Rank feasibility 1-5, where 1 = Feasible/Evident; 5 = Impossible/Not Applicable.	

Rare Earth Element Recycling Processes

Describe the REE-related recycling processes adopted by your organization.

C	1	By volume of recycled material, what is the primary recycling technique or process adopted (or planned) by your organization for recycling REEs or REE-related products? Explain your selection.	
		Explanation:	
	2	Has (or will) the recycling of REEs or REE-related products improve your organization's overall competiveness, e.g., improved product quality or performance, increased margins, reduced lead times, etc.? Explain your response.	
		Explanation:	

Comments:	

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Section 5.d: Challenges and Organizational Outlook - Substitution

Substitution of Rare Earth Elements

The act of replacing a REE or REE-related input with another input, also known as substitution, is a process of increasing relevance in the REE supply chain.

Respond to the following questions concerning REE substitution practices and their application to your organization's REE-related business lines, to include its Dysprosium, Erbium, Neodymium, Terbium, and/or Ytterbium-related business lines.

A	1	Does your organization substitute REEs with different REEs or non-REE materials?	
	2	If no, does your organization plan to substitute REEs with different REEs or non-REE materials in the next 5 years?	
	3	If no, identify the primary constraint prohibiting your organization's substitution of REEs with different REEs or non-REE materials. Explain your selection.	
		Explanation:	
	4	If no, indicate the feasibility of REE substitution at your organization. Rank feasibility 1-5, where 1 = Feasible/Evident; 5 = Impossible/Not Applicable.	

Use of REE Substitutes/Related Products

B	1	Does your organization use products containing REE substitutes?	
	2	If no, does your organization plan to use products containing REE substitutes in the next 5 years?	
	3	If no, identify the primary constraint prohibiting your organization's use of products containing REE substitutes. Explain your selection.	
		Explanation:	
	4	If no, indicate the feasibility of using REE substitute or products containing REE substitutes in your current business lines. Rank feasibility 1-5, where 1 = Feasible/Evident; 5 = Impossible/Not Applicable.	

Rare Earth Element Substitution Processes

Describe the REE-related substitution processes adopted by your organization.

C	1	By volume of material or product subject to REE substitution, what is the primary substitution technique or process used (or planned) by your organization? Explain your selection.	
		Explanation:	
	2	Has (or will) the substitution of REEs improve your organization's overall competiveness, e.g., improved product quality or performance, increased margins, reduced lead times, etc.? Explain your response.	
		Explanation:	

Comments:	

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Section 6.a: Imports of Dysprosium, Erbium, Neodymium, Terbium, Ytterbium, and Other REE-related Material

A

Since 2010, has your organization imported into the United States any Dysprosium, Erbium, Neodymium, Terbium, Ytterbium, and/or Other REE-related Ore, Mixed Compound, Inorganic Purified Compound, Organic Purified Compound, Mixed Metal, and/or Purified Metal? (see definitions)

If no, continue to Section 6.b. If yes, complete sub-sections B and C.

B

Recorded data should reflect only United States-based imports of Dysprosium, Erbium, Neodymium, Terbium, Ytterbium, and/or Other REE-related Ore, Mixed Compound, Inorganic Purified Compound, Organic Purified Compound, Mixed Metal, and/or Purified Metal transacted from 2010 through 2013.

First, select the countries from which your organization has imported Dysprosium, Erbium, Neodymium, Terbium, Ytterbium, and/or Other REE-related material.

Then, identify the REE Ore/Compound/Material Type imported from each Country. If multiple Ores/Compounds/Material Types are imported from a single country, record all requisite information in an additional line.

Lastly, by Country and corresponding REE Ore/Compound/Material Type, record the Total Quantity Imported between 2010-2013, Quantity Unit of Measure, and Total Value Imported (in USD Thousands) between 2010-2013.

Country	REE Imported						REE Ore/Compound/ Material Type	Total Quantity Imported in 2010-2013 (write-in)	Quantity Unit of Measure: Ounces, Pounds, Tons, Grams, Kilograms, or Metric Tons	Total Kilograms Imported in 2010-2013 (auto-calculated)	Total Value Imported in 2010-2013 in $ Thousands $12,000.00 = survey input of $12
	Dysprosium	Erbium	Neodymium	Terbium	Ytterbium	Other REE					
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	

C

1. Does your organization anticipate increasing its imports of Dysprosium, Erbium, Neodymium, Terbium, Ytterbium and/or Other REE-related material over the next 5 years?
2. If yes, does your organization anticipate any challenges to increasing its imports of Dysprosium, Erbium, Neodymium, Terbium, Ytterbium and/or Other REE-related material?
3. Explain current and/or future challenges your organization faces when importing Dysprosium, Erbium, Neodymium, Terbium, Ytterbium and/or Other REE-related material.

Explanation:

Comments:

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Section 6.b: Exports of Dysprosium, Erbium, Neodymium, Terbium, Ytterbium, and Other REE-related Material

A

Since 2010, has your organization exported from the United States any Dysprosium, Erbium, Neodymium, Terbium, Ytterbium, and/or Other REE-related Ore, Mixed Compound, Inorganic Purified Compound, Organic Purified Compound, Mixed Metal, and/or Purified Metal? (see definitions)

If no, continue to Section 7. If yes, complete sub-sections B and C.

B

Recorded data should reflect only United States-based exports of Dysprosium, Erbium, Neodymium, Terbium, Ytterbium, and/or Other REE-related Ore, Mixed Compound, Inorganic Purified Compound, Organic Purified Compound, Mixed Metal, and/or Purified Metal transacted from 2010 through 2013.

First, select the countries in receipt of your organization's exports of Dysprosium, Erbium, Neodymium, Terbium, Ytterbium, and/or Other REE-related material.

Then, identify the REE Ore/Compound/Material Type exported to each Country. If multiple Ores/Compounds/Material Types are exported to a single country, record all requisite information in an additional line.

Lastly, by Country and corresponding REE Ore/Compound/Material Type, record the Total Quantity Exported between 2010-2013, Quantity Unit of Measure, and Total Value Exported (in USD Thousands) between 2010-2013.

Country	REE Exported						REE Ore/Compound/ Material Type	Total Quantity Exported in 2010-2013 (write-in)	Quantity Unit of Measure: Ounces, Pounds, Tons, Grams, Kilograms, or Metric Tons	Total Kilograms Exported in 2010-2013 (auto-calculated)	Total Value Exported in 2010-2013 **in $ Thousands** **$12,000.00 = survey input of $12**
	Dysprosium	Erbium	Neodymium	Terbium	Ytterbium	Other REE					
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	
										0	

C

1. Does your organization anticipate increasing its exports of Dysprosium, Erbium, Neodymium, Terbium, Ytterbium and/or Other REE-related material over the next 5 years?
2. If yes, does your organization anticipate any challenges to increasing its exports of Dysprosium, Erbium, Neodymium, Terbium, Ytterbium and/or Other REE-related material?
3. Explain current and/or future challenges your organization faces when exporting Dysprosium, Erbium, Neodymium, Terbium, Ytterbium and/or Other REE-related material.

Explanation:

Comments:

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Section 7: Sales

Provide your U.S.-based operation's 2010-2013 U.S. and Non-U.S. sales information.

Record your Total U.S. and Non-U.S. Sales, all Customers, and a percentage breakout by both Non-Government and Government Sales in lines 1 and 2 (should sum to 100%).

Then, record your Total U.S. and Non-U.S. REE-related Sales, all Customers, to include Dysprosium, Erbium, Neodymium, Terbium, Ytterbium, and Other REE-related Sales, and a percentage breakout by REE-related Non-Government and REE-related Government Sales in lines 1 and 2 (should sum to 100%).

Lastly, provide a percentage breakout of your U.S. Government REE-related Government Sales by both U.S. Government Defense and Non-Defense Sales in lines i and ii (should sum to 100%).

For 2014, estimate the percentage change from 2013 in Total U.S. and Non-U.S. Sales, Total U.S. and Non-U.S. REE-related Sales, and U.S. Government REE-related Defense and Non-Defense Sales.

*Government Sales include both direct and indirect sales to government customers (including sales to prime contractors with government program application). All sales with government end uses should be reported as Government Sales.

Note: Ensure your "Source of Sales Data" declaration is consistent with your response in Section 1.a. This means that if you declared the survey response to be a Business Unit/Division-level response in Section 1.a then this section should contain Business Unit/Division-level data.

Source of Sales Data:	
Reporting Schedule:	

		"U.S." means U.S. domestic sales; "Non-U.S." means export sales from U.S. locations	Record in $ Thousands, e.g. $12,000.00 = survey input of $12								Record as Percent Change from 2013	
			2010		2011		2012		2013		2014	
			U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.
A		Total Sales, all Customers										
	1	Total Non-Government Sales [as a % of line A]										
	2	*Total Government Sales [as a % of line A]										
		Lines 1 and 2 must sum to 100%	0%	0%	0%	0%	0%	0%	0%	0%		
B		Total REE-related Sales, all Customers										
	1	REE-related Non-Government Sales [as a % of line B]										
	2	*REE-related Government Sales [as a % of line B]										
		Lines 1 and 2 must sum to 100%	0%	0%	0%	0%	0%	0%	0%	0%		
	i	*REE-related U.S. Government Defense Sales [as a % of line B.2]										
	ii	*REE-related U.S. Government, Non-Defense Sales [as a % of line B.2]										
		Lines i and ii must sum to 100%	0%		0%		0%		0%			

C	1	Does your organization consider itself dependent on its REE-related sales for its ongoing viability? Explain your response.	
		Explanation:	
	2	Indicate the degree of compatibility between your REE and non-REE business lines and/or operations by estimating the percentage of your current REE-related business lines/operations that can be readily converted to non-REE-related business lines/operations. Explain your response.	
		Explanation:	
		Comments:	

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Section 8: Customers

Identify your organization's leading direct customers for Dysprosium, Erbium, Neodymium, Terbium, and Ytterbium-related business lines based on average annual sales in 2010-2013.

Provide the Direct Customer's Name, indicating both the Type of Customer and corresponding Market Segment of Customer.

Then, record the leading Products/Services sold and the Customer's Location (City, State, Country).

Lastly, for each customer estimate the Average Annual Total Sales (in U.S. dollar thousands) from 2010-2013.

		Customer Profile			Product/Service			Customer Location			Sales (USD)
		Direct Customer Name (write-in)	Type of Customer	Market Segment of Customer (primary if multiple) **Populated from 1.B.a**	REE Product/Service 1 **Populated from 2.A**	REE Product/Service 2 **Populated from 2.A**	REE Product/Service 3 **Populated from 2.A**	City (write-in)	State	Country	Average Annual Sales **in $ Thousands** **$12,000.00 = survey input of $12**
A	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										

Comments:

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Section 9: Financials

Report line items from your organization's financial statements for years 2010-2013.

Indicate whether the reported income statement and balance sheet line items are Business Unit/Division or Corporate/Whole Organization financials.

Note: Ensure your "Source of Sales Data" declaration is consistent with your response in Section 1.a. This means that if you declared the survey response to be a Business Unit/Division-level response in Section 1.a then this section should contain Business Unit/Division-level data.

Source of Financial Line Items:	
Reporting Schedule:	

	Income Statement (Select Line Items)	Record in $ Thousands, e.g. $12,000.00 = survey input of $12			
		2010	2011	2012	2013
A	Net Sales (and other revenue)				
B	Cost of Goods Sold				
C	Total Operating Income (Loss)				
D	Earnings Before Interest and Taxes				
E	Net Income				

	Balance Sheet (Select Line Items)	Record in $ Thousands, e.g. $12,000.00 = survey input of $12			
		2010	2011	2012	2013
A	Cash				
B	Inventories				
C	Total Current Assets				
D	Total Assets				
E	Total Current Liabilities				
F	Total Liabilities				
G	Retained Earnings				
H	Total Owner's Equity*				

* Total Owner's Equity (line H in the Balance Sheet) should equal Total Assets less Total Liabilities

Comments:	

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Section 10: Employment

Record the total number of full-time equivalent (FTE) employees in your organization's U.S.-based operations for the 2010-2013 period.

Then, estimate the percentage of these employees that perform the professional occupations indicated.

Do not double count personnel who may perform cross-operational roles. Estimates are encouraged.

Note: Ensure your "Source of Workforce Data" declaration is consistent with your response in Section 1.a. This means that if you declared the survey response to be a Business Unit/Division-level response in Section 1.a then this section should contain Business Unit/Division-level data.

	Source of Workforce Data:					
	Reporting Schedule:					
A		Professional Occupations	2010	2011	2012	2013
	1	Total Full Time Equivalent (FTE) Employees (write-in)				
	2	Administrative, Management, and Legal Staff [as a % of a]				
	3	Engineers, Scientists, and R&D Staff [as a % of a]				
	4	Facility & Maintenance Staff [as a % of a]				
	5	Information Technology Professionals [as a % of a]				
	6	Marketing and Sales [as a % of a]				
	7	Production Line Workers [as a % of a]				
	8	Testing Operators, Quality Control, and Support Technicians				
	9	Other (specify)				
	10	Other (specify)				
	Lines 2 through 10 must total 100%		0%	0%	0%	0%
B	Estimate the percentage of your organization's Total FTEs that work on REE-related business lines [as a % of line A.1]:					

C	Does your organization currently have difficulty hiring or retaining employees?		
	If yes, indicate the primary reason(s) why you currently have difficulty hiring or retaining employees, particularly employees affiliated with your REE-related business lines. Explain each selection.		
		Primary Reason (select)	Explanation
	1		
	2		
	3		
	4		
	5		

D	1	Does your organization offer apprenticeship programs with academic institutions (e.g., community colleges, local trade schools, universities, etc.)? Explain your response.				
		Explanation:				
	2	Indicate the workforce development program preferred by your organization. Explain your selection.				
		Explanation:				
	3	Indicate if your organization participates in/sponsors any of the identified workforce development programs.	Apprenticeship		Internship	
			Certification		On-The-Job Training	
			Detail/Rotation		Reimbursement/ Subsidized	
			Fellowship		Specialized Coursework	
			Other (specify)			

E	Identify any unique skills and/or competencies that are essential to maintaining your organization's REE-related business lines. Explain each selection.		
		Type of Skill or Competency	Explanation
	1		
	2		
	3		
	4		
	5		

Comments:	

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Section 11: Research and Development

Record your organization's total Research and Development (R&D) Expenditures and Funding Sources for the years 2010 to 2013.

Estimate the percentage of total R&D expenditures related to both your REE-related and Defense business lines.

Note: Ensure your "Source of R&D Data" declaration is consistent with your response in Section 1.a. This means that if you declared the survey response to be a Business Unit/Division-level response in Section 1.a then this section should contain Business Unit/Division-level data.

Note: R&D annual expenditure totals should match those your organization typically provides in its annual income statement.

Source of R&D Data:	
R&D Reporting Schedule:	

	R&D Expenditures	Record in $ Thousands, e.g. $12,000.00 = survey input of $12			
		2010	2011	2012	2013
A	Total R&D Expenditures (write-in)				
1	Basic Research [as a % of a]				
2	Applied Research [as a % of a]				
3	Product/Process Development [as a % of a]				
	Lines 1 through 3 must total 100%	0%	0%	0%	0%
4	Percent of Total R&D Expenditures relating to REE-related business lines				
5	Percent of Total R&D Expenditures relating to Defense business lines				

	R&D Funding Sources	Record in $ Thousands, e.g. $12,000.00 = survey input of $12			
		2010	2011	2012	2013
B	Total R&D Funding Sources (write-in)				
1	Internal/Self Funded/IRAD [as a % of B]				
2	Total Federal Government [as a % of B]				
3	Total State and Local Government [as a % of B]				
4	Universities--Public and Private [as a % of B]				
5	U.S. Industry, Venture Capital, Non-Profit [as a % of B]				
6	Non-U.S. investors [as a % of B]				
7	Other (specify)				
	Lines 1 through 7 must sum to 100%	0%	0%	0%	0%

	Compatibility and Constraints to REE-related R&D	
C	Does defense-related R&D shape the development of your commercial product lines?	
	If yes, estimate the degree of compatibility between your defense-related R&D and your commercial product lines, i.e., the percentage of your defense-related R&D, any given year, that supports your commercial business.	
D	Does the cost of REEs and/or related ores, compounds, material types, inhibit your ability to perform REE-related R&D?	
	Does limited availability of REEs and/or related ores, compounds, material types, inhibit your ability to perform REE-related R&D?	
	Do China quotas/trade restrictions inhibit your ability to perform REE-related R&D?	
	Have recent efforts to "design or engineer out" REEs from related product and application areas reduced or increased your incentive to invest in REE-related R&D?	

	REE-related R&D for Recycling/Substitution	Recycling	Substitution
E	Does your organization perform any R&D activities related to REE recycling and substitution?		
	If yes, estimate the proportion of your overall R&D expenditures related to REE recycling and substitution.		
	Does your organization plan on increasing future R&D activities related to REE recycling and substitution?		
F	Provide a brief description of your organization's R&D activities.		

Comments:	

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Section 12: Capital Expenditures

Record your organization's capital expenditures corresponding to the select categories.

Note: Ensure your "Source of Capital Expenditure Data" declaration is consistent with your response in Section 1.a. This means that if you declared the survey response to be a Business Unit/Division-level response in Section 1.a then this section should contain Business Unit/Division-level data.

		Source of Capital Expenditure Data:				
		Capital Expenditure Reporting Schedule:				
		Capital Expenditure Category	Record in $ Thousands, e.g. $12,000.00 = survey input of $12			
			2010	2011	2012	2013*
A		Total Capital Expenditures				
	1	Machinery, Equipment, and Vehicles [as a % of A]				
	2	IT, Computers, Software [as a % of A]				
	3	Land, Buildings, and Leasehold Improvements [as a % of A]				
	4	Other (specify) [as a % of A]				
	5	Other (specify) [as a % of A]				
		Lines 1 through 5 must total 100%	0%	0%	0%	0%
	6	REE-related Capital Expenditures [as a % of A]				

B	Since 2010, have your organization's capital expenditures been adversely impacted by reductions in U.S. Government defense spending? Do you anticipate them to be impacted in the future? Explain your response.	
	Explanation:	

C

Barriers to entry or expansion in REE-related fields can be high, particularly in the early, capital-intensive steps of the REE value chain.

1 — Describe any obstacles to the future procurement by your organization of new machinery, technology, and/or facilities necessary for expanding its REE-related business lines. Such investments might include the acquisition of equipment for the extraction, refinement, processing, manufacture, and/or recycling of REE-related material. Explain your response.

Availability		Interoperability		Operating Costs	
Environmental Regulations, Compliance		Lead Time		Purchase Price	
Expertise/Know-how		Licensing/Permits		Return On Investment	
Explanation:					

2 — Does your organization own any of the following pieces of machinery and equipment?

If either yes or no, indicate the status of each machinery and equipment type. Explain your response.

Bioleaching Bacteria		Crushers		Flotation Separation Tanks/Jameson Cells	
Centrifugal Contractors		Electromagnets		Rock-breakers	
Chemicals used in Flotation Separation		Falcon/Gravity Concentrators		Saponification Equipment	
		Other (specify)			
Explanation:					

D

Identify and describe any unique or critical equipment, infrastructure, and/or facilities owned and/or operated by your organization in support of its REE-related business lines.

	Type of Equipment, Infrastructure, or Facility	Description (write-in)
1		
2		
3		
4		
5		

Comments:	

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Section 13.a: U.S. Government Outreach

There are many federal and state government programs and services available to assist your organization to better compete in the global marketplace.

If you would like more information regarding these U.S. Government programs, select the specific areas of interest below.

The Commerce Department will follow-up with your organization regarding your selections.

A	Business development (joint ventures, new markets, etc.)		Patents and trademarks		
	Energy and environmentally conscious manufacturing		Product/service development (including manufacturing standards, processes, and practices)		
	Export licensing (ITAR/EAR)		R&D programs		
	Financing (access to capital, loans, etc.)		Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) contracts		
	Global export opportunities		Training Opportunities		
	Government procurement guidelines and e-commerce		Country Commercial Guides (specify most relevant country in box)		
	Manufacturing technology development (including acquiring, licensing, and/or commercializing federally developed technologies)		Other (specify)		
	Marketing assessment skills		Other (specify)		
	Comments:				

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Section 13.b: Certification

The undersigned certifies that the information herein supplied in response to this questionnaire is complete and correct to the best of his/her knowledge. It is a criminal offense to willfully make a false statement or representation to any department or agency of the United States Government as to any matter within its jurisdiction (18 U.S.C.A. 1001 (1984 & SUPP. 1197)).

Organization Name:	
Organization's Internet Address:	
Name of Authorizing Official:	
Title of Authorizing Official:	
E-mail Address:	
Phone Number and Extension:	
Date Certified:	

In the box below, provide any additional comments or any other information you wish to include regarding this survey assessment.

How many hours did it take to complete this survey?	

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