

Definition of Manufacturing

February 1, 2018

I. TASKING

The task as outlined in the June 12, 2017 letter from DDTC is as follows:

(3) Definition of Manufacturing (post-revision of firearms rule)

Tasking: Considering the possibility of revisions of Cats I-III and removal of most commercial firearms and related activities from the ITAR, DDTC requests DTAG to review and provide feedback to accurately and effectively define “manufacturing” (and distinguish from other related activities like assembly, integration, installment, various services) for remaining defense articles and services.

II. OVERVIEW

The Arms Export Control Act (AECA) (22 U.S.C. 2751 et seq.) has numerous references to the term “manufacture.” These include the requirement to register “manufacturers” (2778(b)) and the requirement to notify Congress on the manufacture abroad of significant combat equipment (2776(d)). However, the AECA nowhere defines the term “manufacture.”

The International Traffic in Arms Regulations (ITAR) (22 C.F.R. 120-130) implement the AECA. Like the AECA, the ITAR do not provide a single definition of “manufacture.” Instead, the ITAR use versions of the term “manufacture”¹ in conjunction or interchangeably with the synonym “production”² numerous times with differing contexts and meanings. The term “production” is defined in §120.41(b)(3), but only in the context of *specialty designed*. The Department of Commerce Export Administration Regulations (EAR) and Wassenaar Arrangement Dual Use regulations do not define “manufacture”, other than as a subset of the defined term “production.”

From a regulatory construction standpoint, using the same term to represent different things creates issues for both the regulator and the regulated. The use of two similar terms together in one instance (as in “manufacture or production”) and individually in others creates confusion and can make it difficult to consistently administer and comply with the law.

¹ “Manufacture”, “manufacturing”, manufactured, manufacturer.

² “Produce”, “production”, “producing”, “produced”, “produces”, “coproduction”.

A. Approach

Distinct items or activities must have distinct, unique identifiers. When used in a well-defined context, this creates a taxonomy, which allows the user to classify the item or activity. The regulatory requirements are then applied consistently and confidently.

As “manufacture” is a process, the suggested approach is to identify unique and distinct process steps, and then determine when those steps may occur in a defense article’s life cycle. The policy decisions that trigger regulatory controls can then be more clearly determined based on both the process and where it occurs in the life cycle.

This paper proposes creating specific and distinct definitions for “manufacturing” and “production”. :

B. Guiding Principles

Consider life cycle phases and supporting activities. Defense articles go through four general life-cycle phases; (1) design and development, (2) realization of the final design (e.g., serial production), (3) operation and sustainment, and optionally (4) decommissioning. Each of those phases is comprised of supporting activities such as building or testing. Some of these activities may occur in multiple phases, for example, fabrication of items may occur in the development phase when building a prototype, again during realization/serial production, and yet again during a remanufacturing repair during the operation and sustainment phase. Inspection, calibration and testing can occur in development, realization/serial production and sustainment. The regulatory implications may differ depending on the life-cycle context.

Consistently use distinct terms to define distinct processes and actions. The ITAR uses the terms “manufacture”, “manufactured”, “manufacturer”, or “manufacturing” one hundred and twenty eight (128) times with only one specific but not directly related definition³. The terms “production”, “produce” and “producing” are used both in conjunction and interchangeably with “manufacture”, with one hundred and twenty six (126) instances with one local definition⁴.

It is critical that terms used to identify commodities, technology, or activities be clear and unique, so that the result of a classification analysis is consistent and repeatable. Vague and/or broad terms can be appealing for a “I know it when I see it” classification approach, but it does neither the Regulators nor the regulated Industry any favors.

³ “Manufacturing know-how” is defined in §124.2(c)(4)(iii) and again in §125.4(c)(6)

⁴ The term “production” is defined in §120.41(b)(3), but only in the context of *specialty designed*

Because the term “manufacture” is used extensively and in different contexts throughout the ITAR, this paper suggests a two-phase approach. The first phase defines the term and applies it to the specific instance of § 122.1, the requirement to register by those persons who engage in the business of “manufacturing.” The second phase would be to apply the defined terms “manufacturing” and “production” to the ITAR as a whole. Because of the extensive nature of the second phase, this paper will only discuss a suggested implementation. The full implementation of the definitions throughout the ITAR will require an additional tasking.

C. Existing Guidance

Although the ITAR does not define “manufacture”, DDTC issued guidance for firearms manufacturers on July 22, 2016. This guidance differentiates between a “manufacturer” and a “gunsmith” by applying the ‘ordinary, contemporary, and common meaning’ of the terms. The purpose of the letter was the applicability of the § 122.1 registration requirements to those in the firearms industry, and provides both general and detailed policy guidance. The detailed guidance is restricted to Category I and III items, and specifically states that it does not apply to items elsewhere on the USML. The Tasking that is the subject of this paper is specific to a USML where Categories I through III have transitioned to the EAR, so the specific guidance would not apply. However, the general policy guidance provided in the letter is still informative and applicable to this task.

The general policy guidance of the letter states that “manufacture” includes activities such as cutting, drilling, machining, or other activities that improve the capability of the item. “Manufacture” does not include assembly and repairs. The Tasking echoes this in that it asks the DTAG to distinguish “manufacturing” from activities such as assembly, integration, and installment.

III. CONCEPT

In light of the Guiding Principles and Existing Guidance set forth above, the concept is to define “manufacture” as a subset of the overall process of producing a defense article. This is modeled on the ITAR § 120.38 definition of Maintenance Levels, where Organizational, Intermediate, and Depot-level maintenance are identified as separate and distinct sets of activities under the general activity of maintenance. This requires not only identifying what processes that comprise “manufacture”, it also requires identify those processes that are not.

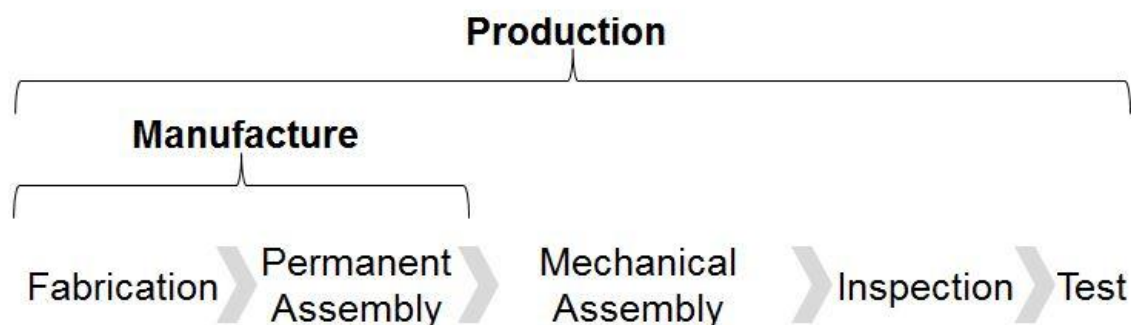
At the basic level, “manufacture” would include those processes that materially change the item and are not readily reversible. This would include processes

which convert material into parts and components⁵, such as casting or forging. It would also include processes to form those parts as described in the DDTC guidance, such as cutting, drilling or machining. It would also include permanent attachment, such as welding, diffusion bonding, and other joining processes, which are difficult to reverse without damage to the parts.

“Manufacture” would not include processes where there is (1) no change to the item, such as test, inspection, or other quality assurance activities, or (2) where the assembly process is easily reversible. Both of these process groups are often aspects of repair.

A. Proposed Definitions

The proposed definitions are based on the following organizational structure:



This identifies separate and distinct processes and groups those under specific, over-arching definitions. This approach also mirrors the Department of Commerce Export Administration Regulations (“EAR”) definition of “production”, which includes all production stages, with manufacture as a sub-element. “Manufacture” covers those activities that materially change the item but are not ‘mere’ assembly.

B. Manufacture and Production

(a) *Fabrication*. Any construction process, other than Mechanical or Permanent Assembly, which results in a new and different article, having a distinctive form, function, or performance capabilities from that originally possessed by the article(s) or material(s) before subject to the fabrication process. Changes to form include changes of mechanical properties, material composition, or geometry. Examples of fabrication include casting, forging, bending, and material removal through machining or cutting.

⁵ As defined in § 120.45.

(b) *Permanent Assembly*. The fitting or joining together of fabricated parts, components, and assemblies using permanent joining processes that can only be disassembled by destruction of the joint and damage to the fabricated parts. Examples of permanent joining processes are welding, brazing, solid state joining, and riveting. Permanent Assembly does not include soldering of electrical components.

(c) *Mechanical Assembly* is the semi-permanent combination of fabricated parts, components, and assemblies:

- 1) using hardware or fasteners (e.g., nuts, bolts, screws, clips, pins, wire);
- 2) without the use of processes in Permanent Assembly; and
- 3) Such that disassembly can be performed without damage to the fabricated parts, components, or assemblies.

(d) *Manufacture, Manufacturing*. To engage in any of the activities described in Fabrication and Permanent Assembly. Aspects of repair, overhaul, or refurbishment that involve fabrication (e.g., fabricating new parts, dimensional restoration of existing parts) or permanent assembly are considered manufacturing. Manufacturing does not include testing, inspection, quality assurance, or any other activity that does not change the function, form, or effectiveness of the defense article. Manufacturing does not include the creation or generation of technical data, firmware, or software, the furnishing of assistance in the design, development, engineering, assembly, testing, repair, maintenance, modification, operation, demilitarization, destruction, or the use of defense articles.

(e) *Manufacturer*. A corporation, business association, partnership, society, trust, or any other entity, organization or group that engages in manufacturing.

(f) *Produce, Production*. Any of the distinct stages of product engineering, manufacturing, integration, inspection, calibration, test, or quality assurance to create a defense article commodity. The *production* of technical data or software consists of creation and refinement (e.g., design, development, analysis, and/or verification).

The paper emphasizes that “production” includes any of the described processes, including “manufacture.” The term “manufacture” identifies a specific subset of “production” processes.

IV. Rationale

The approach is to create a hierarchy of processes that fall under “Production”. “Production” covers all activities necessary to complete an item ready for sale or use. This breaks down into two groups – activities that materially change the item and those that do not. Fabrication and assembly materially change the

item; inspection, calibration, testing, quality assurance, and installation into a higher assembly do not materially change the item.

As defined above, “Manufacture” covers those activities that materially change the item but are not “mere” assembly. Inspection, calibration and test are part of the “production” process, but are not “manufacture”.

In the general sense, building an item may require actions that are clearly understood to be the fabrication of parts – e.g., forging, casting, forming – the conversion of materials into clearly identifiable defense articles (items). The resultant items may be the end-product, or assembled into complex items (assemblies). However, assembly may also involve complex processes, such as welding, brazing, crimping, etc. For example, metal sections may be formed and permanently assembled into an aircraft structure using diffusion bonding. That would likely be more than “mere” assembly.

A. Assembly.

In both the tasking letter and the ITAR, there appears to be intent to exclude “simple” assembly from “manufacturing.” Examples in the ITAR include §120.22, where a Technical Assistance Agreement can be used for “assembly of defense articles” as long as manufacturing know-how is not conveyed. There are several instances of *assembly* being separate from *manufacture*⁶. The proposed definition would separate *assembly* into two groups, based roughly on the permanence of the assembly process. Items assembled in a way that is conducive to disassembly, for example, for repair or access, would be the “simple” assembly and DDTC does not need to this process control as “manufacturing”. This is typically accomplished with non-permanent fasteners such as nuts, bolts, screws, pins, etc. Assembly that uses permanent processes, i.e., those that are difficult to reverse, would be a form of assembly worthy of higher control. These divide into *Mechanical Assembly* and *Permanent Assembly*, for lack of better terminology.

The processes and technical data used in mechanical assembly, inspection, calibration and test are often identical with organizational-level maintenance⁷ and repair. “Remove and replace” repair requires disassembly and re-assembly, and the defense article may require calibration, and must be inspected and tested before returning to service. From a policy perspective, maintenance and repair data for a lawfully exported or authorized defense article is itself often eligible for exemptions. This does not mean there is no control on this data; only that it is of lower sensitivity.

⁶ §§§120.9(a); 120.10(a); 120.41 Note 1 to paragraph (b)(3); and §123.16(b)(9);

⁷ Reference §120.38(a)

While this is by no means a perfect division, it does provide a division based on the technical difficulty or sophistication of a given process. In addition, a distinction can be clearly identified through the physical characteristics of the resulting defense article.

The working group recognizes that the distinction may not apply to every situation but at least the proposed definition creates a distinction. The scenario where several pieces of metal or composite are formed (*fabrication*), and then welded or bonded together to create an airframe structure seems worthy of being a “manufacturing” step, whereas bolting on an antenna does not. That said, there would clearly be situations where assembly using removable fasteners requires a high level of sophistication and others where welding does not. These could be addressed through a catch and release process with various exceptions to the general definition. For example:

1. Soldering.

Although this falls under a “permanent” process, electrical soldering would be a “mere” assembly method. In addition, electrical soldering is not intended to be a mechanical retention method.

2. Riveting.

Riveting could fall in either Mechanical Assembly or Permanent Assembly. Rivets are routinely drilled out for repair purposes. Controlling riveting an identification plate in place as “*manufacture*” seems excessive. However, rivets are also used for robust structural fabrication, such as aircraft structures or ship hulls. Depending on how DDTC views the policy, riveting could be a form of mechanical assembly by adding to the exclusion in Paragraph (a).

The second to last sentence in paragraph (a) is intended to tie together the concepts of *form* from “specially designed” in §120.41 and the specific forms described in “clearly identifiable” from §120.6.

V. Implementation

A. Phase 1 - ITAR §122.1 Registration Requirements

As described earlier, the first stage of implementation would be to specifically apply the definition of “manufacture” to the Registration requirement in §122.1. The suggested changes are in **bold**:

§ 122.1 Registration Requirements

(a) Any person who engages in the United States in the business of manufacturing or exporting or temporarily importing defense articles or furnishing defense services, is required to register with the Directorate of Defense Trade Controls under § 122.2. For the purpose of this subchapter, engaging in such a business requires only one occasion of manufacturing or (sic) exporting or temporarily importing a defense article, or furnishing a defense service. A manufacturer who does not engage in exporting must nevertheless register. (See part 129 of this subchapter for requirements for registration of persons who engage in brokering activities.)

(b) *Exemptions.* The registration requirements of paragraph (a) of this section do not apply to:

- (1) Officers and employees of the U.S. Government acting in an official capacity;
- (2) Persons whose pertinent business activity is confined to the production of unclassified technical data only;
- (3) Persons all of whose manufacturing and export activities are licensed under the Atomic Energy Act of 1954, as amended; or
- (4) Persons who engage in the ~~fabrication~~ **manufacture** of articles solely for experimental or scientific purposes, including research and development.

Note to paragraph (b): Persons who qualify for the exemptions in paragraphs (b)(2) or (b)(4) of this section remain subject to the requirements for licenses or other approvals for exports of defense articles and defense services and may not receive an export license or approval unless registered under § 122.2.

Note to paragraphs (a) and (b): Manufacturing consists of fabrication or permanent assembly where the result is a defense article. Fabrication results in a new and different item with distinctive form, function or performance capabilities distinct from the items(s) or material(s) prior to fabrication. Permanent assembly joins parts, components, and/or assemblies such that disassembled requires destruction of the joint or damage to the fabricated items. Manufacturing does not include (a) semi-permanent assembly, where the use of hardware or fasteners (e.g., nuts and bolts) allows disassembly without damage to the fabricated items, (b) the soldering of electrical components, or (c) testing, inspection, and quality assurance, or other activities that do not change the function, form, or effectiveness of the defense article.

Although definitions of both “manufacture” and “production” have been set forth, only “manufacture” is required for this phase, and embodies in an additional note to paragraphs (a) and (b). Paragraph (b)(4) uses the term ‘fabrication’ but in this context, the meaning is the same as “manufacture.”

B. Phase 2 -Implementing the Proposed Definitions in the ITAR

As stated earlier, the second phase of implementation would be to promulgate the definitions broadly through the ITAR. The ITAR uses “manufacture” together or interchangeably with “production” with different contexts and meanings. Whereas the EAR differentiates between defined terms and their common meanings by the use of quotation marks⁸, the ITAR has no such identification mechanism. Therefore, except in instances where the alternate common meaning is unambiguous⁹, the usage of terms must be consistent throughout the ITAR.

First, § 120 would be updated to include the definitions of “manufacture” and “production”. Next, each instance of “manufacture”, “manufacturer”, “manufactures”, and “manufactured” would be reviewed for consistency with the newly defined term. In those cases where the usage is not consistent with the defined term, the words would be replaced – likely in most cases with *production*. For example, the Note to Category VIII that references aircraft “manufactured prior to 1950” would change to “produced prior to 1950”, as that more accurately reflects the intent. When used in the general sense of making or building an item, the term “production” should be used in lieu of “manufacture”. The construction of the item, but not “mere” assembly, inspection, calibration or test are elements of “production” but not “manufacture”. To take another example, the term “Manufacturing License Agreement” can likely stay, as long as the entries are updated to reflect the covered activities. Because “production” is now also a defined term, each instance of “production”, “produce”, “produces”, “producing”, and “coproduction” will also need review. Common in the ITAR is the use of “manufacture” and “production” together as either “manufacture or production” or in a greater list of verbs¹⁰ - each instance will need review, but most likely “production” would remain as it describes a broader set of processes than “manufacture.” The intent is to use “manufacture” to reference specific and narrower defense article construction processes, and use “production” to reference aspects of end-to-end product creation.

Appendix A of this document contains an initial review of the ITAR with suggested changes in line with the proposed definitions of “manufacture” and “production.” Because of the differences in scope between “manufacture” and “production”, the choice of one term over another in a given section is a function

⁸ E.g., the defined term “required” in relationship to “technology”, versus ECCN 2B352.f.2 ‘generation of *required* particle size.’

⁹ E.g., § 128.6(b) Discovery by the Directorate of Defense Trade Controls includes ‘the production of books, records, or other relevant evidence,..’ which would be understood to mean ‘bring forth’ versus ‘fabricate.’

¹⁰ E.g., § 120.10(a)(1) “Technical data” includes [I]nformation, other than software as defined in § 120.10(a)(4), which is required for the design, development, production, manufacture, assembly, operation, repair, testing, maintenance or modification of defense articles.

of policy. For that reason, the Working Group suggests DDTC initiate a follow-on Task, to provide suggestions that will accurately reflect DDTC policy intent.

C. Additional Examples:

Example 1:

§123.16(b)(9) Port Directors of U.S. Customs and Border Protection shall permit the temporary export without a license by a U.S. person of any unclassified component, part, tool or test equipment to a subsidiary, affiliate or facility owned or controlled by the U.S. person (see §120.37 of this subchapter for definition of foreign ownership and foreign control) if the component, part, tool or test equipment is to be used for ~~manufacture, assembly, testing~~, production, or modification provided:.....

Example 2:

§125.4(c)(1) *Build-to-Print*. “*Build-to-Print*” means that a foreign consignee can **produce** a defense article from engineering drawings without any technical assistance from a U.S. exporter. This transaction is based strictly on a “hands-off” approach since the foreign consignee is understood to have the inherent capability to **produce** the defense article and only lacks the necessary drawings. Documentation which is not absolutely necessary to permit **production manufacture** of an acceptable defense article (*i.e.*, “nice to have”) is not considered within the boundaries of a “Build-to-Print” data package;

VI. Additional Discussion

In the course of generating the proposed definitions, a number of issues were discussed within either the Working Group, or the DTAG as a whole. As these discussions provided valuable insight, they are included here.

A. Integration and Installation

The issue was raised as to how *integration* and *installation* fall under the proposed definition of “manufacturing” or “production.” Neither are defined in the ITAR today, but the proposed definition for defense services (80 FR 31525) included definitions as a note to Paragraph (a)(2) of § 120.9:

“Integration” means any engineering analysis (see § 125.4(c)(5) of this subchapter) needed to unite a defense article and one or more items. Integration includes the introduction of software to enable operation of a defense article, and the determination during the design process of where

an item will be installed (e.g., integration of a civil engine into a destroyer that requires changes or modifications to the destroyer in order for the civil engine to operate properly; not plug and play). Integration is distinct from “installation.” Installation means the act of putting an item in its predetermined place without the use of technical data or any modifications to the defense article involved, other than to accommodate the fit of the item with the defense article (e.g., installing a dashboard radio into a military vehicle where no modifications (other than to accommodate the fit of the item) are made to the vehicle, and there is no use of technical data.). The “fit” of an item is defined by its ability to physically interface or connect with or become an integral part of another item (see § 120.41).

Based on the proposed definition above, *integration* is a design process that falls under design or development, and is not a manufacturing or production activity. Installation, on the other hand, is the actual process of attaching an item into a defense article. Under the proposed definition of “manufacture”, installation of an item using permanent methods would be “manufacture”, and installation using semi-permanent methods would not. Both cases would fall under “production.” The proposed definition of *installation* in the context of defense services hinges on the use of ITAR technical data, which has no impact on if it is “manufacturing” or not – only how the item is attached would matter.

B. Manufacturing Know-How

The term “*manufacturing know-how*” occurs sixteen times in the ITAR, mostly as a trigger for a MLA versus a TAA, or as data not eligible for an exemption. Under the proposed definition structure, “manufacturing know-how” could be set at three levels:

1. Change the term to “production know-how” and define the scope as including manufacturing, mechanical assembly, inspection, calibration, and test. This is the broadest scope.
2. Maintain the term “manufacturing know-how” and indicate that it includes fabrication, and permanent and mechanical assembly, but not inspection, calibration, or test.
3. Continue to use the term “manufacturing know-how” but specify in the definition (§125.4(c)(6)) that it consists of manufacturing (i.e., fabrication and permanent assembly only), and does not include mechanical assembly, inspection, calibration, or test. This is the narrowest scope.

It is the recommendation of the Working Group to choose level 3, the narrowest definition. The primary reason for this choice is the processes omitted from “manufacturing know-how” (i.e., mechanical assembly, calibration, inspection,

and test) are often the same as for maintenance and repair. Technical assistance and instruction for maintenance will often go beyond that of build-to-print.

C. Heat Treatment and Coatings

The question was raised as to if heat treatment or coatings would fall under “manufacture.” Appealing to the proposed definitions, heat treatment would likely fall under “manufacturing” if it changes the material properties of the item, which is the usual intent of heat treatment. Coating covers a broader range of processes, from coatings bonded at the molecular level, to paints, and then to preservation coatings. Appealing to the proposed definitions, coating processes that intended to be permanent, such as a plasma-spray coating or paint would fall under *permanent assembly* and be part of “manufacture.” A preservation coating designed for removal before use would be *semi-permanent assembly* and would not be “manufacture”.

D. SME Technical data

SME technical data is that data for the manufacture or production of a SME item. With defined terms for “manufacture” and “production”, only one term is necessary. The choice of words defines what data is classified as SME, which then drives licensing requirements. The Working Groups suggestion is that “manufacturing” be used and not the broader “production”:

121.1(a)(2). *Significant Military Equipment*. All items described within a USML paragraph or subparagraph that is preceded by an asterisk (*) are designated “Significant Military Equipment” (see § 120.7 of this subchapter). Note that technical data directly related to the manufacture ~~or production~~ of a defense article designated as Significant Military Equipment (SME) is also designated as SME.

The deletion of “production” in the definition of SME is necessary as to not create an over-broad control and not destroy Export Control Reform. Take, for example, a fighter engine. Both a turbine blade and the engine itself are SME (*XIX(f)(2) and *XIX(a), respectively.) Casting of the turbine blade is *fabrication*, which is an element of *manufacture*, and hence data for casting the blade is SME technical data. The issue is with the engine, as the engine is made up of both SME and non-SME components; in fact, many of the components may be 600 series or controlled for AT-only. If the fuel pump is 600 series, assembling parts to make the fuel pump is not under ITAR jurisdiction, yet it is one-step in the *assembly* of the engine. Installing the fuel pump on the engine is not logically “production” of the engine, as the fuel pump could be installed on the (600 series)

gearbox prior to installation on the engine; whether data is 600 series or ITAR SME should not depend on order of installation. As the engine comes together through the process of *assembly*, it is not an engine until it is completed. If the last step to completing the engine is to bolt the identification plate in place, it is absurd to treat the bolt torque for the identification plate as SME technical data.

Therefore, technical data for the *mechanical assembly* of large, complex assemblies that are SME should not itself be SME technical data. Since *production* includes *mechanical assembly*, *production* is deleted, the question as to what data is SME data as related to the “manufacture or production” of a SME defense article is important to answer. For example, what is the SME data for a Category VIII aircraft? As discussed, it cannot be the technical data for the installation of the wheel on the landing gear. It is possible to treat any “production” data that is applicable to the SME item in its entirety as SME technical data. In the previous example, the Production Acceptance Test (PAT) for the SME engine is considered SME technical data, but the PAT for individual sub-assemblies would not be. This is a policy question that needs to be resolved through clear guidelines.

VII. TEAM

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Appendix A – Suggested updates based on revised definitions

Word	Section	Section title	Context	Sense	Change	Policy Issue
manufacturing	120.6	Defense Article	stage of manufacture "clearly identifiable"	In the process of building; manufacturing has stages	No change required	
production	120.8	Major Defense Equipment	total production cost'	building/making	No change required	
manufacture	120.9(a)(1)	Defense Service	Actions that trigger defense services	building/making	No change required	
production	120.9(a)(1)	Defense Service	Actions that trigger defense services	building/making	No change required	
Manufacturing	120.21	Manufacturing License Agreement	Title	MLA	Possibly No change	
manufacture	120.21	Manufacturing License Agreement	authorization to manufacture defense articles abroad	building/making	Replace 'manufacture' with 'produce'?	Yes
manufacture	120.22	Technical Assistance Agreement	As opposed to granting a license to manufacture	building/making	Replace 'manufacture' with 'produce'?	Yes
manufacturing	120.22	Technical Assistance Agreement	Assembly is included , as long as NO manufacturing know-how are conveyed	building/making	manufacturing know-how => production know-how	Yes
production	120.22	Technical Assistance Agreement	Assembly is included, as long as NO granting production rights are conveyed	building/making	No change required	
production	120.41(b)(3)(i)	Specially Designed	Was or in production	serial production	No change required	
production	120.41(b)(3) Note 1	Specially Designed	Definition of production for Specially designed	building/making	No change required	
production	120.41(b)(3) Note 1	Specially Designed	all production stages'	building/making	No change required	
production	120.41(b)(3) Note 1	Specially Designed	the definition of serial production	building/making	No change required	
production	120.41(b)(3) Note 1	Specially Designed	the definition of serial production	building/making	No change required	
production	120.41(b)(3) Note 1	Specially Designed	the definition of serial production	building/making	No change required	
manufacture	120.41(b)(3) Note 1	Specially Designed	element of 'production	building/making	No change required	
production	120.41(b)(3) Note 2	Specially Designed	Definition of "development"	Production is post-development	No change required	

Appendix A – Suggested updates based on revised definitions

Word	Section	Section title	Context	Sense	Change	Policy Issue
production	120.41(b)(3) Note 2	Specially Designed	Definition of "development"	Serial production	No change required	
production	120.41(b)(3) Note 3	Specially Designed	Commodities in production subsequently subject to development	Production is post-development	No change required	
production	120.41(b)(3) Note 3	Specially Designed	Commodities in production subsequently subject to development	Production is post-development	No change required	
production	120.41(b)(3) Note 3	Specially Designed	Commodities in production subsequently subject to development	Production is post-development	No change required	
production	121.1(a)(2)	USML - SME	SME technical data	building/making	Delete 'production'	Yes
manufacture	121.1(a)(2)	USML - SME	SME technical data	building/making	No change required	
manufacture	121.1 Cat I(f)	Riflescopes	Manufactured to military specifications	building/making	N/A - entry will be deleted	
manufacture	121.1 Cat I(i)	Technical Data	SME technical data	building/making	N/A - entry will be deleted	
production	121.1 Cat I(i)	Technical Data	SME technical data	building/making	N/A - entry will be deleted	
manufacture	121.1 Cat I Note	Cat I Firearms	..not manufactured to military specifications	building/making	N/A - entry will be deleted	
manufacture	121.1 Cat II(l)	Interpretations	Items designed or manufactured using data/defense services	building/making	N/A - entry will be deleted	
production	121.1 Cat II(g)	Tooling	for production of defense articles	building/making	N/A - entry will be deleted	
manufacture	121.1 Cat II(k)	Technical Data	SME technical data	building/making	N/A - entry will be deleted	
production	121.1 Cat II(k)	Technical Data	SME technical data	building/making	N/A - entry will be deleted	
production	121.1 Cat III(c)	Tooling	for production of defense articles	building/making	N/A - entry will be deleted	
manufacture	121.1 Cat III(e)	Technical Data	SME technical data	building/making	N/A - entry will be deleted	
production	121.1 Cat III(e)	Technical Data	SME technical data	building/making	N/A - entry will be deleted	
manufacture	121.1 Cat III(f)(4)	Interpretations	Items designed or manufactured using data/defense services	building/making	N/A - entry will be deleted	
manufactured	121.1 Cat IV(h)(22)	Radome windows	manufactured as composite structures or laminates	made from/using	No change required	
manufactured	121.1 Cat V(c)(4)	Metal fuels	manufactured from material consisting of	made from/using	manufactured from' => 'made from'	

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Word	Section	Section title	Context	Sense	Change	Policy Issue
produced	121.1 Cat V(c)(4)(i)(B)	Metal fuels	produced by reduction of iron oxide..	using a process	No change required	
production	121.1 Cat V(c)(6)	Pyrotechnic materials	production of radiated energy	emitting energy	production' => 'emission'	
production	121.1 Cat V(i) Note 1	Developmental Explosives	Does not control items in 'production' subject to the EAR	serial production/regular use	No change required	
production	121.1 Cat V(i) Note 2	Developmental Explosives	USML items 'in production or development'	All stages of life cycle	No change required	
manufactured	121.1 Cat VI Note to para (a) and (b)	Cat VI Surface Vessels	manufactured prior to 1950'	built/made	produced prior to 1950'	
production	121.1 Cat VI Note 1 to para (c)	Cat VI Surface Vessels	Does not control items in 'production' subject to the EAR	serial production/regular use	No change required	
production	121.1 Cat VI(f)(3)	equipment	including production equipment	tooling	No change required	
production	121.1 Cat VI Note 2 to para (c)	Vessel Parts	USML items 'in production or development'	All stages of life cycle	No change required	
manufactured	121.1 Cat VII Note	Ground Vehicles	manufactured prior to 1950'	built/made	produced prior to 1950'	
manufactured	121.1 Cat VIII Note 1 to para (a)	Aircraft	manufactured prior to 1950'	built/made	produced prior to 1950'	
manufacture	121.1 Cat VIII Note 1 to para (a)	Aircraft	Unmodified since manufacture	built/made	Unmodified since production	
production	121.1 Cat VIII Note 1 to para (f)	Aircraft	Does not control items in 'production' subject to the EAR	serial production/regular use	No change required	
production	121.1 Cat VIII Note 2 to para (f)	Aircraft	USML items 'in production or development'	All stages of life cycle	No change required	
production	121.1 Cat X(a)(8) Note 1	Developmental PPG	Does not control items in 'production' subject to the EAR	serial production/regular use	No change required	
production	121.1 Cat X(a)(8) Note 2	Developmental PPG	USML items 'in production or development'	All stages of life cycle	No change required	
production	121.1 Cat XI(a)(7) Note 1	Developmental Electronic Equipment	Does not control items in 'production' subject to the EAR	serial production/regular use	No change required	

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Word	Section	Section title	Context	Sense	Change	Policy Issue
production	121.1 Cat XI(a)(7) Note 2	Developmental Electronic Equipment	USML items 'in production or development'	All stages of life cycle	No change required	
produce	121.1 Cat XI(b)	Electronic Systems	collect, survey, monitor, or exploit, or analyze and produce information from	analyze	analyze and create information from	
produced	121.1 Cat XI(c)(1) Note 1	ASICs	integrated circuit developed and produced for a specific	built/made	No change required	
manufactured	121.1 Cat XI(c)(11)(v)	Radomes	manufactured from ceramic materials	made from/using	No change required	
production	121.1 Cat XII(b)(7) Note 1	Developmental lasers	Does not control items in 'production' subject to the EAR	serial production/regular use	No change required	
production	121.1 Cat XII(b)(7) Note 2	Developmental lasers	USML items 'in production or development'	All stages of life cycle	No change required	
production	121.1 Cat XII(c)(10) Note 1	Developmental systems	Does not control items in 'production' subject to the EAR	serial production/regular use	No change required	
production	121.1 Cat XII(c)(10) Note 2	Developmental systems	USML items 'in production or development'	All stages of life cycle	No change required	
production	121.1 Cat XII(d)(6) Note 1	Developmental systems	Does not control items in 'production' subject to the EAR	serial production/regular use	No change required	
production	121.1 Cat XII(d)(6) Note 2	Developmental systems	USML items 'in production or development'	All stages of life cycle	No change required	
production	121.1 Cat XII(e)(23)(iii)	Classified items	is manufactured using classified production data	built/made	Delete 'production' as redundant	
manufactured	121.1 Cat XII(e)(23)(iii)	Classified items	is manufactured using classified production data	built/made	Delete 'production' as redundant	
production	121.1 Cat XII(e)(24) Note 1	Developmental image intensifiers	Does not control items in 'production' subject to the EAR	serial production/regular use	No change required	
production	121.1 Cat XII(e)(24) Note 2	Developmental image intensifiers	USML items 'in production or development'	All stages of life cycle	No change required	
production	121.1 Cat XIII(e)(7) Note 1	Developmental armor	Does not control items in 'production' subject to the EAR	serial production/regular use	No change required	
production	121.1 Cat XIII(e)(7) Note 2	Developmental armor	USML items 'in production or development'	All stages of life cycle	No change required	

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Word	Section	Section title	Context	Sense	Change	Policy Issue
production	121.1 Cat XIII(i)	Signature reduction software	MT for technical data for the development, production, or use	building/making	No change required	
manufacture	121.1 Cat XIII(j)	Dyes, coatings, fabrics	used in the design, manufacture, or production of protective...	elements of	Delete either production or manufacture	Yes
production	121.1 Cat XIII(j)	Dyes, coatings, fabrics	used in the design, manufacture, or production of protective...	elements of	Delete either production or manufacture	Yes
production	121.1 Cat XIII(k)(1)	Tooling	tooling and equipment for production of LO	making/building	No change required	
produce	121.1 Cat XIV(a)(5)	Chemical warfare agents	to produce casualties	result in	No change required	
producing	121.1 Cat XIV(a)(5) Note	Chemical warfare agents	producing casualties	resulting in	No change required	
producing	121.1 Cat XIV(b)(1)(ii)(B)	Toxins	neurotoxin producing species of Clostridium	make	No change required	
produced	121.1 Cat XIV(b)(2)(i)	Biological agents	modified, formulated, or produced as	built/made	No change required	
produce	121.1 Cat XIV(b) Note 2	Biological agents	unable to produce or direct biosynthesis of infections	result in	No change required	
manufactured	121.1 Cat XIV(f)(8)(iii)	Classified items	is manufactured using classified production data	built/made	Delete 'production' as redundant	
production	121.1 Cat XIV(f)(8)(iii)	Classified items	is manufactured using classified production data	built/made	Delete 'production' as redundant	
production	121.1 Cat XIV(i)	Modeling or simulation tools	developed or produced under a DoD contract	software designed/written	No change required	
production	121.1 Cat XIV(n) Note 1		Does not control items in 'production' subject to the EAR	serial production/regular use	No change required	
production	121.1 Cat XIV(n) Note 2		USML items 'in production or development'	All stages of life cycle	No change required	
manufactured	121.1 Cat XV(a)(13)	Classified items	is manufactured using classified production data	built/made	Delete 'production' as redundant	
production	121.1 Cat XV(a)(13)	Classified items	is manufactured using classified production data	built/made	Delete 'production' as redundant	
manufactured	121.1 Cat XV(e) Note 3	Space qualified	item is space qualified if it is designed, manufactured, or qualified for operation ...	built/made	manufactured => produced	

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Word	Section	Section title	Context	Sense	Change	Policy Issue
production	121.1 Cat XV(e) Note 4 (1)	Space qualified	in the same production run	build lot	No change required	
manufactured	121.1 Cat XV(e) Note 4 (3)	Space qualified	specific article not designed or manufactured for use	built/made	manufactured => produced	
manufactured	121.1 Cat XV(e) Note 4 (4)	Space qualified	"designed" and "manufactured" are synonymous with "specially designed"	built/made	manufactured => produced	
manufactured	121.1 Cat XV(f) Note 1	Technical Data	technical data to show the item has been designed, manufactured..	built/made	manufactured => produced	
manufacturing	121.1 Cat XV(f) Note 2	Technical Data	commercial manufacturing	building/making	No change required	
production	121.1 Cat XV(f) Note 2	Technical Data	commercial production	building/making	No change required	
production	121.1 Cat XVI(d)	Parts and components	production equipment and tooling	tooling	No change required	
production	121.1 Cat XVIII(f) Note 1	Developmental countermeasures	Does not control items in 'production' subject to the EAR	serial production/regular use	No change required	
production	121.1 Cat XVIII(f) Note 2	Developmental countermeasures	USML items 'in production or development'	All stages of life cycle	No change required	
production	121.1 Cat XX(a)(8) Note 1	Developmental vessels	Does not control items in 'production' subject to the EAR	serial production/regular use	No change required	
production	121.1 Cat XX(a)(8) Note 2	Developmental vessels	USML items 'in production or development'	All stages of life cycle	No change required	
production	121.1 Cat XX(c)	Parts and components	production equipment and tooling	tooling	No change required	
manufactures	121.16 Item 8 Category II	Structural materials	Composite structures, laminates, and manufactures thereof	items made from materials	No change required	
production	121.16 Item 9 Category II	Instrumentation and Equipment	and associated production equipment	tooling	No change required	
Manufacturers	122	Title	Registration of Manufacturers and Exporters		No change required	
manufacturing	122.1(a)	Registration requirements	Any person who engages in the business of manufacturing	making/building	No change required	

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Word	Section	Section title	Context	Sense	Change	Policy Issue
manufacturing	122.1(a)	Registration requirements	Requires only one instance of manufacturing or exporting...	making/building	No change required	
manufacturer	122.1(a)	Registration requirements	A manufacturer who does not engage in exporting must still register	making/building	No change required	
production	122.1(b)(2)	Exemptions	activity is confined to the production of unclassified technical data	making/designing	production => creation	
manufacturing	122.1(b)(3)	Exemptions	all of whose manufacturing and export activities...	making/building	manufacturing => production	Yes
manufacturing	122.1(c)	Purpose	to provide information on who is involved certain manufacturing and exporting activities...	making/building	No change required	
manufacturing	122.3(c)	Lapse in registration	engaged in the business of manufacture	make/build	No change required	
manufacturing	122.4(a)(2)(v)	Changes	engaged in manufacturing of defense articles	making/building	No change required	
manufacturer	122.4(a) Note 2	Changes	existing manufacturer/exporter registration	make/build	No change required	
manufacture	122.5(a)	Records	maintain records concerning the manufacture of defense articles	make/build	manufacture => production	
manufactured	123.4(a)	Temporary Import Exemptions	items manufactured abroad	made/built	manufactured => produced	
manufacturing	123.16(b)(1)	Exemptions	in furtherance of a manufacturing license agreement	title/name	No change required	
manufacture	123.16(b)(9)	Exemptions	items used for manufacture, production	making/building	manufacture, assembly, testing, production => production	
production	123.16(b)(9)	Exemptions	items used for manufacture, production	making/building	manufacture, assembly, testing, production => production	
manufactured	123.17(b)	Exemptions	firearms manufactured in or before 1898	made/built	manufactured => produced	
production	123.20(b)	Nuclear Related Controls	engaging in the production or use thereof	make/build	No change required	
Manufacturing	123.22(b)(3)(ii)	Reporting	Manufacturing license agreements	title/name	No change required	

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Word	Section	Section title	Context	Sense	Change	Policy Issue
manufacturing	123.27(a)(4)	Special licensing	articles not detailed design, manufacturing, or production data	information to make/build	manufacturing or production =>production	
production	123.27(a)(4)	Special licensing	articles not detailed design, manufacturing, or production data	information to make/build	manufacturing or production =>production	
manufacture	123.27(a)(4)	Special licensing	do not involve the manufacture abroad of SME	make/build	No change required	
Manufacturing	124.1	Title	Manufacturing license agreements		No change required	
manufacturing	124.1(a)	Approval	agreements are generally characterized as manufacturing license agreements	title/name	No change required	
manufacturing	124.2(c)(4)	Exemptions	technical data may not contain manufacturing know-how	How to make/build	manufacturing know-how => production know-how	Yes
Manufacturing	124.2(c)(4)(iii)	Exemptions	Title		manufacturing know-how => production know-how	Yes
manufacturing	124.2(c)(4)(iii)	Exemptions	information that provides detailed manufacturing processes and techniques	make/build	manufacturing => production	Yes
manufacturing	124.3(a)	Data IFO agreements	manufacturing license agreement	title/name	No change required	
manufacturing	124.3(b)	Classified Technical data	manufacturing license agreement	title/name	No change required	
manufacturing	124.4(a)	Deposit	manufacturing license agreement	title/name	No change required	
coproduction	124.4(b)	Deposit of agreements	agreements involving coproduction or license production outside the US	build/make	No change required	
production	124.4(b)	Deposit of agreements	agreements involving coproduction or license production outside the US	build/make	No change required	
produced	124.4(b)(2)	Deposit of agreements	description and estimate of items to be produced	made/built	No change required	
produced	124.4(b)(3)	Deposit of agreements	articles produced overseas	made/built	No change required	
production	124.4(b)(3)	Deposit of agreements	restrictions on production quantities	number made	No change required	
manufactured	124.4(b)(3)	Deposit of agreements	foreign manufactured articles	made/built	manufactured => produced	

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Word	Section	Section title	Context	Sense	Change	Policy Issue
manufacturing	124.5	Proposed agreements	manufacturing license agreement	title/name	No change required	
Manufacturing	124.6	Termination of Agreements	manufacturing license agreement	title/name	No change required	
manufacturing	124.6	Termination of Agreements	manufacturing license agreement	title/name	No change required	
Manufacturing	124.7	Information required	manufacturing license agreement	title/name	No change required	
manufacturing	124.7(a)	Information required	manufacturing license agreement	title/name	No change required	
manufactured	124.7(a)(1)	Information required	defense article to be manufactured	made/built	manufactured => produced	
manufacturing	124.7(a)(2)	Information required	..design and manufacturing know-how	How to make/build	manufacturing know-how => production know-how	Yes
manufacturing	124.7(a)(2)	Information required	manufacturing rights	right to make/build	manufacturing rights => production rights	
production	124.7(a)(4)	Information in all MLAs	areas in which manufacturing, production, processing.. Is to be licensed	made/built	manufacturing, production =>production	
manufacturing	124.7(a)(4)	Information in all MLAs	areas in which manufacturing, production, processing.. Is to be licensed	made/built	manufacturing, production =>production	
Manufacturing	124.8	Clauses	manufacturing license agreement	title/name	No change required	
manufacture	124.8(a)	Clauses	manufacturing license agreement	title/name	No change required	
manufactured	124.8(a)(5)	Clauses	defense article which may be produced or manufactured from such technical data	made/built	produced or manufactured => produced	
produced	124.8(a)(5)	Clauses	defense article which may be produced or manufactured from such technical data	made/built	produced or manufactured => produced	
Manufacturing	124.9	Additional Clauses	manufacturing license agreement	title/name	No change required	
manufacturing	124.9(a)	Additional Clauses	manufacturing license agreement	title/name	No change required	
manufacturing	124.9(a)	Additional Clauses	manufacturing license agreement	title/name	No change required	
manufacture	124.9(a)(1)	Additional Clauses	territory wherein manufacture or sale herein is licensed	make/build	manufacture => production	

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Word	Section	Section title	Context	Sense	Change	Policy Issue
manufacture	124.9(a)(1)	Additional Clauses	territory wherein manufacture or sale herein is licensed	make/build	manufacture => production	
manufacture	124.9(a)(3)	Additional Clauses	are involved in the manufacture, use, or sale of	make/build	manufacture => production	
production	124.9(b)	Additional Clauses	agreement for the production of SME	make/build	No change required	Yes
manufacturing	124.10(a)	Nontransfer and Use	manufacturing license agreement	title/name	No change required	
manufacturing	124.11(a)	Congressional Notification	manufacturing license agreement	title/name	No change required	
manufacturing	124.11(a)	Congressional Notification	for the manufacture abroad of SME	make/build	manufacture => production	Yes
manufacturing	124.11(a)	Congressional Notification	manufacturing license agreement	title/name	No change required	
manufacturing	124.12	Required TL information	manufacturing license agreement	title/name	No change required	
produced	124.13(a)	Procurement	defense articles to be produced only..	make/build	No change required	
manufacture	124.13(b)	Procurement	data to be used in the foreign manufacture of defense articles	make/build	manufacture => production	
producing	124.13(b)	build-to-print	build-to-print means producing and end item from technical drawings..	make/build	No change required	
manufacturing	124.13(b)	build-to-print	..detailed process information or manufacturing know-how	How to make/build	manufacturing know-how => production know-how	
manufacture	124.13(c)(1)	Procurement	technical data for the manufacture of defense articles	make/build	manufacture => production	
manufacture	124.13(c)(4)	Procurement	for manufacture of equipment for delivery	make/build	manufacture => production	
manufactured	124.13(c)(6)	Procurement	delivery of defense articles manufactured abroad	make/build	manufactured => produced	
produced	124.13(d)	Procurement	clearly identify the article to be produced	made/built	No change required	
production	125.1(b)	Classified Exports	exemptions.. May not be used for foreign production purposes..	make/build	No change required	
produces	125.1(d)	Classified Exports	the person who intends to export the technical data produces or manufactures defense articles	make/build	produces or manufactures => produces	

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Word	Section	Section title	Context	Sense	Change	Policy Issue
manufactures	125.1(d)	Classified Exports	the person who intends to export the technical data produces or manufactures defense articles	make/build	produces or manufactures => produces	
producing	125.4(a)	Exemptions	establishing offshore procurement arrangements or producing defense articles offshore (see 124.13)	make/build	No change required	
manufacturing	125.4(b)(1)	Exemptions	manufacturing license agreement	title/name	No change required	
production	125.4(b)(3)	Exemptions	data does not disclose the details of design, development, production, or manufacture of any defense article	make/build	production, or manufacture => or production	
manufacture	125.4(b)(3)	Exemptions	data does not disclose the details of design, development, production, or manufacture of any defense article	make/build	production, or manufacture => or production	
production	125.4(b)(6)	Exemptions	firearm data..design, development, production, or manufacturing information	make/build	production, or manufacture => or production	
manufacturing	125.4(b)(6)	Exemptions	firearm data..design, development, production, or manufacturing information	make/build	production, or manufacture => or production	
production	125.4(b)(8)	Exemptions	data does not disclose the details of design, development, production, or manufacture of any defense article	make/build	production, or manufacture => or production	
manufacture	125.4(b)(8)	Exemptions	data does not disclose the details of design, development, production, or manufacture of any defense article	make/build	production, or manufacture => or production	
production	125.4(b)(9)(iv)	Exemptions	not be used for foreign production purposes	make/build	No change required	
manufacture	125.4(c)(1)	Built-to-print	necessary to permit manufacture of an acceptable defense article	making/building	manufacture => production	
produce	125.4(c)(1)	Built-to-print	a foreign consignee can produce a defense article	make/build	No change required	

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Word	Section	Section title	Context	Sense	Change	Policy Issue
produce	125.4(c)(1)	Built-to-print	capability to produce the defense article	make/build	No change required	
produce	125.4(c)(1)	Built-to-print	not be able to produce an acceptable defense article	make/build	No change required	
produce	125.4(c)(2)	Build/Design to Spec	can design and produce a defense article	make/build	No change required	
produce	125.4(c)(2)	Build/Design to Spec	capability to both design and produce the defense article	make/build	No change required	
production	125.4(c)(3)	Basic Research	systematic application of knowledge towards the production of useful materials, devices, and systems or methods	creation	No change required	
manufacturing	125.4(c)(6)	Manufacturing know-how	title		Manufacturing know-how => production know-how	
manufacturing	125.4(c)(6)	Manufacturing know-how	information that provides detailed manufacturing process and techniques need to translate a detailed design into a qualified, finished defense article	make/build	manufacturing => production	
produce	125.4(c)(6)	Manufacturing know-how	Information may be provided in a build-to-print package that is necessary in order to produce an acceptable defense article	make/build	No change required	
manufacture	125.5(a)	Exemptions for plant visits	..does not disclose the details of the design, development, production, or manufacture	make/build	production, or manufacture => or production	
production	125.5(a)	Exemptions for plant visits	..does not disclose the details of the design, development, production, or manufacture	make/build	production, or manufacture => or production	
manufacture	125.5(b)	Exemptions for plant visits	..does not disclose the details of the design, development, production, or manufacture	make/build	production, or manufacture => or production	
production	125.5(b)	Exemptions for plant visits	..does not disclose the details of the design, development, production, or manufacture	make/build	production, or manufacture => or production	

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Word	Section	Section title	Context	Sense	Change	Policy Issue
manufacture	125.5(c)	Exemptions for plant visits	..does not apply to technical data which could be used for design, development, production, or manufacture of a defense article	make/build	production, or manufacture => or production	
production	125.5(c)	Exemptions for plant visits	..does not apply to technical data which could be used for design, development, production, or manufacture of a defense article	make/build	production, or manufacture => or production	
Production	126.5(b)	Canadian Exemptions	Canadian Defense Production Act	title/name	No change required	
manufacturing	126.7(a)(2)	Denial of licenses	Terms of a manufacturing license	title/name	No change required	
manufacturer	126.7(a)(6)	Denial of licenses	An applicant, any party to the export or agreement, any source or manufacturer of the defense service..	maker/build	manufacturer => producer	
manufacture	126.14(a)(1)	Special Comprehensive authorizations NATO +4	to design, develop, and manufacture defense articles	make/build	manufacture => produce	
manufacturing	126.14(a)(2)	Special Comprehensive authorizations NATO +4	providing all phases of the necessary support (including the needed hardware, technical data, defense services, development, manufacturing, and logistic support)	making/building	manufacturing => production	
production	126.14(a)(3)(i)	Special Comprehensive authorizations NATO +4	covering research and development or production)	make/build	No change required	
manufacturer	126.16(c)	US-AU Treaty	..any party to the export, or any source or manufacturer is ineligible to receive export licenses	make/build	manufacturer => producer	
production	126.16(e)(2)	US-AU Treaty	US and Australia defense, research, development, production, and support programs	make/build	No change required	

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Word	Section	Section title	Context	Sense	Change	Policy Issue
production	126.16(l)(2)(ii)	US-AU Treaty	cooperative security and defense research, development, production, and support programs	making/building	No change required	
production	126.16(n)(4)	US-AU Treaty	require the production of documents	provide records	No change required	
manufacturing	126.16(o)(1)(iii)	US-AU Treaty	A contract, regardless of value, for the manufacturing abroad of any SME item	making/building	manufacturing => production	Yes
manufacturer	126.17(c)	US-UK Treaty	..any party to the export, or any source or manufacturer is ineligible to receive export licenses	maker/buildier	manufacturer => producer	
production	126.17(e)(2)	US-UK Treaty	US and Australia defense, research, development, production, and support programs	make/build	No change required	
production	126.17(l)(2)(ii)	US-UK Treaty	cooperative security and defense research, development, production, and support programs	making/building	No change required	
production	126.17(n)(4)	US-UK Treaty	require the production of documents	provide records	No change required	
manufacturing	126.17(o)(1)(iii)	US-UK Treaty	A contract, regardless of value, for the manufacturing abroad of any SME item	making/building	manufacturing => production	Yes
manufacturing	Supp 1 to Part 126	Cat I-XX Defense Services	or manufacturing know-how as defined in 125.4(c)(6)	how to make/build	Manufacturing know-how => production know-how	
produce	Supp 1 to Part 126	Cat I-XX Defense Services	other than that required to produce, design, assemble, or maintain'	make/build	No change required	
produced	Supp 1 to Part 126	Cat V	Iron powder produced by the reduction of iron oxide with hydrogen	made via a process	No change required	
producing	Supp 1 to Part 126	Cat VI	capable of operating while and motion and of producing or maintaining temperatures	capable of providing	No change required	
produced	Supp 1 to Part 126	Cat VI	in a magnetic field produced by superconducting windings	capable of providing	No change required	

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Word	Section	Section title	Context	Sense	Change	Policy Issue
producing	Supp 1 to Part 126	Cat VII	capable of operating while and motion and of producing or maintaining temperatures	capable of providing	No change required	
produced	Supp 1 to Part 126	Cat VII	in a magnetic field produced by superconducting windings	capable of providing	No change required	
producing	Supp 1 to Part 126	Cat VIII	capable of operating while and motion and of producing or maintaining temperatures	capable of providing	No change required	
produced	Supp 1 to Part 126	Cat VIII	in a magnetic field produced by superconducting windings	capable of providing	No change required	
producing	Supp 1 to Part 126	Cat XX	capable of operating while and motion and of producing or maintaining temperatures	capable of providing	No change required	
produced	Supp 1 to Part 126	Cat XX	in a magnetic field produced by superconducting windings	capable of providing	No change required	
Manufacturing	Supp 1 to Part 126	II(k)	Manufacturing know-how related to USML Category II(d)	how to make/build	Manufacturing know-how => production know-how	
Manufacturing	Supp 1 to Part 126	III(e)	Manufacturing know-how related to USML Category III(d)(1) or III(d)(2)	how to make/build	Manufacturing know-how => production know-how	
Manufacturing	Supp 1 to Part 126	IV(i)	Manufacturing know-how related to USML Category IV(a), (b), or (g)	how to make/build	Manufacturing know-how => production know-how	
Manufacturing	Supp 1 to Part 126	VIII(i)	Manufacturing know-how related to USML Category VIII(a) or (e)	how to make/build	Manufacturing know-how => production know-how	
Manufacturing	Supp 1 to Part 126	X(e)	Manufacturing know-how related to USML Category X(a)(1) or (2)	how to make/build	Manufacturing know-how => production know-how	
Manufacturing	Supp 1 to Part 126	XI(d)	Manufacturing know-how related to USML Category XI(a)(3) or (4)	how to make/build	Manufacturing know-how => production know-how	
Manufacturing	Supp 1 to Part 126	XII(f)	Manufacturing know-how related to USML Category XII(d)	how to make/build	Manufacturing know-how => production know-how	
manufactured	Supp 1 to Part 126	XIII(e)	armor plate manufactured to comply with	designed/built	manufactured => produced	
Manufacturing	Supp 1 to Part 126	Note 5	Manufacturing know-how as defined in 125.4(c)(6)	how to make/build	Manufacturing know-how => production know-how	

Appendix A – Suggested updates based on revised definitions

Word	Section	Section title	Context	Sense	Change	Policy Issue
production	Supp 1 to Part 126	Note 6	It also includes production and test equipment	tooling	No change required	
manufacture	Supp 1 to Part 126	Note 7	design, arrangement, development, manufacture, testing, operation, administration, training, maintenance, and repair...		manufacture => production	
manufacturing	Supp 1 to Part 126	Note 12	Manufacturing know-how as defined in 125.4(c)(6)	how to make/build	Manufacturing know-how => production know-how	
produced	Supp 1 to Part 126	Note 14(b)(1)	defense articles being produced directly to an identified manufacturer in the US registered in accordance with Part 122	made/built	No change required	
manufacturer	Supp 1 to Part 126	Note 14(b)(1)	defense articles being produced directly to an identified manufacturer in the US registered in accordance with Part 122	maker/builder	No change required	
manufacture	Supp 1 to Part 126	Note 14(b)(1)	a Canadian registered person authorized in writing to manufacture defense articles	make/build	manufacture => produce	
produced	Supp 1 to Part 126	Note 14(c)	The report shall include the article(s) being produced; the	made/built	No change required	
manufacturing	127.1(b)(3)	Violations	To engage in the US in the business of manufacturing or exporting	making/building	No change required	
manufacturing	127.1(b)(3)	Violations	To engage in the US in the business of manufacturing or exporting	making/building	No change required	
manufacturing	127.1(b)(3)	Violations	To engage in the US in the business of manufacturing or exporting	making/building	No change required	
produced	127.1(c)	violations	who obtain custody of a defense article exported from the US or produced under an agreement in Part 124	made/built	No change required	
production	127.4(c)	Authority of ICE and CBP	may require the production of relevant documents	bring forth	No change required	
production	127.5	Authority of DSS	may require the production of relevant documents	bring forth	No change required	
production	128.6(b)	Discovery	the production of books, records	bring forth	No change required	

Appendix A – Suggested updates based on revised definitions

Word	Section	Section title	Context	Sense	Change	Policy Issue
production	128.6(c)	Discovery	the production of books, records	bring forth	No change required	
manufacture	129.2(b)	Definitions	Brokering activities means any action on behalf of another to facilitate the manufacture, export, permanent import,	make/build	manufacture => production	
manufacturer	129.3(d)	Requirements to Register	U.S. persons who are registered as a manufacturer or exporter in accordance with part 122	maker/builder	No change required	
manufacturer	129.3(d)	Requirements to Register	identified as brokers within their manufacturer or exporter Statement of registration	name/title	No change required	
manufacture	129.6(b)(1)	Procedures for obtaining approval	The action to be taken by the applicant to facilitate the manufacture, export, import, or transfer	make/build	manufacture => production	
manufacturer	129.8 Note 2 to para (d)	Submissions	with an existing manufacturer/exporter registration	name/title	No change required	
manufacturer	130.8(a)	Vendor	Vendor means any distributor or manufacturer who ..	maker/builder	manufacturer => producer	