

NASA's Export Control Program Response to Outside Reviews

National Aeronautics and
Space Administration



NASA ADVISORY COUNCIL INSTITUTIONAL COMMITTEE Spring 2015 Meeting March 26, 2015



*David T. Flynn
NASA Headquarters Export Administrator*



- **NASA's Export Control Program**
- Recent Reviews by Outside Organizations
- NASA Export Control Operations Manual
- Export Reform and NASA
- Questions



NASA Export Control Program

- <http://oiiir.hq.nasa.gov/nasaecp/index.html>



ECILD Compliance is Part of the NASA Mission



Export Control and Interagency
Liaison Division

- “It is NASA policy to ensure that exports and transfers of commodities, technical data, or software to foreign persons are carried out in accordance with United States export control laws and regulations, and Administration and NASA policy.”

NPD 2190.1, Section 1.a.

- “We want to maximize the benefits of our international efforts while ensuring that we comply with U.S. export control laws and regulations. This is the personal responsibility of each employee.”

NPR 2190.1B, Section P.1.

Compliance is everyone's job at NASA

ECILD Key Concepts in NPR 2190.1B

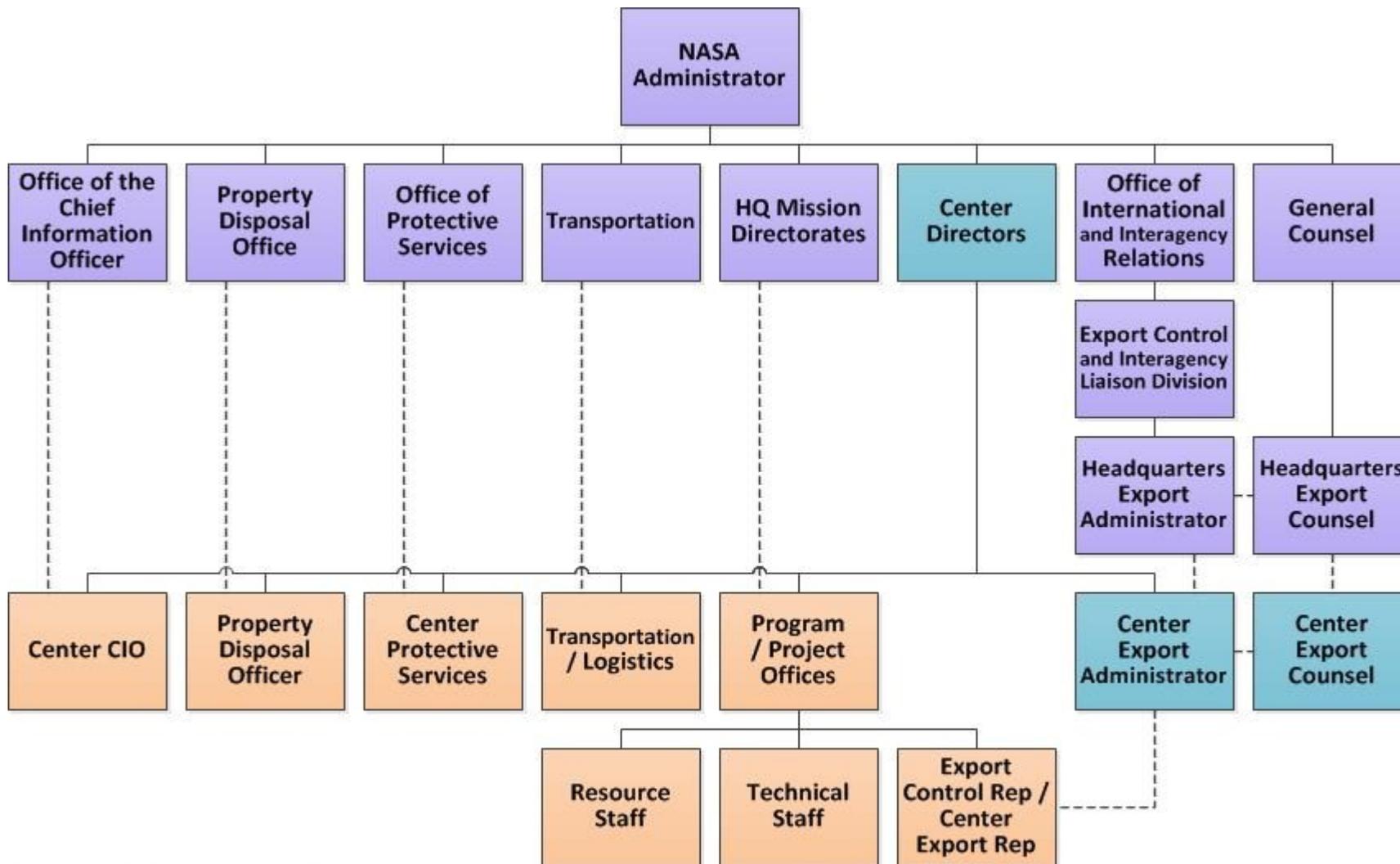


Export Control and Interagency
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- No exports of controlled items to any foreign entity under any NASA program unless the exporter is confident that such exports are in conformity with approved contracts or international agreements and U.S. export control laws and regulations
- Generally, NASA exports to foreign entities are only conducted in furtherance of NASA international agreements or contracts



Export Control and Interagency
Liaison Division



Agency EC Roles & Authority
Center EC Authority
Resource Staff



- NASA Project Managers have “export control” responsibilities under NPR 2190.1B
 - NASA program and project managers shall include "export control milestones" in their program and project plans and should collaborate with HEA/CEAs early in a project's life cycle (prior to the mission definition review) to identify and assess export-controlled technical data that will be provided to foreign partners, and other activities as appropriate, to ensure that export control matters are considered and resolved in advance of shipping or transfer dates.
 - Include appropriate safeguards for commodities, technologies, and software exported pursuant to international agreements or contracts; controlled technical data & commodities should be marked or identified in accordance with the Transfer of Goods and Technical Data Clause of the relevant international agreement
 - Provide necessary information to HEA/CEAs for determination re: need for validated export licenses
 - Meet all deadlines for submission of export licenses
 - Include a Technology Transfer Control Plan (TTCP), where appropriate, for programs with international involvement
 - Support export control training for program/project personnel
 - Maintain oversight of NASA-directed contractor export activities, including concurrence on the use of NASA-authorized Exemptions, use of NASA-obtained Licenses, and requiring that copies of all export records (AES, GBLs, waybills, invoices) be submitted to NASA



- NASA provides review of licenses submitted to the Department of State and the Department of Commerce
- NASA contractors, should be coordinating with NASA in advance of any license application that will further a NASA program
- **NPD/NPR 2190 is applicable to NASA contractors and grantees as required in their contracts or grants**
- Contractor is responsible for export compliance in the execution of contracted work (NFS 1825.1103-70 and 1852.225-70)
 - Except when NASA directs or authorizes a contractor to effect exports using a NASA-obtained IVL or GBL
 - NFS Clause 1852.225-70 “Export Licenses” – required in all domestic contracts
 - Contractors have responsibility to obtain any required licenses unless otherwise agreed with NASA



- NASA's International Agreements - the basis for NASA foreign cooperative (or reimbursable) activity
 - define the responsibilities of the parties, scope of the work to be performed, & the terms and conditions under which the cooperation will be effected
- All NASA International Agreements contain a clause on transfers of controlled goods & data
- NASA's International Agreements do **NOT** trump export control laws & regulations

An International Agreement does not replace a contractor's need for a Technical Assistance Agreement



- Early coordination between the NASA Program/Project Managers, Contractor(s), and NASA Headquarters or Center Export Administrator will benefit program
 - Understand what is controlled
 - International parties involved
 - Export milestones added to program/project schedule
 - Develop technology transfer control plan
 - Coordination of meetings including international partner(s)
- NPR 2190.1B requires export plans and **reporting** for exports effected in support of NASA programs
- Mark/determine the export jurisdiction of data/hardware when created or acquired
- Recordkeeping and regular audits



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ECILD Protecting NASA Technologies



Export Control and Interagency
Liaison Division



United States Government Accountability Office
Report to Congressional Requesters

April 2014

EXPORT CONTROLS

NASA Management
Action and Improved
Oversight Needed to
Reduce the Risk of
Unauthorized Access
to Its Technologies

GAO-14-315

A Report by a Panel of the
NATIONAL ACADEMY OF PUBLIC ADMINISTRATION
for the National Aeronautics and Space Administration



An Independent Review of
Foreign National Access Management



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January 2014





Deliverables Identified in Response to NAPA and GAO Reports Concerning Export Controls

Review	Due Date		Rec. #	Deliverable	Current Status
GAO	2015	April	1	Establish guidance defining the appropriate level and organizational placement of the CEA function.	Completed 9/17/2014
GAO	2016	April	2	Assess CEA workload and other factors to determine appropriate resources needed to support the CEA function	
GAO	2015	April	3	Implement a risk-based approach to the export control program by using existing information sources	Completed 3/17/2015
GAO	2015	April	4	Direct Center Directors to oversee implementation of export-related audit findings	Completed 8/14/2014
GAO	2015	April	5	Develop a plan for addressing CEA issues and suggestions for improvement provided during the annual export control conference	Completed 7/14/2014
GAO	2015	April	6	Re-emphasize to CEAs the requirements on how and when to notify the HEA about potential voluntary disclosures	Completed 6/13/2014
GAO	2016	July	7	Develop plans with specific time frames to monitor corrective actions related to management of foreign national access	
NAPA	2015	April	19a	Export Control Manual Draft	Completed 3/17/2015
NAPA	2014	April	19b	Strong Communication of Export Control Commitment	Completed 5/8/2014
NAPA	2014	May	19c	Conduct Periodic Outside Reviews of Center Export Control Programs	Ongoing
NAPA	2015	April	19d	HQ Endorsement of CEA Appointments and Annual Reviews	Completed 9/17/2014
NAPA	2015	April	20	Export Control Training Program Plan	Completed 3/17/2015

Message from the Administrator



NASA's Export Control Program

As the world's premier aerospace agency, with remarkable achievements and expertise in space launch vehicles, satellites, aircraft and other advanced technologies, NASA has a unique responsibility to safeguard the sensitive technologies that are crucial to our missions. As NASA employees, we have each been entrusted with access to impressive resources, talent, capabilities and technologies, all of which demand careful stewardship. The loss or theft of certain advanced aerospace technologies could have grave national security implications for our nation. As a result, U.S. government export control regulations and NASA's security procedures are designed to protect these sensitive technologies.

Cooperation with other nations is one of our founding principles. And we have always sought the widest distribution of information about our programs, whenever practical and appropriate. Accordingly, the NASA Export Control Program, one of the first of its kind in the federal government, is devoted to maximizing the benefits of our international efforts while ensuring that we comply with all U.S. export control laws and regulations. The continuing success of this program and the protection of sensitive technologies is the personal responsibility of every NASA employee.

Earlier today I reiterated the importance of this effort in a conversation with representatives from across the agency who are responsible for the implementation of NASA's Export Control Program on a daily basis. In support of their work, I also want to remind each of you of your responsibility to comply with all export control regulations and our foreign national management requirements. This is a serious matter and penalties for noncompliance can include fines and imprisonment, as well as administrative personnel actions, such as reduction-in-grade or even termination.

I encourage each of you to take the time to talk with your local export control officials to learn more about NASA's Export Control Program and your responsibilities in protecting sensitive technologies. You can find a list of the Center Export Administrators on the NASA Export Control Program website at <http://oiair.hq.nasa.gov/nasaecp/>. In the near future you can also expect to see an expansion of online and in-person training to assist you in better understanding export controls and the important part you play in making our program a continuing success.

Thank you for your attention to this matter of great importance to NASA and the nation.

Charlie B.

ECILD Example Action Tracking List



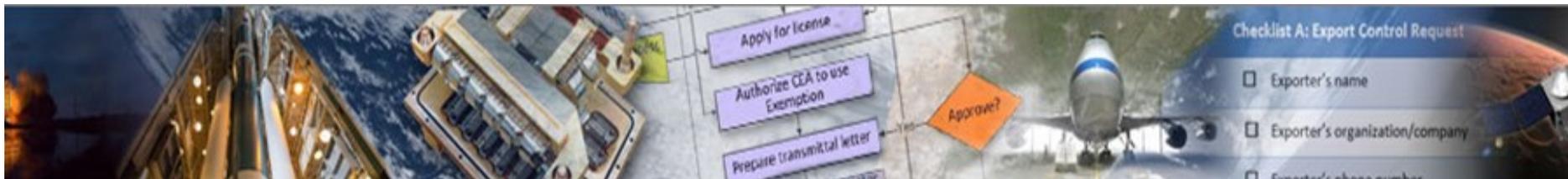
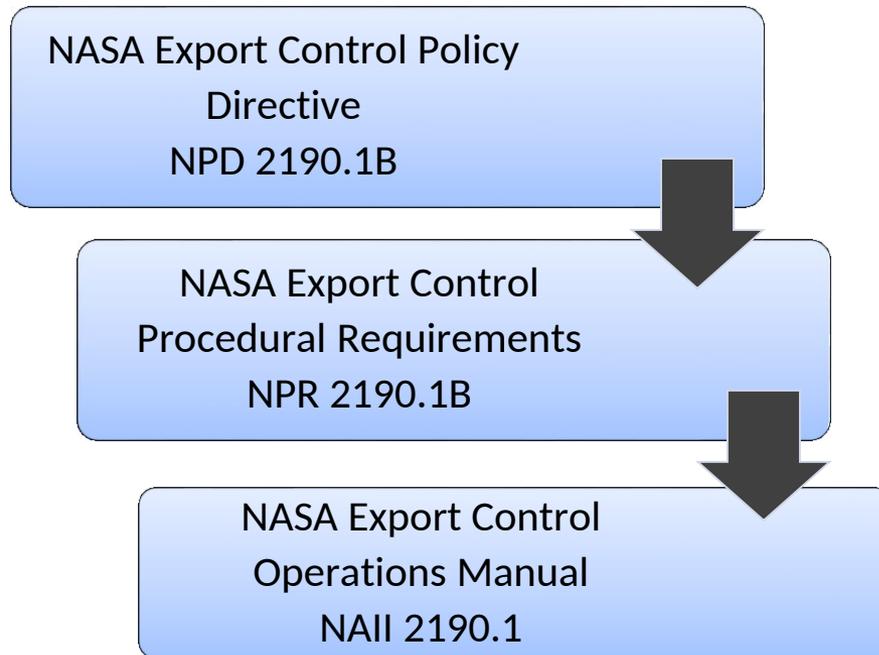
Export Control and Interagency
Liaison Division

No.	Category	Action/Issue	Date Added	Due Date	Status	Completion Date
1	FNAMP	Need for current and readily available policy for foreign national physical and logical access. Centers are awaiting HQ guidance before implementing any new action.	5/8/2014	12/1/2015	FNAMP Manual being prepared in response to NAPA recommendations. (22 Jul 2014)	OPEN
7	FNAMP	Noted problems getting fingerprints for vetting FNs living in or from designated countries for remote IT access.	5/8/2014	12/1/2015	Concern forwarded to FNAMP Program Manager to be addressed in the FNAMP Manual. (22 Jul 2014)	OPEN
32	Resources	Several Centers indicated that Export Control Offices need to focus more of its resources on program/projects in order to be more proactive and less reactive.	5/8/2014	4/30/2016	In response to GAO recommendations, NASA will conduct an assessment of CEA workloads and other factors to determine appropriate resources needed at each Center. With sufficient resources, Center Export Control offices should be able to address these concerns. (22 Jul 2014)	OPEN
19	EC Policies	Centers suggested the creation of an Agency-wide policy that travel orders cannot be picked up without a signed 1676 or a determination that no presentation will be given.	5/8/2014	3/30/2015 6/30/2015	NASA HEA will discuss this proposal with NASA Management and the Travel Office. Any specific guidance will be incorporated into the Export Control Manual. (22 Jul 2014) The current system of reviewing and approving travel orders do not allow for an automatic restriction but does allow for attaching documents such as signed 1676. Various Centers have internal procedures where approvals are pending until these documents are attached. HEA will work with the HQ Travel Office to see if such restrictions can be incorporated into the next release of the Agency's travel order system. (17 Mar 2015)	OPEN
36	Audits	One Center indicated a need to improve and update the Annual Export Control Audit Module.	5/8/2014	10/1/2014 11/4/2014	HEA will solicit input for CEAs to be delivered by the next VITS. (22 Jul 2014) As of 10/7/2014, HEA has not received inputs for additions to the annual audit. Will extend this request until Nov 4. (7 Oct 2014) Inputs have been received, the Upcoming Annual Internal Audit of the NASA Export Control Program for CY2014 will be discussed at the 22 January 2015 VITS. (7 Nov 2014)	CLOSED 11/7/2014
3	FNAMP	Results of annual EC audits should be shared with FNAMP Program Manager	5/8/2014	7/30/2014	Results of all annual export control audits will be shared with FNAMP Program Manager. (22 Jul 2014) Results of last annual export control audit shared with FNAMP Program Manager. All subsequent results will be shared as they are available. (7 Oct 2014)	CLOSED 10/7/2014



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The Operations Manual, NAI 2190.1, implements NASA’s EC directive and policy by providing **consistent processes** and establishing **standard training requirements** across the Agency.



- The organization of the document is guided by Bureau of Industry and Security (BIS) “Compliance Guidelines” and “Audit Module” by making use of **checklists** and **process flowcharts**.
- The NAI document format is similar to an existing implementing document (NAI 1050.1C – it implements NPD 1050.1C). The document is accessible through NPR 2190.1B:



**NASA
Procedural
Requirements**

Request Notification of Change (NASA Only)

Subject: NASA Export Control Program

Responsible Office: Export Control & Interagency Liaison Division

[View all pages in PDF](#)

[NAI 2190.1, NASA Export Control Program Operations Manual \(MSWord Version\)](#)
[NAI 2190.1, NASA Export Control Program Operations Manual \(PDF Version\)](#)

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Preface

- P.1 Purpose
- P.2 Applicability
- P.3 Authority
- P.4 Applicable Documents and Forms
- P.5 Measurement/Verification
- P.6 Cancellation

Chapter 1. Introduction

- The ops manual is intended to accomplish the following concerning NASA's Export Control Program (ECP):
 - **What** is an export and export control?
 - **When** is export necessary?
 - **Who** is authorized to approve an export in the Agency?
 - **Where** to find information and resources for questions?
 - **How** to conduct various export related activities?
 - Specify consistent processes for Non-Export Control personnel
 - Specify consistent processes for Export Control Staff (ECS)
 - Specify training requirements for all personnel
 - Introduce the risk-based approach to Export Control

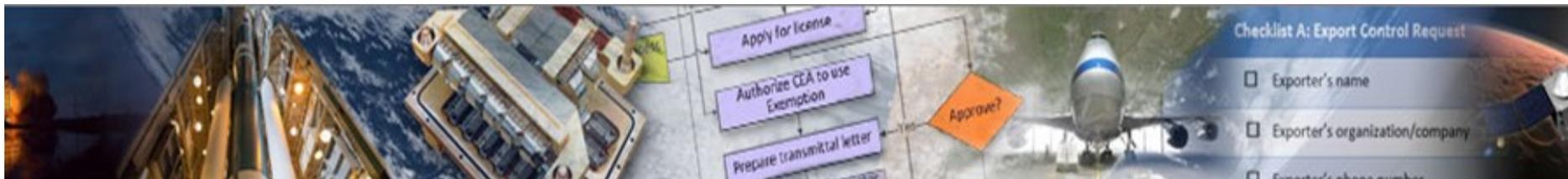
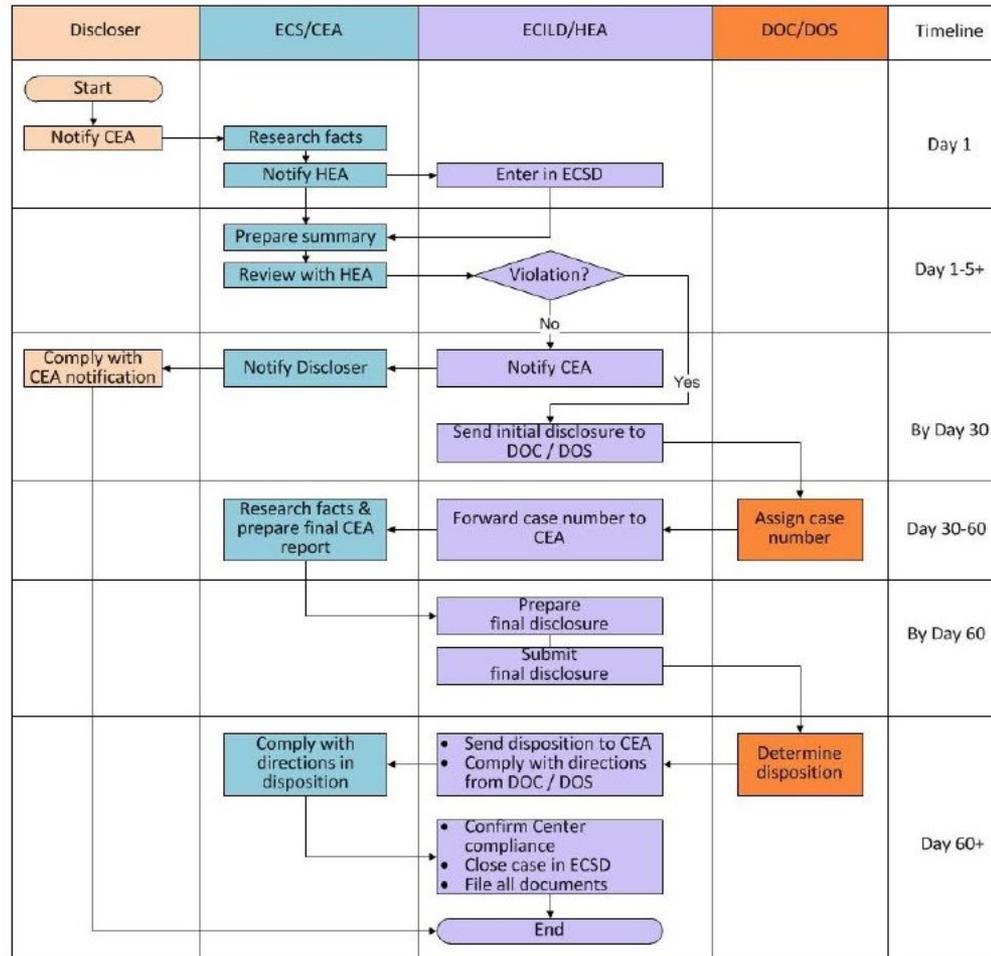
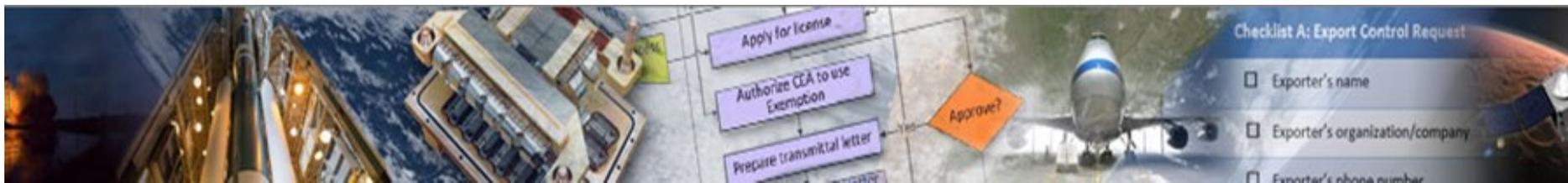




Figure 15: Process for Voluntary Disclosure



- Training program is designed with the emphasis that:
 - All NASA employees are aware of EC laws, regulations and NASA policies irrespective of whether roles and responsibilities involve EC related activities or not.
 - The Agency leadership is aware of the resources and training needed to implement EC processes per the Ops Manual.
 - Train personnel on processes per the Ops Manual and in accordance with their roles and responsibilities for export control.
 - Center ECS is able to supplement the training with Center-specific content.
 - The Agency has a consistent training requirement for CEAs and ECRs





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- Objective: Protecting U.S. National Security
- *“Higher fence around a smaller yard”*
- Must be multilateral to be effective
 - Unilateral controls must address legal or foreign policy objective
- Dynamic control lists that are easily updated
 - Reflect changing technology/availability
- Transparent, predictable and timely processes
- Strengthen ability to comply, enforce

Visit: www.export.gov/ecr



ECR Final Rule I (78 FR 22740) – *Effective October 15, 2013*

- VIII (Aircraft)
- XVII (Classified Defense Articles)
- XIX (Gas Turbine Engines)
- XXI (Articles Not Enumerated)
- “Specially Designed” (§120.41)
- “Paragraph (x)”
- Transition Plan



ECR Final Rule II (78 FR 40922) – *Effective January 6, 2014*

- VI (Naval Vessels) VII (Military Vehicles)
- XIII (Materials) XX (Submersibles)

ECR Final Rule III (79 FR 0034)– *Effective July 1, 2014*

- IV (Missiles) V (Explosives)
- IX (Simulators) X (Protective Equipment)
- XVI (Nuclear Weapons)



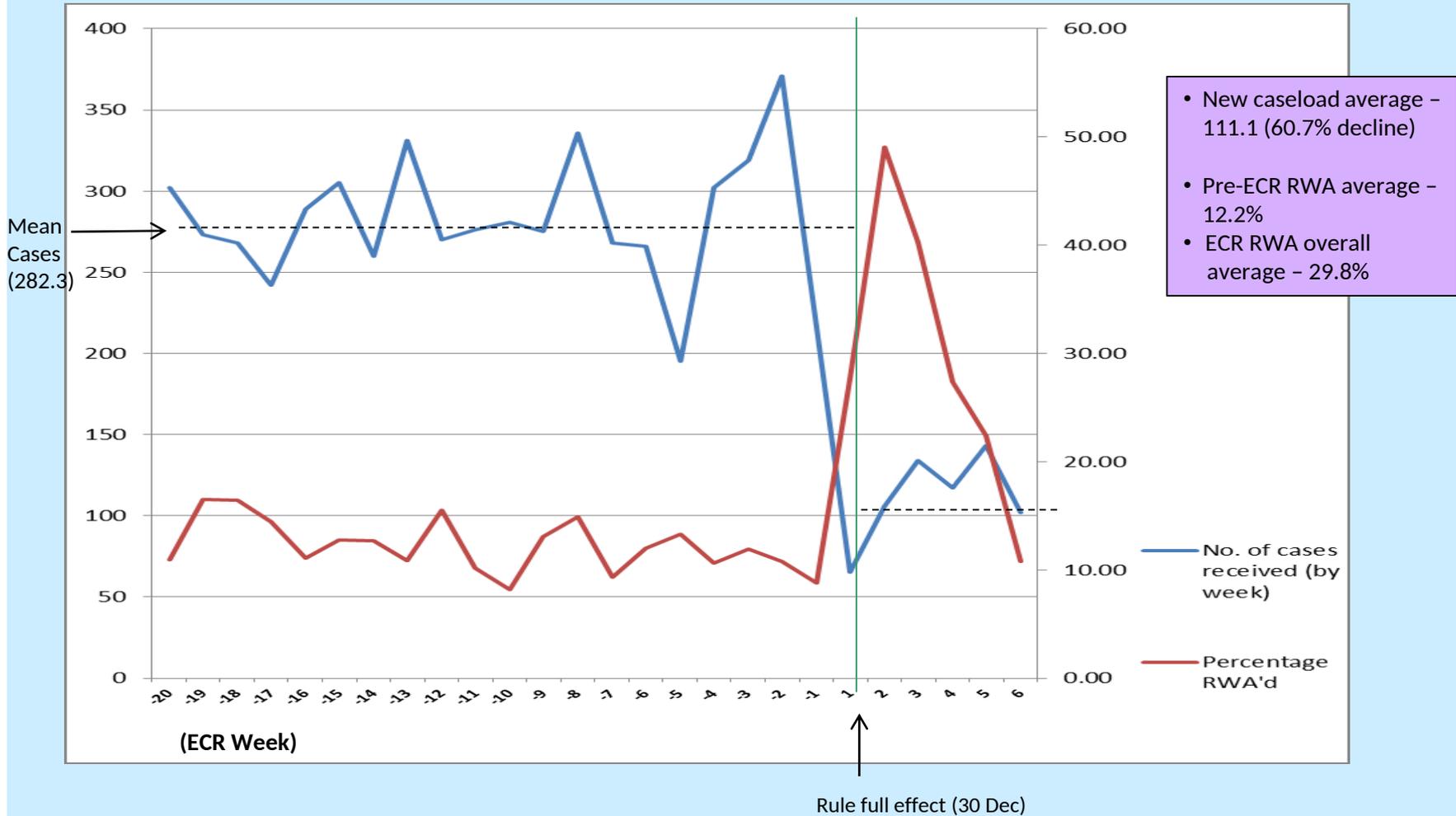
Export Control Reform Actions

ECR Final Rule IV (78 FR 27180) – *Effective November 10, 2014*

- XV (Spacecraft and Related Articles)

Revisions to USML Category XI (79 FR 37536) – *Effective December 30, 2014*

- XI (Military Electronics)





Cat XV Pre-ECR

CCL Pre-ECR

Revised USML

Revised CCL

Cat XV

Other

New ECCN 9x515

Existing ECCNs

Military and Intelligence Satellites

Military Ground equipment

Parts critical for military

Services for USML and CCL

GPS Receivers (XV now

Worldwide license, except Canada.
25% *de minimis*, except 0% for China and other D:5 countries.
STA eligible for A:5, except for space based logistics satellites and certain software and technology

Microelectronic circuits in ECCN 3A001 and 3A101, Star Trackers in ECCNs 7A004 and 7A104, and items in ECCNs using “space qualified” are excluded from 9A515.x.

Satellites and Ground Equipment not on the USML

Specially Designed Radiation Hardened Integrated Circuits

Specially Designed Parts not on USML

New Satellite Related Item or Technology

Specific Electronics

Specific Optical Sensors

Specific Radar Systems



- Satellites and spacecraft
 - Unique military and intelligence functions
(e.g., nuclear detection, intelligence collection, missile tracking, anti-satellite or space-based weapons, classified operation or equipment, and navigation)
 - Certain remote sensing with military applications
 - Man-rated habitats with integrated propulsion
- Ground control equipment
 - Performs a uniquely military function for one of satellites above
- Parts & components
 - 16 specific technologies critical to military functions
 - Any payload that performs one of military functions listed above
 - DoD funded payloads

ECILD Services Remaining on USML



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- Satellite integration and launch services
 - Provided by a U.S. person
 - To a foreign launch integrator or launch vehicle provider
- Launch support - includes furnishing assistance/information for:
 - Integration of any satellite to a launch vehicle
 - Launch failure analysis

ECILD Items Transferred to Commerce

Export Control and Interagency
Liaison Division

- Satellites
 - Commercial communication satellites without classified components
 - Lower-performance remote sensing satellites
 - Planetary rovers, planetary and interplanetary probes
 - Human-rated spacecraft without integrated propulsion*
- Related systems
 - Ground control systems
 - Training simulators; test, inspection, and production equipment
 - Non-critical software and technology
 - Radiation hardened microelectronics
- Parts & components of satellite bus and payloads not on USML

Many of these items are eligible to be exported under exceptions

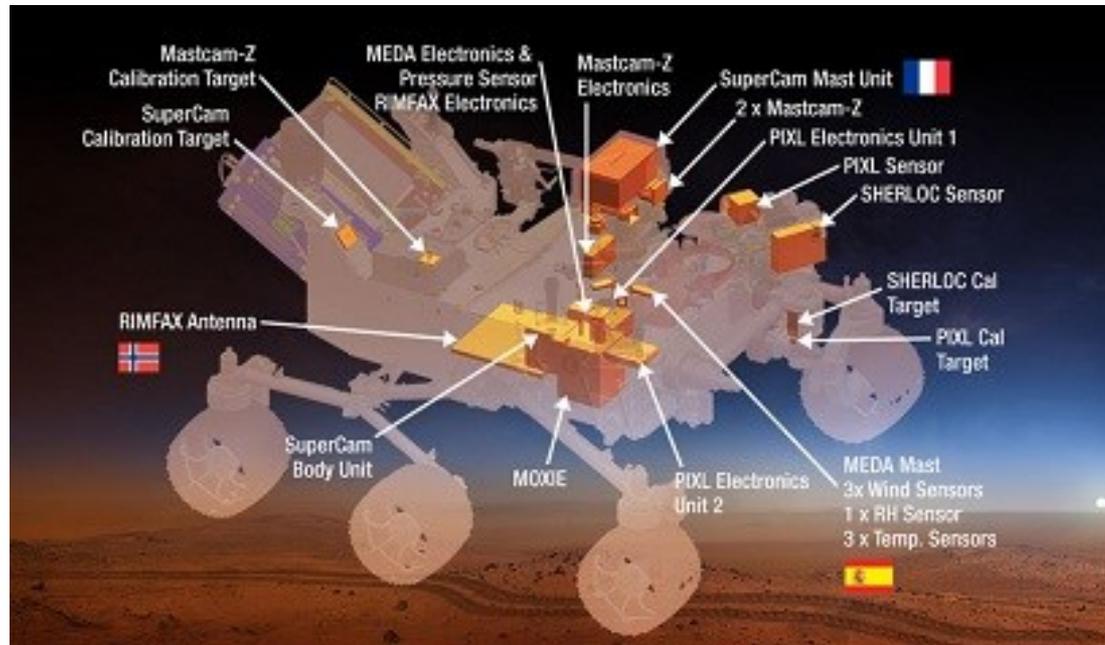


- Changes in the regulations will cause evaluation on impacts to existing programs
- Indications are that the changes will be beneficial to NASA and our international and domestic partners
- Cooperation with agencies of Cooperating Governments greatly facilitated for items moved to Commerce regulation with access to more license exceptions

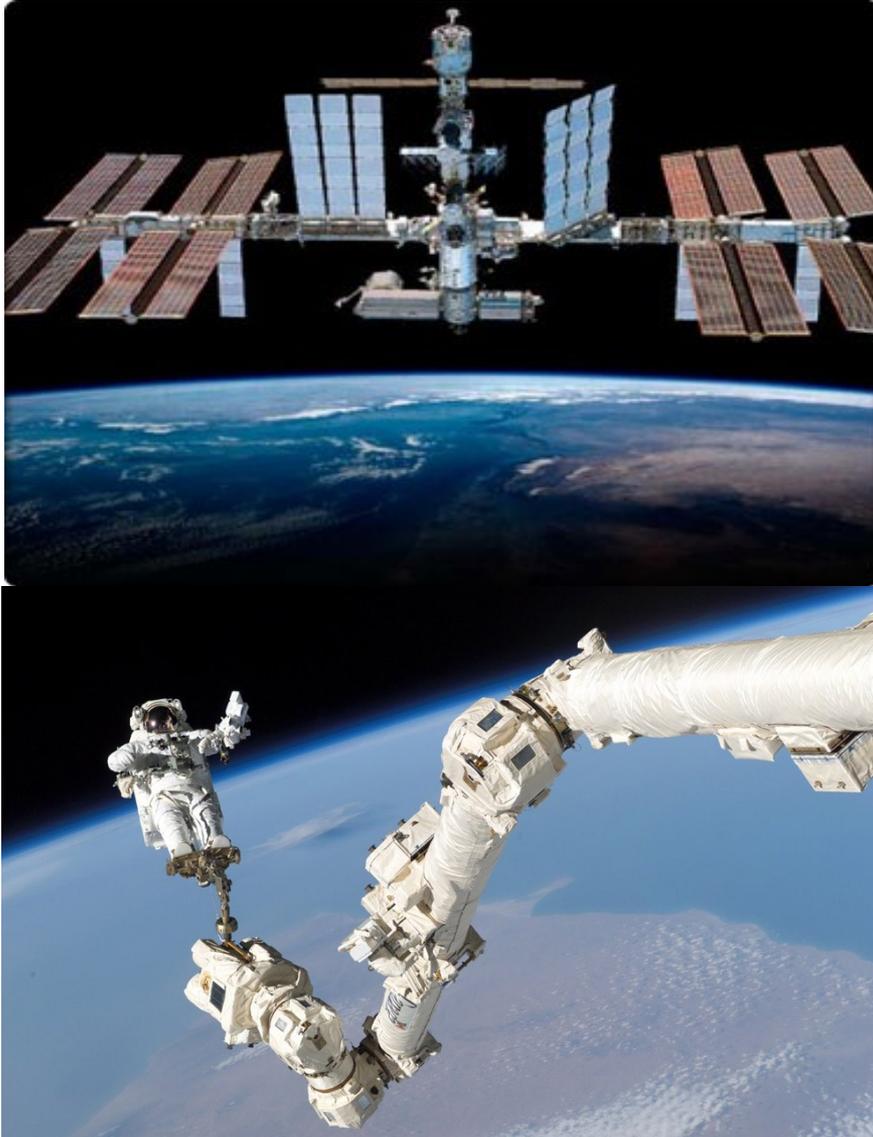
ECILD Mars 2020 International Partners



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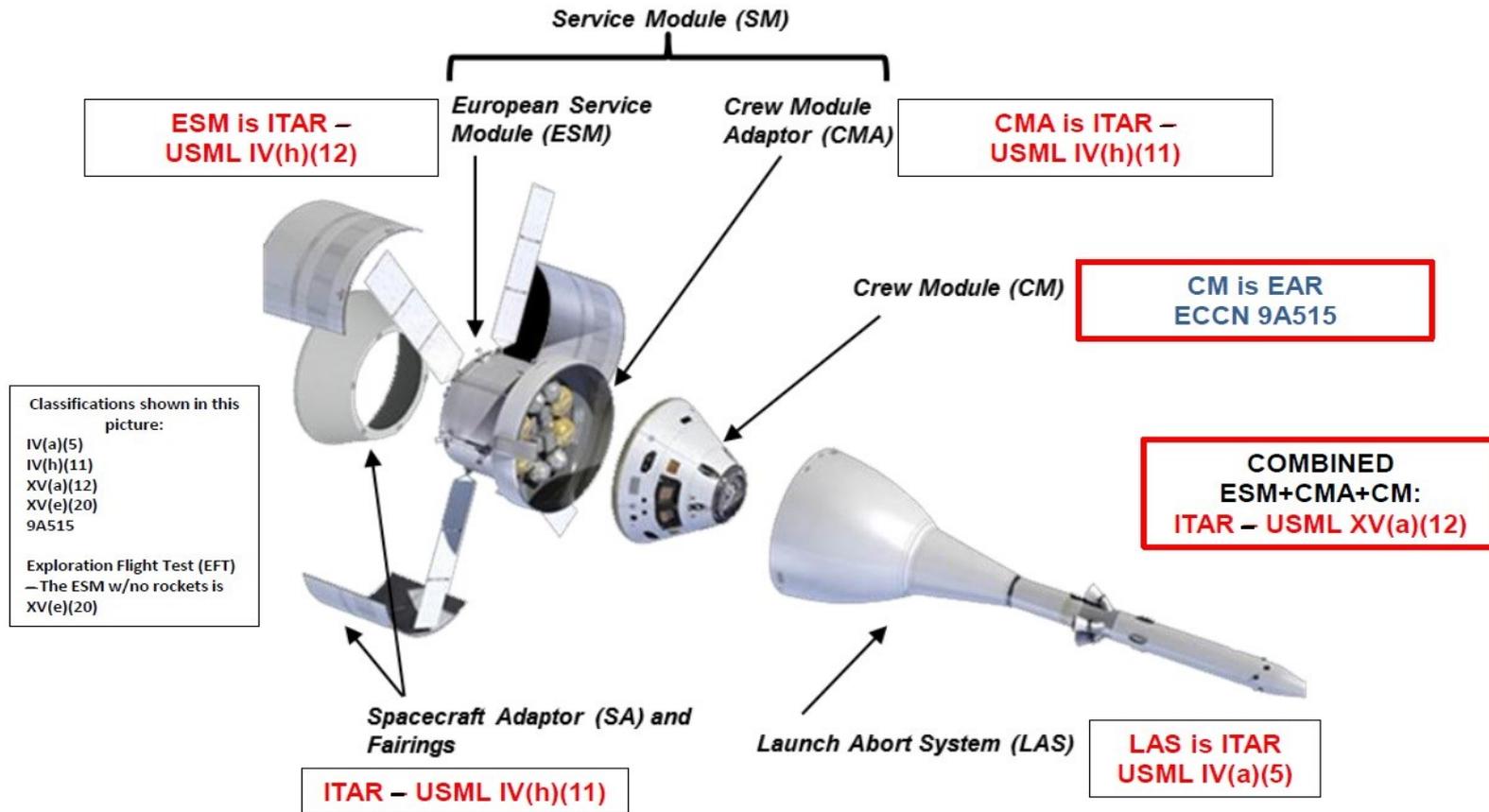


- Centro de Astrobiología, Instituto Nacional de Técnica Aeroespacial, Spain, providing Mars Environmental Dynamics Analyzer (MEDA)
- Norwegian Defense Research Establishment (FFI) providing the Radar Imager for Mars' Subsurface Experiment (RIMFAX)
- CNES's Institut de Recherche en Astrophysique et Plané'tologie (CNES/IRAP), France, contributing to SuperCam
- All three partners are considered "Agencies of Cooperating Governments"



- International agreement with Canada, ESA, Japan and Russian Federation
- ISS is subject to EAR as 9A004
- Technical data required for the detailed design, development, manufacturing, or production of the ISS was subject to the ITAR Category XV
- License exception GOV used for hardware destined to ISS less than 45 days before launch
- License exemption 126.4(a) used for technical data shared with international partners
- On Nov 10, 2014 technology moved to EAR jurisdiction

Orion MPCV Major Subsystems When Finally Operational





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