

Transitioning from a Fundamental Research Culture to a Managed Controlled Environment

Impact of Export Controls on Higher Education and Scientific Institutions

May 3rd, 2022

**THE GEORGE
WASHINGTON
UNIVERSITY**

WASHINGTON, DC

Hiromi Sanders
Director, Research Integrity & Compliance



Agenda

About George Washington University

- Research Portfolio
- University Policy

What is the Fundamental Research Exclusion (FRE)?

Challenges

- Case Study: DARPA-Sponsored Research

Building an EC Compliance Program at GW

GW Portfolio & Policy

The George Washington University

- Chartered by an Act of Congress February 9, 1821. Largest institution of higher education in the District of Columbia. In our 10 schools and colleges you can find more than 100 undergraduate programs and more than 230 graduate programs at the certificate, master's and doctoral levels. You could study in the center of D.C., in Virginia at our [Virginia Science and Technology campus](#) or at one of our [graduate education centers](#) in Arlington or Alexandria. Home to traditional disciplines as well as [more than 80 centers and institutes](#).
- GWU has over 12,000 undergraduates and 16,000 graduate students enrolled from all 50 states and 132 countries, with more than 3,700 international students hailing from more than 130 countries, GW's community thrives off of varied perspectives and experiences. Non-medical faculty 1166 medical faculty 1197.

Research Portfolio at GW

“...Research spans science, technology, health, policy, global security, arts and humanities. Our faculty are driving progress in many different fields — everything from advancing human health and improving current technologies to expanding our understanding of the universe.”

- **School of Engineering and Applied Sciences**
- **School of Medicine and Health Sciences**
- Milken Institute School of Public Health
- Elliot School of International Affairs
- Columbian College of Arts & Sciences
- Graduate School of Education & Human Development
- School of Nursing
- School of Business



SEAS Researcher Develops New Tools to Advance Cardiac Surgery and Therapy

Professor Igor Efimov and his collaborators are pioneering a new class of medical instruments that use [flexible electronics to improve patient outcomes](#) in minimally invasive surgeries. Detailed in a new paper published in Nature Biomedical Engineering, Efimov and a research team applied stretchable and flexible matrices of electrode, temperature and pressure sensors, along with actuators that enable movement, to a balloon catheter system. Balloon catheters are often used in minimally invasive surgeries or ablations, a procedure for restoring normal heart rhythm, to treat conditions such as heart arrhythmias.

<https://www.gwu.edu/research>



University Policy Statement

	THE GEORGE WASHINGTON UNIVERSITY WASHINGTON, DC	Responsible University Official: Associate Vice President for Research Integrity Responsible Office: Office of the Vice President for Research Last Revised Date: March 31, 2015
EXPORT CONTROL		

- It is the policy of the university to comply with U.S. export control laws. Export control laws restrict certain types of information, technologies and commodities that can be transmitted overseas to entities and individuals, including U.S. citizens, or made available to foreign nationals on U.S. soil.
- It is the responsibility of faculty, staff and students to be aware of and comply with U.S. export control laws as well as with the university's written instructions and procedures before engaging in any activities that may raise compliance issues under U.S. export control laws or this policy
- Research eligible for the FRE is basic and applied research in science and engineering, where the resulting information is ordinarily published and shared broadly within the scientific community. Whenever possible, the university structures its projects to qualify for the FRE. PIs, PLs and others involved in identifying and negotiating research or educational, academic or other university opportunities should make every effort to ensure that the FRE applies to their projects.

<https://compliance.gwu.edu/export-control>



University Policy Statement

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EXPORT CONTROL

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<https://compliance.gwu.edu/export-control>



What is the FRE?

Fundamental Research Exclusion

Fundamental Research is defined by the **National Security Decision Directive 189 (NSDD189)**:

- basic or applied research in science and engineering,
- the results of which are **ordinarily published** and
- **shared broadly** within the scientific community,
- as distinguished from proprietary research and from industrial development, design, production, and product utilization,
- the results of which ordinarily are restricted for proprietary or national security reasons.

Fundamental Research Exclusion does not cover:

- Export of controlled hardware, software, or technology
- Export controlled activities (i.e. defense services)
 - Training related to defense articles or furnishing of technical data to foreign nationals
- Proprietary or non-disclosure agreements on research
- Transactions involving embargoed or sanction parties/countries



Challenges

Challenges

Export control matters in sponsored research

- Confidentiality restrictions
- Publication/dissemination restrictions on techniques or processes
- Restrictions on the participation of foreign nationals
- Material Transfer Agreements
- Non-Disclosure Agreements
- Controlled Unclassified Information

Sponsored Research – Award/Contract Terms

Does this proposal, project or agreement:

- Restrict researcher participation based on country of origin or citizenship?
- Require researcher participation in US-citizen-only meetings?
- Prohibit the hiring of non-US citizens to be involved in the proposed research?
- Contain restrictions on foreign travel?
- Grant the sponsor a right of prepublication review for matters other than the inclusion of patent and/or proprietary sponsor information?
- Provide that any part of the sponsoring, granting, or establishing documents may not be disclosed?
- Limit access to confidential data?
- Accept proprietary information as part of the project?
- Involve materials, equipment or technology that may be regulated by export control laws?

Case Study: DARPA-Sponsored Research

Case Study: DARPA-Sponsored Research

Personalized Protective Biosystem (PPB) Program.

Develop an integrated system that simultaneously reduces protective equipment needs while increasing protection for the individual against existing and future chemical and biological (CB) threats.

Letter of Commitment:

“provide the leading technological role in the development, characterization, and propagation of transgenic helminths, including Schistosoma mansoni. The effort will include the insertion of transgenes and cognate regulatory sequences, designed to neutralize the targeted chemical and biological threats specified for TA2 by DARPA.”

GWU

Statement of Work
Personalized Protective Biosystems – Membranes and Commensal Helminths
(PPB MaCH)
Personalized Protective Biosystem PPB, HR001120S0015

07 February 2020

PHASE I:

Task 8 Develop Transgenic Helminth Platform
The Contractor shall determine helminth secreted transcriptomes and proteomes.
The Contractor shall develop transgenic helminth chassis delivered via lentivirus or like method.
The Contractor shall explore toggleable regulatory elements to control and enhance secretion.
The Contractor shall establish helminth secretory organoids for in vitro testing.
The Contractor shall establish transgenic helminths in vitro producing reporter and/or prophylactic proteins.
The Contractor shall support IV&V testing.

Task 9 Identify and Incorporate Prophylactic Molecules and Conduct In Vitro Testing
The Contractor shall identify relevant prophylactic molecules and insert them into the configurable chassis.
The Contractor shall assess expression of prophylactic molecules in vitro by transfecting helminth organoids.
The Contractor shall assess expression of prophylactic molecules in vitro by transfecting helminth parasites and culturing them in vitro.
The Contractor shall support IV&V testing.

Task 11 Develop and Test Animal Models
The Contractor shall establish and optimize animal models for helminths.
The Contractor shall perform in vivo validation of countermeasure secretion and detection.
The Contractor shall support IV&V animal model testing.

Case Study: DARPA-Sponsored Research

General Award Information

- “publication of products of fundamental research will remain unrestricted to the maximum extent possible for proprietary or national security reasons.”
- “Government anticipates restrictions on the resultant research that will require the awardee to seek DARPA permission before publishing any information or results relative to the program.”

DFAR Contract Terms

- 252.204-7000. Disclosure of Information
- 252.204-7008. Compliance with Safeguarding Covered Defenses Information Controls
- 252.204-7012. Safeguarding Covered Defense Information and Cyber Incident Reporting



Broad Agency Announcement
Personalized Protective Biosystem (PPB)
BIOLOGICAL TECHNOLOGIES OFFICE

HR001120S0015

November 26, 2019



Case Study: DARPA-Sponsored Research

Work with researchers and team

- Review the program and contract
- Scope of Work

Partner with IT

- Implement NIST 800-171
- Controlled Unclassified Information (CUI) Plan

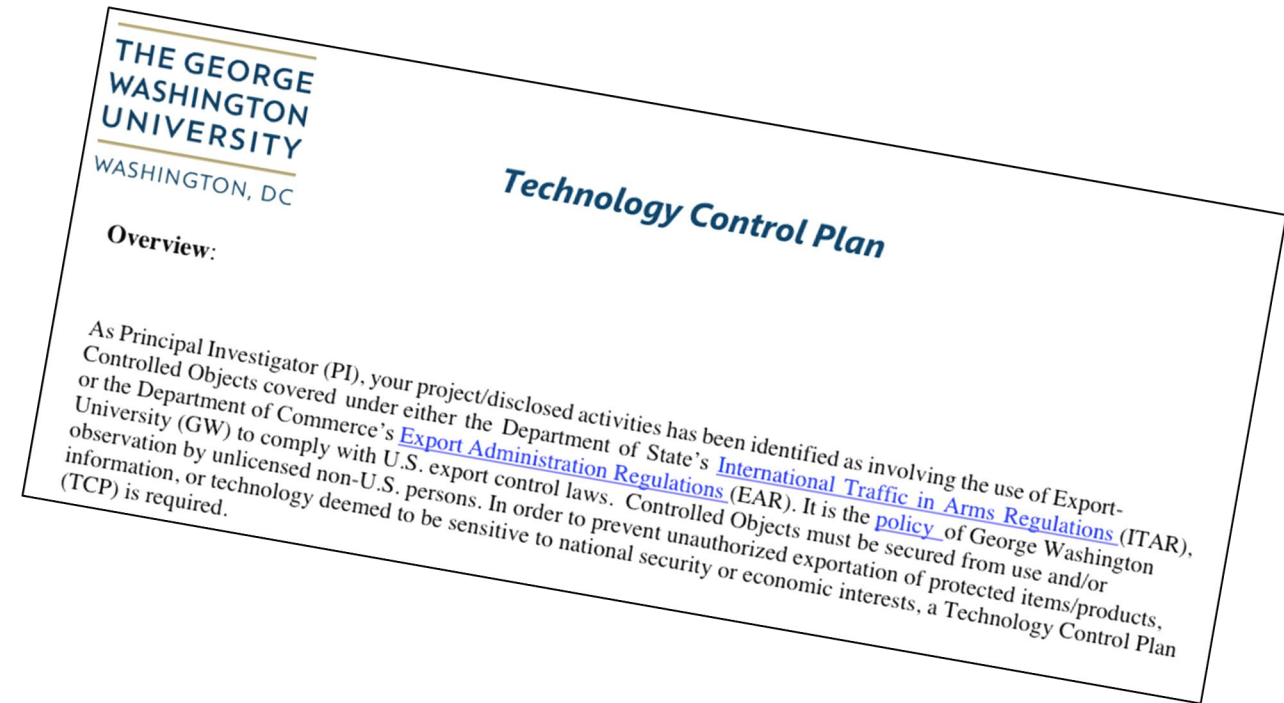
Required training

- In-person training (virtual)
 - Export Controls
 - CUI

Develop Technology Control Plan (TCP)

- Ensure research team reads and understands

Continuous Monitoring



Building an EC Compliance Program

Building EC Compliance Program

KNOW THE LANDSCAPE

PARTNER WITH BUSINESS UNITS

- Office of Sponsored Programs
- Information Technology
- Procurement
- Facilities
- Animal Research Facility
- Office of Laboratory Safety
- Travel Safety

EDUCATION & OUTREACH

- Format
- Consultations
- Audience
- Flexibility
- Required trainings (CITI)

RECORDKEEPING/DOCUMENTATION

AUDITS

Building EC Compliance Program

SCREEN

- Individuals/Collaborators
- Entities
- Vendors

MONITOR & REVIEW PROCESSES

- Shipping
- Inventory Biomaterial and Equipment
- International Travel

SENIOR LEADERSHIP SUPPORT

- Provost
- Vice Provost for Research

EXPORT CONTROL STAFF

- Detailed, thorough
- Able to comprehend regulations
- Technical background
 - Science, Engineering, International Trade

Thank you...

Hiromi Sanders
Director, Research Integrity & Compliance
Office of the Vice Provost for Research



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: <https://researchintegrity.gwu.edu/export-controls>



: 202.994.0843

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Transitioning from a Fundamental Research Culture to a Managed Controlled Environment

Impact of Export Controls on Higher Education and Scientific Institutions

May 3rd, 2022



William J. Collins
University of Miami (UM)
Director, Export Control Compliance



Agenda

RFP Submission & Review – **“Proposal”**

University Management Concerns – **“Being Selected”**

USG Master/Base Agreement – **“Institution Requirements”**

USG Contract Award – **“Project Specific”**



The Spectrum of University Research – The Toolbox

The spectrum of university research	Increased Sensitivity/Increased Restrictions			
	Fundamental University Research	Restricted University Research	Industry Research	Classified Research
Publication restrictions?	Freedom to publish without prior approval	Prior approval needed to publish	Prior approval needed to publish	Publication generally not possible
Employee NDAs?	Rarely or never	Sometimes	Typically	Required for clearance
Customer expectations re: dissemination?	Unlimited dissemination	Restricted dissemination	Restricted dissemination	Highly restricted dissemination
Subject to export controls?	No, excluded by definition	Often	Often	Almost always
Special IT/physical security measures?	No; best practices	Often required by contract; e.g. NIST 800-171	Often required by contract; e.g. NIST 800-171	Yes; NISPOM and related rules

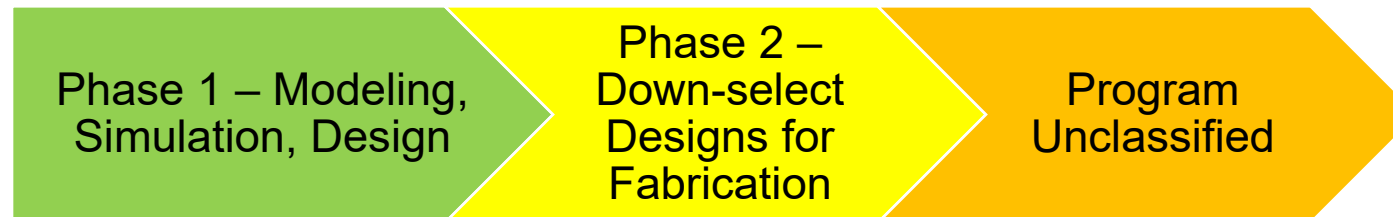
NOTE: Provided by the Academic Security and Counter-Exploitation (ASCE) Working Group.

RFP Submission & Review

Proposal

RFP Submission & Review – Proposal

- The contractor shall develop **two innovative aerodynamic technologies envisioned** by the contractor for modified projectiles.



Program is awarded in a Phased development approach.

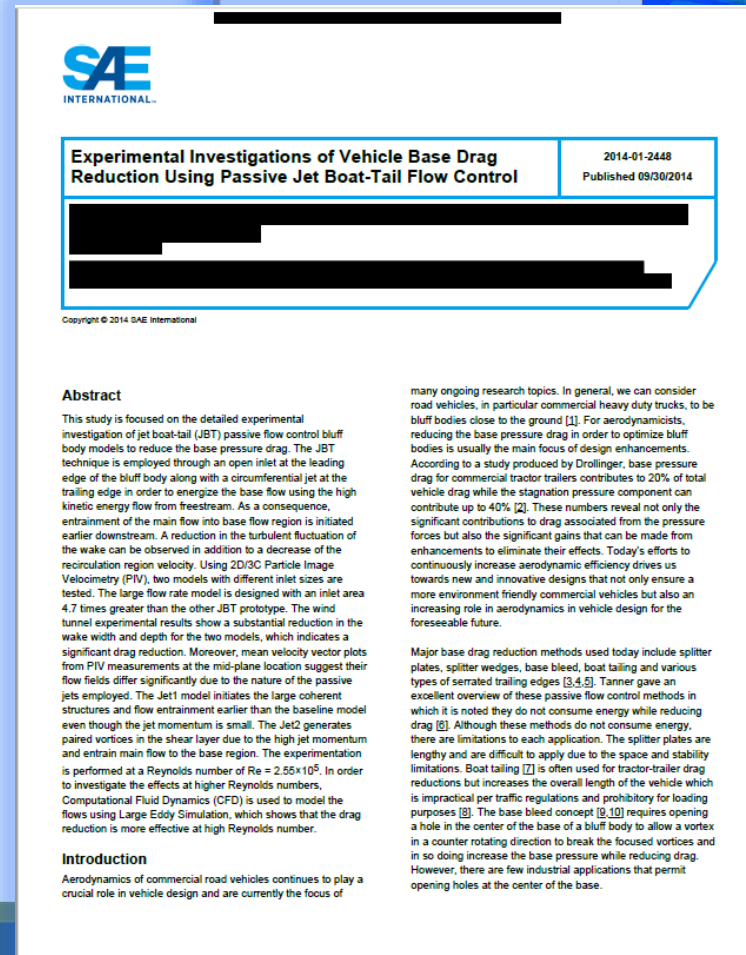
RFP Submission & Review – Whitepaper Details

Review of the Whitepaper for “DDDDPM”:

- **D**etails of **D**esign
- **D**evelopment
- **P**roduction
- **M**anufacturing

Determination:

- Administrative Data
- Fundamental Research
- Export Controlled
- Intellectual Property



University Management Concerns

Being Selected

University Management Concerns – Jurisdiction

- **USG Jurisdiction Order of Review – EAR or ITAR?**
 - **Parts, Components, Accessories and Attachments (PCAA), System Level, SW and TD.**
 - **HW: 7A611.x**

Commerce Control List Supplement No. 1 to Part 774 Category 7—page 1

CATEGORY 7—NAVIGATION AND AVIONICS

A. "END ITEMS," "EQUIPMENT," "ACCESSORIES," "ATTACHMENTS," "PARTS," "COMPONENTS," AND "SYSTEMS"

N.B.1: For automatic pilots for underwater vehicles, see Category 6. For radar, see Category 6.

7A001 Accelerometers: as follows (see List of Items Controlled) and "specially designed" "components" therefor.

License Requirements:

Reason for Control: NS, MT, AT

Control(s)	Country Chart (see Supp. No. 1 to part 738)
NS applies to entire entry	NS Column 1
MT applies to commodities that meet or exceed the parameters of 7A101.	MT Column 1
AT applies to entire entry	AT Column 1

List Based License Exceptions: (See Part 740 for a description of all license exceptions)

LVS: N/A
GBS: N/A
CIV: N/A

List of Items Controlled

Related Controls: (1) See USML Category XII(e) for accelerometers subject to the

ITAR: (2) See also ECCNs 7A101, 7A611, and 7A984. (3) For angular or rotational accelerometers, see ECCN 7A001.b. (4) MT controls do not apply to accelerometers that are "specially designed" and developed as Measurement While Drilling (MWD) sensors for use in downhole well service applications.

Related Definitions: N/A
Items:

a. Linear accelerometers having any of the following:

a.1. Specified to function at linear acceleration levels less than or equal to 15 g and having any of the following:

a.1.a. A "bias" "stability" of less (better) than 130 micro g with respect to a fixed calibration value over a period of one year; or

a.1.b. A "scale factor" "stability" of less (better) than 130 ppm with respect to a fixed calibration value over a period of one year;

a.2. Specified to function at linear acceleration levels exceeding 15 g but less than or equal to 100 g and having all of the following:

a.2.a. A "bias" "repeatability" of less (better) than 1,250 micro g over a period of one year; and

a.2.b. A "scale factor" "repeatability" of less (better) than 1,250 ppm over a period of one year; or

a.3. Designed for use in inertial navigation or guidance systems and specified to function at linear acceleration levels exceeding 100 g;

Note: 7A001.a.1 and 7A001.a.2 do not apply to accelerometers limited to

Export Administration Regulations Bureau of Industry and Security August 15, 2017

Commerce Control List Supplement No. 1 to Part 774 Category 7—page 11

7A611 Military fire control, laser, imaging, and guidance equipment, as follows (see List of Items Controlled).

License Requirements:

Reason for Control: NS, MT, RS, AT, UN

Control(s)	Country Chart (see Supp. No. 1 to part 738)
NS applies to entire entry except 7A611.y	NS Column 1
MT applies to commodities in 7A611.a that meet or exceed the parameters in 7A103.b or c.	MT Column 1
RS applies to entire entry except 7A611.y	RS Column 1
AT applies to entire entry	AT Column 1
UN applies to entire entry except 7A611.y	See § 746.1(b) for UN controls

List Based License Exceptions: (See Part 740 for a description of all license exceptions)

LVS: \$1500
GBS: N/A
CIV: N/A

Special Conditions for STA

STA: Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any item in 7A611.

List of Items Controlled

Related Controls: (1) Military fire control, laser, imaging, and guidance equipment that are enumerated in USML Category XII, and technical data (including software) directly related thereto, are subject to the ITAR. (2) See Related Controls in ECCNs 9A987, 9A984.

Export Administration Regulations Bureau of Industry and Security August 15, 2017

6A002, 6A003, 6A004, 6A005, 6A007, 6A008, 6A107, 7A001, 7A002, 7A003, 7A005, 7A101, 7A102, and 7A103. (3) See ECCN 3A611 and USML Category XI for controls on countermeasure equipment. (4) See ECCN 9A919 for foreign-made "military commodities" that incorporate more than a *de minimis* amount of U.S. origin "600 series" controlled content.

Related Definitions: N/A
Items:

a. Guidance or navigation systems, not elsewhere specified on the USML, that are "specially designed" for a defense article on the USML or for a 600 series item.

b. to w. [RESERVED]

x. "Parts," "components," "accessories," and "attachments," including accelerometers, gyros, angular rate sensors, gravity meters (gravimeters), and inertial measurement units (IMUs), that are "specially designed" for defense articles controlled by USML Category XII or items controlled by 7A611, and that are NOT:

1. Enumerated or controlled in the USML or elsewhere within ECCN 7A611;
2. Described in ECCNs 6A007, 6A107, 7A001, 7A002, 7A003, 7A101, 7A102 or 7A103; or
3. Elsewhere specified in ECCN 7A611.y or 3A611.y.

y. Specific "parts," "components," "accessories," and "attachments" "specially designed" for a commodity subject to control in this ECCN or a defense article in Category XII and not elsewhere specified on the USML or in the CCL, as follows, and "parts," "components," "accessories," and "attachments" "specially designed" therefor:

University Management Concerns – Jurisdiction

- **USG Jurisdiction Order of Review – EAR or ITAR?**
 - **Parts, Components, Accessories and Attachments (PCAA), System Level, SW and TD.**
 - **SW: 7D611.b and TD: 7E611.a**

Commerce Control List Supplement No. 1 to Part 774 Category 7—page 20

7B103 is "subject to the ITAR" (see 22 CFR parts 120 through 130). (2) "Software" for inertial navigation systems and inertial equipment and "parts" and "components" "specially designed" therefore that are directly related to a defense article is "subject to the ITAR" (see 22 CFR parts 120 through 130).
Related Definitions: N/A
Items:

The list of items controlled is contained in the ECCN heading.

7D102 Integration "software," as follows (See List of Items Controlled).

License Requirements

Reason for Control: MT, AT

Control(s) *Country Chart (See Supp. No. 1 to part 738).*

MT applies to entire entry MT Column 1

AT applies to entire entry AT Column 1

List Based License Exceptions (See Part 740 for a description of all license exceptions)

CIT: N/A
TSR: N/A

List of Items Controlled

Related Controls: The "software" related to 7A003.b or 7A103.b is "subject to the ITAR" (see 22 CFR parts 120 through 130).
Related Definitions: N/A
Items:

a. Integration "software" for the equipment controlled by 7A103.b.

Export Administration Regulations Bureau of Industry and Security August 15, 2017

b. Integration "software" "specially designed" for the equipment controlled by 7A003 or 7A103.a.

7D103 "Software" "specially designed" for modelling or simulation of the "guidance sets" controlled by 7A117 or for their design integration with "missiles". (This entry is "subject to the ITAR". See 22 CFR parts 120 through 130.)

License Requirements

Reason for Control: NS, MT, RS, AT, UN

Control(s)	Country Chart (See Supp. No. 1 to part 738)
NS applies to entire entry except 7D611.y	NS Column 1
MT applies to 7D611.a "software" "specially designed" for 7A611.a commodities controlled for MT reasons	MT Column 1
RS applies to entire entry except 7D611.y	RS Column 1
AT applies to entire entry	AT Column 1
UN applies to entire entry except 7D611.y	See § 746.1(b) for UN controls

List Based License Exceptions (See Part 740 for a description of all license exceptions)

CIT: N/A

Commerce Control List Supplement No. 1 to Part 774 Category 7—page 27

MT applies to entire entry MT Column 1

AT applies to entire entry AT Column 1

List Based License Exceptions (See Part 740 for a description of all license exceptions)

CIT: N/A
TSR: N/A

List of Items Controlled

Related Controls: N/A
Related Definitions: N/A
Items:

a. Design "technology" for shielding systems;

b. Design "technology" for the configuration of hardened electrical circuits and subsystems;

c. Design "technology" for the determination of hardening criteria of .a and .b of this entry.

7E104 Design "Technology" for the integration of the flight control, guidance, and propulsion data into a flight management system, designed or modified for rockets or missiles capable of achieving a "range" equal to or greater than 300 km, for optimization of rocket system trajectory. (This entry is "subject to the ITAR". See 22 CFR parts 120 through 130.)

License Requirements

Reason for Control: NS, MT, RS, AT, UN

Export Administration Regulations Bureau of Industry and Security August 15, 2017

Control(s)	Country Chart (See Supp. No. 1 to part 738)
NS applies to entire entry except 7E611.y	NS Column 1
MT applies to "technology" in 7E611.a if "required" for items controlled for MT reasons in 7A611.a, 7B611.a, or 7D611.a	MT Column 1
RS applies to entire entry except 7E611.y	RS Column 1
AT applies to entire entry	AT Column 1
UN applies to entire entry except 7E611.y	See § 746.1(b) for UN controls

List Based License Exceptions (See Part 740 for a description of all license exceptions)

CIT: N/A
TSR: N/A

Special Conditions for STA

STA: Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any technology in 7E611.

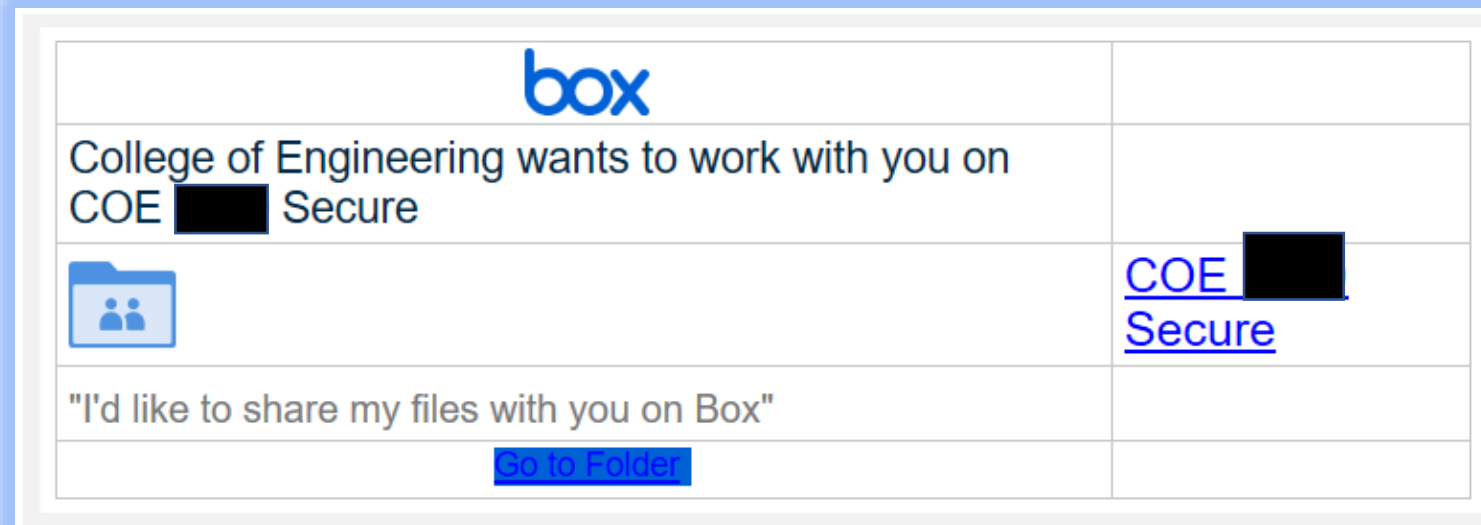
List of Items Controlled

Related Controls: Technical data directly related to articles enumerated in USML Category XII are subject to the control of USML Category XII(c).
Related Definitions: N/A
Items:

a. "Technology" "required" for the "development," "production," operation, installation, maintenance, repair, overhaul, or refurbishing of commodities or "software" controlled by ECCN 7A611 (except 7A611.y), 7B611, or 7D611 (except 7D611.y).

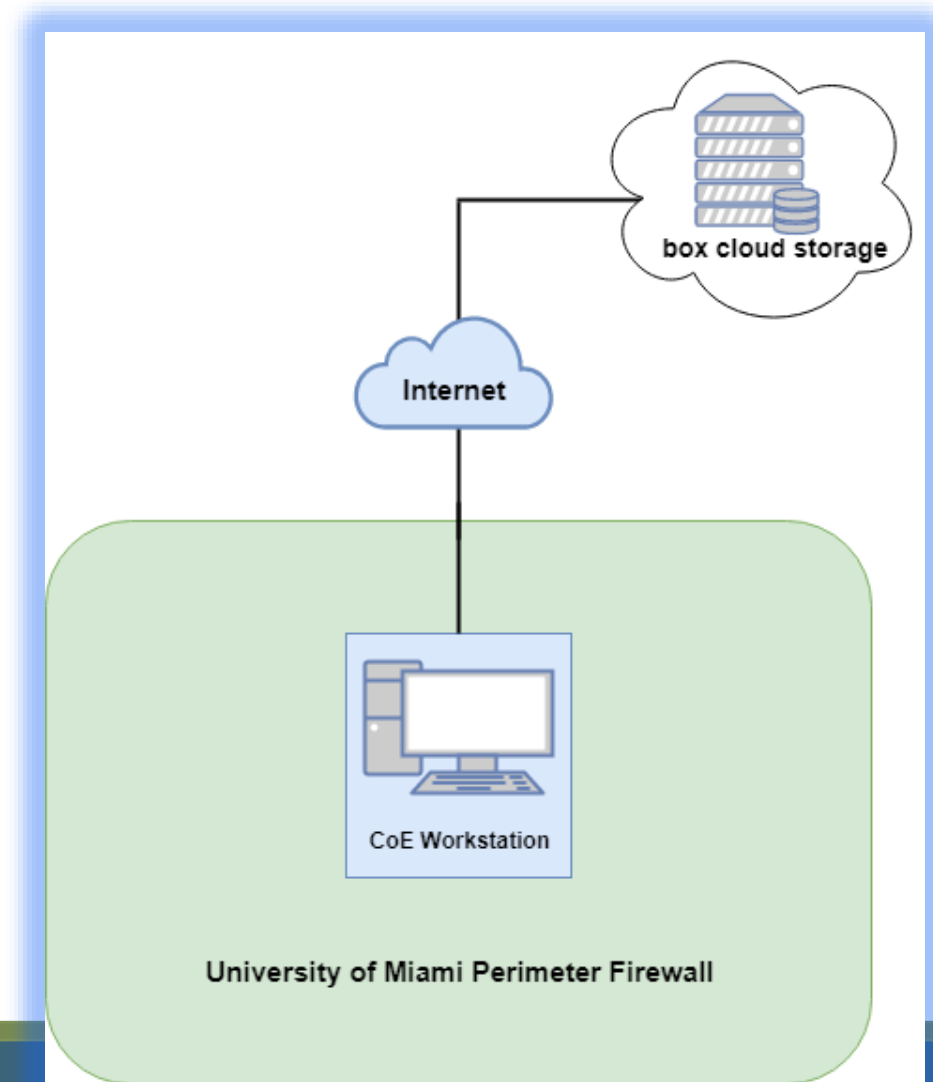
University Management Concerns – Technology Protection

- **UMIT** – Secure “Box” in UM’s Cloud for the storing of CUI and Project data.
 - Folder and naming convention established.
 - Limited access maintained and Team selected for access.
 - USG Portal for retrieval of CUI and then stored in the COE Secure Box.



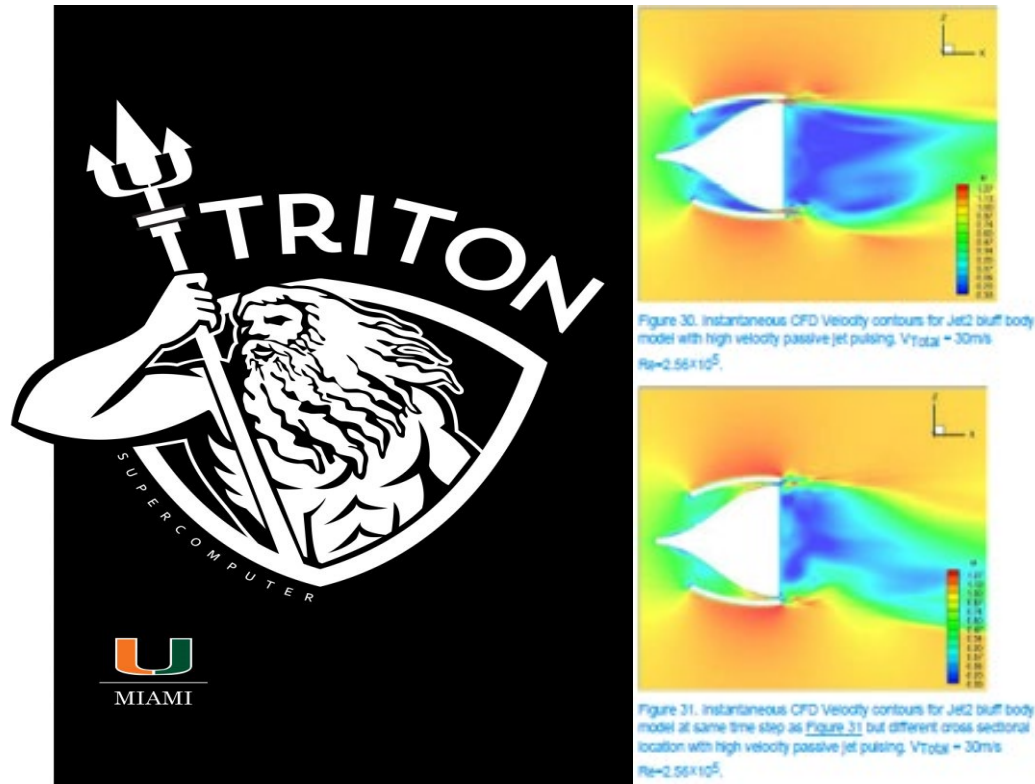
University Management Concerns – Technology Protection

- **UNIT** – Secure Box is the “bridge” for any CUI and Project data. (Block Diagram)



University Management Concerns – Technology Protection

- **Fundamental Research Limitations** – Triton Supercomputer – is only for “**fundamental research**” during Phase 1.
- **Technology Protection** – **NO CUI or Export Control DATA to be stored or utilized in the Center for Computational Science System during Phase 1.**



University Management Concerns – TRL Review

Phase 1 & TRL Development

- Phase 1 – Analytical and experimental critical function and characteristics proof of concept.
- Phase 1 work is a [fundamental science research](#). (Tasks 1 to 4 – TRL's)

- TRL 1: Lowest Level of technology readiness.

TRL 1
Definition
Basic principles observed and reported.

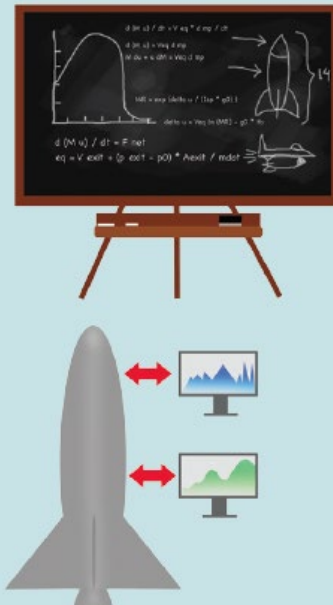
What That Means
Chemistry and physics theory in an academic setting. Think chalked equations and bubbling beakers examining the very concept of RocketX.

USAF Example
Researched material properties for a wide-bandgap semiconductor. The idea was to make devices that can handle high voltages, high current densities, high temperatures, and fast transients.

TRL 2
Definition
Technology concept and/or application formulated.

What That Means
It's time to see if the theory behind RocketX works. A lab takes the research and puts it into capabilities testing.

USAF Example: SSCB
Conceptual circuits for a solid state circuit breaker (SSCB) are designed and analyzed.



Infographic

Technology Readiness Levels, Explained
By Glenn Grady, Digital Platforms Editor

TRL 1
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What That Means
Chemistry and physics theory in an academic setting. Think chalked equations and bubbling beakers examining the very concept of RocketX.

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Researched material properties for a wide-bandgap semiconductor. The idea was to make devices that can handle high voltages, high current densities, high temperatures, and fast transients.

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USAF Example: SSCB
Conceptual circuits for a solid state circuit breaker (SSCB) are designed and analyzed.

TRL 3
Definition
Component and/or technology validation in a relevant environment.

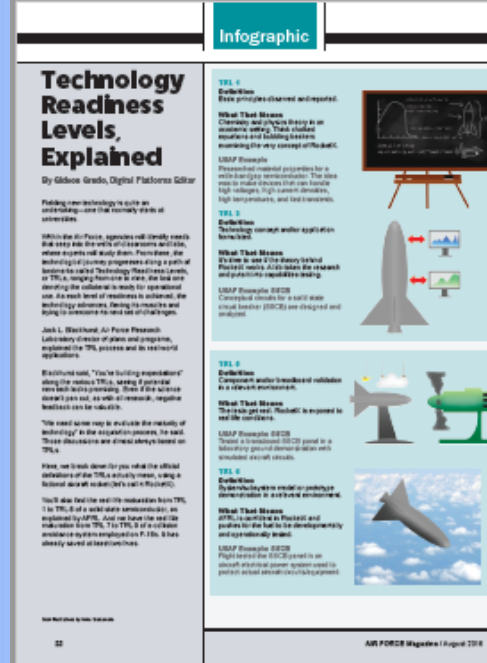
What That Means
Rocket is assembled and tested on various levels. The idea is to build per form capabilities for testing. The goal is to prove the technology in a relevant environment.

USAF Example: SSCB
The SSCB is tested in a relevant environment. The SSCB is tested in a relevant environment.

TRL 4
Definition
System/subsystem model or prototype demonstration in a relevant environment.

What That Means
ATRL is verified in RocketX and proven for the full life cycle development and operational testing.

USAF Example: SSCB
Flight tested the SSCB in an aircraft. The SSCB is tested in an aircraft.



TRL 5
Definition
Analytical and experimental critical function and/or technology proof of concept.

What That Means
ATRL, single technology of RocketX has been proven in a relevant environment. The idea is to prove the technology in a relevant environment.

USAF Example: SSCB
Proven and successfully tested in SSCB capable of low level detection and detection.

TRL 6
Definition
Component and/or technology validation in a relevant environment.

What That Means
The SSCB is tested in a relevant environment. The SSCB is tested in a relevant environment.

USAF Example: SSCB
The SSCB is tested in a relevant environment. The SSCB is tested in a relevant environment.

TRL 7
Definition
System/subsystem demonstration in an operational environment.

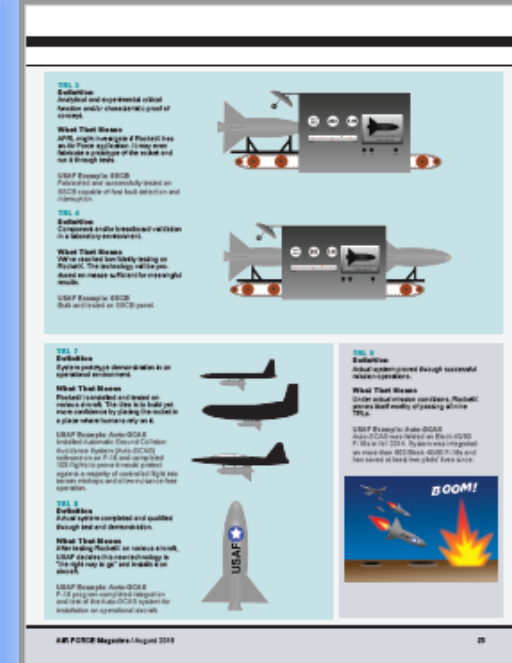
What That Means
Rocket is assembled and tested on various levels. The idea is to build per form capabilities for testing. The goal is to prove the technology in a relevant environment.

USAF Example: SSCB
The SSCB is tested in a relevant environment. The SSCB is tested in a relevant environment.

TRL 8
Definition
System/subsystem demonstration in an operational environment.

What That Means
The SSCB is tested in a relevant environment. The SSCB is tested in a relevant environment.

USAF Example: SSCB
The SSCB is tested in a relevant environment. The SSCB is tested in a relevant environment.



NOTE: TRL graphics are from the USAF/AFRL, Air Force Magazine 2016.

USG Master/Base Agreement

Institution Requirements

USG Master/Base Agreement – Contract Details

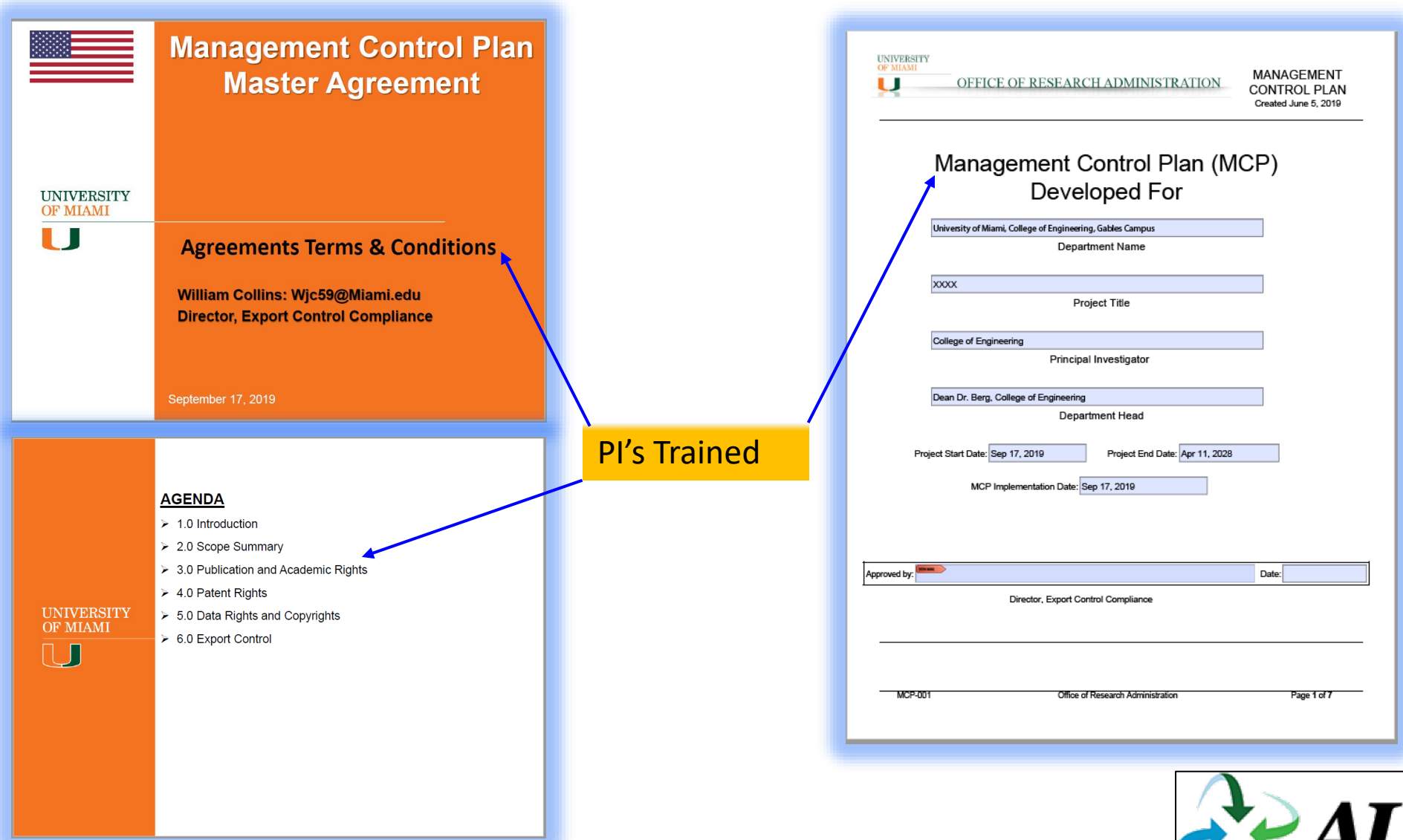
The United States Government (USG) Base Agreement is in collaboration with the members to perform coordinated research and development projects designed to develop and mature prototype technologies. [The Terms and Conditions set in the “agreement” are for all current and future contracts with the University of Miami.](#)

USG Master/Base Agreement Terms:

- 1.2.1 Article I, Scope of the Agreement (UM-Office of Research Administration Contracts, (ORA))
- 1.2.2 Article IX, Publication and Academic Rights. (UM-ORA Contracts)
- 1.2.3 Article X, Patent Rights. (UM-Office of Technology Transfer) (OTT)
- 1.2.4 Article XI, Data Rights and Copyrights (UM-IT Security)
- 1.2.5 Article XII, Export Control (**UM Export Control Office**)



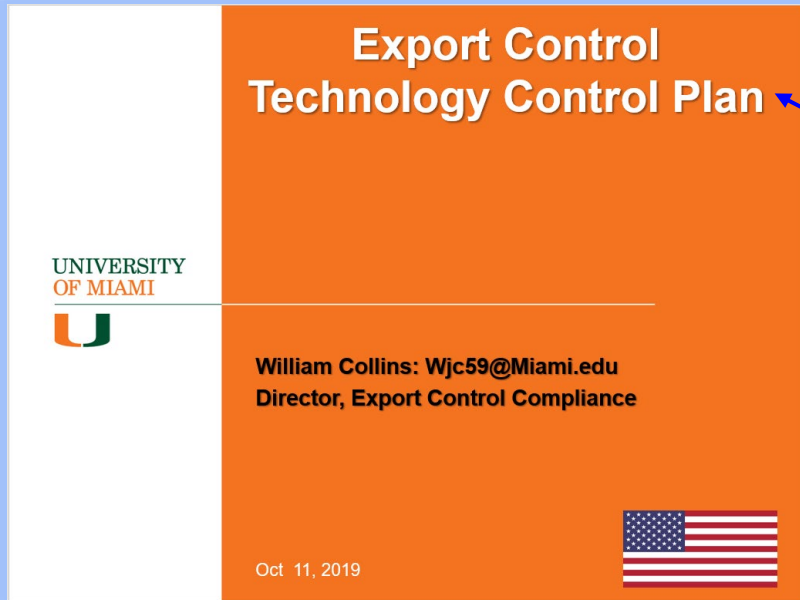
USG Master/Base Agreement – ECO Training



USG Contract Award

Project Specific

USG Contract Award – Technology Control Plan Training



PI's Trained
&
Leadership

The image is a screenshot of a "TECHNOLOGY CONTROL PLAN" form from the University of Miami Office of Research Administration, revised May 17, 2019. It includes instructions to download and read the form before completion. The form is filled out with the following information:

- Technology Control Plan (TCP) Developed For:**
 - Department Name: University of Miami, College of Engineering, Gables Campus
 - Project Title: XXXX
 - Principal Investigator: XXXX
 - Department Head: Dean Dr. Berg, College of Engineering
- Dates:**
 - Project Start Date: Sep 30, 2019
 - Project End Date: Mar 15, 2022
 - TCP Implementation Date: Oct 11, 2019
- Approval:**
 - Approved by: William J. Collins (Digitally signed by William J. Collins, Date: 2019.10.11 14:15:55 -0400)
 - Date: Oct 11, 2019
 - Director, Export Control Compliance
- Notes:**
 - Review of [EXPORT-S-003](#) is required before completing this form.
 - Footnote: ¹ Retention requirements under the EAR can be found under 15 CFR Ch. VII, §762.2 - 762.7. For ITAR, see 22 CFR §122.5 Maintenance of records by registrants, and §123.26, Recordkeeping requirement for exemptions. See also 15 CFR § 30.10.

At the bottom, it says "EXPORT-F-004", "Office of Research Administration", and "Page 1 of 7".

Technology Control Plan Training upon contract signing for PI and Leadership for Phase 1 of the Project.

USG Contract Award – Project Information (OPSEC Plan)

[REDACTED]

[REDACTED]

OPERATIONS SECURITY PLAN

[REDACTED]

Date December 10, 2019

Prepared by: William J. Collins
William J. Collins
Director, Export Control Compliance
Office of Research Administration

Approved by: Barbara A. Cole
Barbara A. Cole
Associate Vice President,
Office of Research Administration

Submitted by:
University of Miami
1320 S. Dixie Highway, Suite 650
Coral Gables, FL 33146

UNIVERSITY
OF MIAMI

[REDACTED]

University of Miami – OPSEC – [REDACTED]

[REDACTED]

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2

University of Miami – OPSEC – [REDACTED]

USG Contract Award – OPSEC Plan/Security Training

- **AT Training:** UM Team completed iwatch and OPSEC Training as required by the Contract in Section 12.



I, First & Last Name, certify that I have reviewed the iWATCH ARMY training slides and understand I am required to immediately report suspicious activity & behavior to my supervisor or authorities.

Signature William J. Collins (William J. Collins)
Date: 11/20/2019
Employing activity: DOTC-18-01-INIT0648/ The University of Miami

Please provide copies of this certificate to your supervisor, and retain for your records.



Agreement Section 10 “Marking of Deliverables”

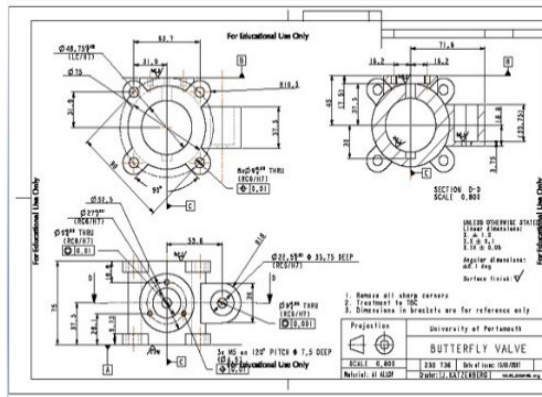
UM Standard Operating Procedures (SOP's)

- Fundamental Research
 - Export Controlled
 - CUI

UNIVERSITY OF MIAMI		USG TECHNICAL DATA MARKING CONTROLLED UNCLASSIFIED INFORMATION (CUI) PROCEDURE	
Sections: <input type="checkbox"/> Procedure Statement		Effective Date: October 23, 2019 Revision History: Noted Below Responsible University Officer: Vice Provost for Research Responsible Offices: Office of Research Administration (ORA)	
USG TECHNICAL DATA MARKING EXPORT CONTROL – USDOC/EAR PROCEDURE			
Sections: <input type="checkbox"/> Procedure Statement		Effective Date: October 23, 2019 Revision History: Noted Below Responsible University Officer: Vice Provost for Research Responsible Offices: Office of Research Administration (ORA)	
USG TECHNICAL DATA MARKING FUNDAMENTAL RESEARCH PROCEDURE			
Sections: <input type="checkbox"/> Procedure Statement <input type="checkbox"/> Reason for the Procedure <input type="checkbox"/> Who Should Know This Procedure <input type="checkbox"/> Definitions <input type="checkbox"/> Procedures <input type="checkbox"/> Signature <input type="checkbox"/> History <input type="checkbox"/> Point of Contact Numbers		Effective Date: October 23, 2019 Revision History: Noted Below Responsible University Officer: Vice Provost for Research Responsible Offices: Office of Research Administration (ORA)	
Procedure Statement This standard operating procedure (SOP) document supports the University of Miami's (UM) policy for USG Technical Data Marking as a compliance control tool to safeguard and control information, can alert holders by identifying the technical data and instructions for handling of the data. The SOP is to furnish guidance with a tailored approach for USG Technical Data Marking procedures at UM. (NOTE: The SOP is "ONLY" for Managed Controlled Program contracts that contain a requirement for "deliverables" to be "marked with a suitable notice or legend".)		This document supports the University of Miami's (UM) policy for USG Technical Data Marking as a compliance control tool to safeguard and control information, can alert holders by identifying the technical data and instructions for handling of the data. The SOP is to furnish guidance with a tailored approach for USG Technical Data Marking procedures at UM. (NOTE: The SOP is "ONLY" for Managed Controlled Program contracts that contain a requirement for "deliverables" to be "marked with a suitable notice or legend".)	
Reason for the Procedure In response to USG contract requirements, federal regulations and UM policy on export controls and technical marking, documents subject to Fundamental Research, Controlled Unclassified Information (CUI) and Export Control under the ITAR and/or EAR are generally marked as per U.S. Government regulations. The most common practice involves the marking of an entire document such as an engineering drawing package, technical report, software simulations, mishap investigation report, or technical presentation are marked by the proper marking regiment.		Federal regulations and UM policy on export controls and technical marking, documents subject to Fundamental Research, Controlled Unclassified Information (CUI) and Export Control under the ITAR and/or EAR are generally marked as per U.S. Government regulations. The most common practice involves the marking of an entire document such as an engineering drawing package, technical report, software simulations, mishap investigation report, or technical presentation are marked by the proper marking regiment.	
Who should Know this Procedure? Provost, Vice Provosts, Deans Associate Vice President for Research Administration Director of Export Compliance Research Administrators Principal Investigators (PI) Office of Research Administration (NOTE: The SOP is "ONLY" for Managed Controlled Program contracts.)		This document supports the University of Miami's (UM) policy for USG Technical Data Marking as a compliance control tool to safeguard and control information, can alert holders by identifying the technical data and instructions for handling of the data. The SOP is to furnish guidance with a tailored approach for USG Technical Data Marking procedures at UM. (NOTE: The SOP is "ONLY" for Managed Controlled Program contracts that contain a requirement for "deliverables" to be "marked with a suitable notice or legend".)	
Definitions UM USG		University of Miami United States Government	
Procedures The USG Technical Data Marking - "Fundamental Research" procedure is for research documents, presentations, software simulations and technical data that contain required contract language for "deliverables" to be "marked with a suitable notice or legend". Recent USG contract language has included markings requirements to safeguard and control information. This procedure will assist authorized holders in the handling, receiving, identification, and storage of documents due to USG contract requirements and terms.		The USG Technical Data Marking - "Fundamental Research" procedure is for research documents, presentations, software simulations and technical data that contain required contract language for "deliverables" to be "marked with a suitable notice or legend". Recent USG contract language has included markings requirements to safeguard and control information. This procedure will assist authorized holders in the handling, receiving, identification, and storage of documents due to USG contract requirements and terms.	
Office of Research Administration		Page 1	

USG Contract Award – UM SOP Requirements

- SOP Requirements
 - **SOP is “Only” for Managed Controlled Program contracts that contain a requirement for “deliverables” to be “marked with a suitable notice or legend”.**
- Documents/Items to be Marked
 - **engineering drawing package**
 - **technical report**
 - **software simulations**
 - **mishap investigation report**
 - **technical presentation**



USG Contract Award – UM SOP Instructions

- Sample Legends

Fundamental Research:

The presentations/reports are not “subject” to the EAR – Fundamental Research as per EAR Part 734.8 (a) and (c).

EAR ECCN_____.

Export Administration Regulations (EAR) Notice

This document contains information within the purview of the Export Administration Regulations (EAR), 15 CFR §730-774, and is export-controlled. It may not be transferred/exported to foreign persons in the U.S. or abroad without specific approval of a knowledgeable export control official, and/or unless an export license or license exception is obtained/available from the Bureau of Industry and Security, United States Department of Commerce. Violations of these regulations are punishable by fine, imprisonment, or both.

**Controlled or CUI//CATEGORIES/SUBCATEGORIES//Limited Dissemination
Control Marking**

USG Contract Award – UM SOP Instructions

- Notice placed on the cover page with contract number, jurisdictions into the header or footer of the remaining pages.

Contract Number/FR/ECCN/CUI

REPORT SAMPLE MARKINGS

FRONT COVER OF REPORT

Place the disclaimer language on front cover at the bottom of the page. Have contract number in the Header or Footer on the front page.

Fundamental Research Example

Fundamental Research:
The presentations/reports are not "subject" to the EAR – Fundamental Research as per EAR Part 734.8 (a) and (c).

Contract Number/FR/ECCN/CUI

To be placed on to pages after the front cover page.

Fundamental Research/ECCN/CUI/Contract Number

USG Contract Award – ECO Summary

- Obligations from the UM Export Control Office
 - Technology Control Plan Reviews.
 - Where is the Project and what Phase?
 - Spot Checks with the PI for compliance of technology marking requirements.
 - Review the BOX data and storage requirements.
 - Training of any new UM students placed on to the Program (RPS of the new students).

Export Regulations



William J. Collins

Director of Compliance (Export Control)

University of Miami – Office of the Vice Provost for Research and Scholarship



: Wjc59@Miami.edu & exportcontrol@miami.edu



: <https://www.research.miami.edu/about/admin-areas/raa/export-control-compliance/index.html>



: 305-284-9558

