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Office of Classification
and Export Control

Export Controls at Lawrence Livermore National Laboratory

AN ADDITION TO THE “USE TECHNOLOGY”

REVIEW OF FOREIGN NATIONAL VISITORS AND ASSIGNEES



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The Purpose of This Presentation is to...

- Provide an overview of the Laboratory's response to the increased concern of DOC/BIS with "deemed exports" to Foreign National visitors and assignees.
- Outline how LLNL's Visitor Tracking System (VTS) will be changed to address those concerns.
- Provide an initial source for a "Commerce Control List for Use Technology."

**The Laboratory's Goal: A Proper Balance of
Scientific Openness vs. Required Controls**





The National Defense Authorization Act of 2000 has a requirement for yearly reports on technology export policies...

As a result, the DOC's Office of Inspector General (OIG) issued a Final Inspection Report "Deemed Export Controls May Not Stop the Transfer of Sensitive Technology to Foreign Nationals in the U.S." March, 2004.

Recommendations to BIS included:

- Modifying the definition of "use" in the EAR.
- Ensuring the academic, industrial, and Federal communities are "better informed" on the requirements for licensing deemed exports associated with equipment use "...even if the research conducted with that equipment is fundamental."
- Changing licensing criteria to include consideration of foreign nationals' country-of-origin.





Along with DOC's emphasis on deemed export issues surrounding "use"...

DOE has issued Order O 142.3 "Unclassified Foreign Visits and Assignments" 6/18/04. Section 4.F.1.b and subsequent areas related to specific use reiterate "SMEs (Subject Matter Experts) will review requests for foreign national visits and assignments when required... (to) include... Export control determination of export license requirements and technology transfer..."

Also, the one page information sheet issued as a supplement to "DOE Guidelines on Export Control and Nonproliferation" issued 07/99 states "Proper identification of sensitive subjects is essential to determine whether an export license is required... to transfer export-controlled technology to a foreign national within the U.S. as a "deemed export."





Reviews using the current LLNL Visitor Tracking System (VTS)

Current Export Control and Sensitive Subjects reviews are largely based on the single narrative description provided by the foreign national's Host in the space provided by the field "Purpose and Justification of Visit/Assignment."

Considered in light of other supporting, factual data (i.e. visa status, citizenships, country of origin, project area, duration of visit or assignment, etc.) an initial determination is made whether to request additional detail from the Host to support a more accurate judgment. Additional information usually relates to actual equipment/machine access and use.





On Further Review...

...And in light of the increased interest in the stated “use” technology issues, we are planning to add a new field to the Visitor Tracking System entitled “Technology Category.” A pull-down menu will assist and guide the Host in more accurately describing the subject areas involving operation, installation, maintenance or repair of equipment expected to be used by or readily accessible to the foreign national during their visit/assignment.

While obviously not all-inclusive when considered over a long assignment, this represents an important step toward identifying the major “use” areas which may be of concern, and provides our Subject Matter Experts with a firm starting point for additional inquiry if necessary.





For Hosts/Users: an explanation of the “Categories” purpose...

Technology Categories Relating To The Use of Equipment

The information you provide will be screened by Export Control specialists to determine if there is a need for further review regarding use of the technology listed and regulatory restrictions. In almost all cases, no further action will be required. If further action is required, the office of Classification and Export Control will provide the means for obtaining any necessary license or exemption documentation required for allowing the Visit/Assignment to continue as planned.

It is equally important to remember that foreign nationals holding the visa status of Lawful Permanent Resident (LPR) are considered US Persons and - like US Citizens - exempt from export control restrictions. This is why it is unnecessary to complete this section of the form for those individuals.

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For Hosts/Users... (cont.)

Besides the more commonly known transfer of a physical commodity, an export may be deemed to have taken place when an item's technical information or technology is released to a foreign national in the United States during use. Identifying such "Deemed Exports" of technology is an important part of the Laboratory's adherence to US export control requirements.

The term "technology" used by export control agencies is usually defined as "...specific information necessary for the design, production or use of a product..." Based on this, we are obligated to look closely at the specific criteria surrounding the "use" of certain technical equipment we know to be export controlled to certain countries (and, by extension, their citizens).

It is important to remember that the actual use of equipment by a foreign national is not controlled,- rather, it is the transfer of technology related to the use of that equipment which may be controlled.

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16b. Technology Category ^{**} [Detailed Instructions](#).

Select either the exemption due to LPR Visa status, the "No Use of Hardware/Software..." statement, or list all subject areas involving the operation, installation, maintenance or repair of equipment planned for use during the Visit/Assignment.

[Click here for a description of all Technology Category/ECCN values.](#)

- Not applicable to this visit request - FIO use only.
- No Use of Hardware/Software or Associated Technology Planned.
- Current Visa Held is LPR – No Category Selections Required.
- Category 0 - Nuclear Materials, Facilities and Equipment
- Category 1 - Materials, Chemicals, Microorganisms and Toxins
- Category 2 - Materials Processing
- Category 3 - Electronics
- Category 4 - Computers
- Category 5, Part 1 - Telecommunications
- Category 5, Part 2 - Information Security
- Category 6 - Sensors and Lasers
- Category 7 - Navigation and Avionics
- Category 9 - Propulsion Systems, Space Vehicles and Related Equipment

Note: 16c. Export Control Classification Number appears on the next form.

To save this entry: To clear this entry and start over:

To return to the menu without creating this entry:

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VISIT/ASSIGNMENT REQUEST INFORMATION

16b. Technology Category **

Category 5, Part 1 - Telecommunications

16c. Export Control Classification Number (ECCN) **

[Click here for a description of Category 5 Part 1 ECCN values.](#)

5A001
5A101
5B001
5D001
5D101
5E001

17. Request Type **

- Visit
- Assignment
- Assignment Extension
- Computer Access Only (no physical access) *Note: in item 34, Buildings, use OFF-SITE COMPUTER ACCESS ONLY.*



The “Commerce Control List for Use Technology”

The LLNL “Commerce Control List for Use Technology” was developed from an initial list supplied by LANL, reviewed in a series of meetings with selected representative scientists and administrators currently working on site, and then modified to a pull-down menu to provide an efficient “check the box” method that would be both useful and easy to use.

Note that the listed Category Sections of technology initially stand alone to allow the selection of a broad working area that is not totally overwhelming in scope. This then refines down to a more detailed “description” as further selections are made.





List Sample... Category 6 / Sensors and Lasers

- 6A002 Optical sensors (NOT industrial/civilian intrusion alarm, etc.) (also select 6A102).
- 6A003 High-speed, mechanical/electronic streak, and electronic framing cameras (also select 6A203).
- 6A005 Gas, solid state, and dye/liquid lasers (also select 6A205).
- 6A007 Gravity meters, gradiometers (also select 6A107).
- 6A008 Radar systems and equipment (also select 6A108).
- 6A102 Radiation hardened detectors (also select 6A002).
- 6A107 Gravity meters, gradiometers (also select 6A007).
- 6A108 Radar systems and equipment (also select 6A008).
- 6A202 Photomultiplier tubes (photocathode area $>20\text{cm}^2$ & anode pulse rise time $<1\text{ns}$).
- 6A203 Mechanical/electronic streak, and electronic framing cameras (also select 6A003).
- 6A205 Lasers and amplifiers (also select 6A005).
- 6A225 Velocity interferometers (velocities $> 1\text{km/s}$ in time intervals $< 10\mu\text{s}$).





Category 6 - Sensors and Lasers (cont.)

- 6A226 Pressure sensors (gauges or quartz pressure transducers > 100kbars).
- 6B108 Radar cross-section measurement systems.
- 6D102 Software designed for the use of the following:
 - Radar systems and equipment for use in missiles.
- 6D103 Software designed for the following:
 - Processing post-flight recorded data for vehicle position, for use in missiles.
- 6E003 Super high-power laser (SHPL) diagnostics or targets, or the testing/evaluation of materials irradiated by SHPL beams (SHPL output energy > 1kJ w/i 50ms or CW power > 20kW).





In Summary...

- **The issue of deemed exports to foreign nationals at the Laboratory is under close scrutiny as regards the technology transfer which may occur from the use of controlled equipment and machinery.**
- **In order to meet these new concerns, a more accurate assessment must be made of each foreign nationals work assignments vis-à-vis controlled “use” technologies.**
- **The most effective method involving the least effort for the Host involves the simple, check-the-box list described, coupled with a renewed emphasis on thorough, detailed initial work descriptions.**

