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Role of BIS

- BIS administers and enforces controls on the export of sensitive dual-use items and technologies for national security and foreign policy reasons
 - The licensing process involves the full participation of the Departments of Defense, State, and Energy
- Overall goal is to prevent exports that could jeopardize national security, while at the same time promoting U.S. economic security through legitimate trade

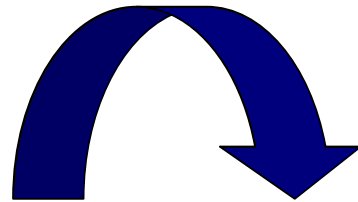


BIS Controls:

Raw Materials

Hetero-Epitaxial Materials

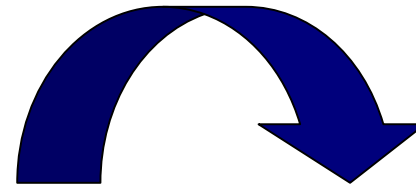
3C001



Machines/Processing Technology/Software

Semiconductor Manufacturing Equipment

3B001, 3E002



End Products

Electronic Components

3A001



Export Controls on Semiconductor Equipment and Materials (SEM)

- Category 3: Electronics
- Subject to U.S. and Multilateral (Wassenaar Arrangement) controls for National Security Reasons
 - 3B001 – Semiconductor Manufacturing Equipment (e.g., CVD, Lithography, Epitaxy)
 - 3B002 – Semiconductor Test/Assembly Equipment
 - 3C – Electronics Materials (e.g., resists, hetero-epitaxial materials)
 - 3D/3E: Electronics Technology and Software
(Includes both international tech transfer and “Deemed Exports”)



Licensing Policy for Taiwan for Semiconductor Equipment and Materials (SEM)

- Taiwan is not a member of the Wassenaar Arrangement
 - Therefore, most items on CCL require are subject to export controls for Taiwan, including semiconductor manufacturing equipment and materials

- Taiwan is in Country Group B, making it eligible for major License Exceptions (e.g., GBS, TSR)
 - In the area of SEM, license exception GBS permits many exports to Taiwan without U.S. Government review

- License applications are reviewed case by case with a general policy of approval



Licensing Policy for China for Semiconductor Equipment and Materials (SEM)

- **China is not a member of the Wassenaar Arrangement**
 - Therefore, most items on CCL require an export license, including semiconductor manufacturing equipment

- **China is in Country Group D; limited License Exceptions Apply (e.g., CIV)**
 - In the area of SEM, there is limited availability of license exception CIV for certain semiconductor manufacturing equipment; most exports require U.S. government review.

- **License applications are reviewed case by case with a general policy of approval, *unless the export will make a substantial contribution to military capability or raises unacceptable risk of diversion***
 - There is no predetermined limitation or “red line” on technology export levels
 - Key review factors include transparency of information on end user, technology roadmap/commercial product lines, existence of effective export control compliance program



Reexport Controls

- In addition to exports of controlled goods from the United States, the U.S. government controls *re-exports* of U.S.-origin items from third countries
- For example, transfer of used tools from Taiwan to China may require U.S. government authorization



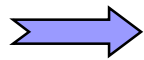
End Use Visits

- Include Pre License Checks and Post Shipment Verifications
 - PLC's: help establish credentials of potential recipients of U.S technology
 - PSV's: help ensure that exported item is being used in accordance with terms of the license
- Routine Part of High Technology Trade
 - BIS conducted PLC's in 60 countries and PSV's in 52 countries in FY04



End Use Visit Understanding with China, April 2004

- The Ministry of Commerce of the PRC reached agreement with the U.S. Department of Commerce on procedures to strengthen end-use visit cooperation and help ensure that U.S. exports of controlled dual-use items are being used by their intended recipients for their intended purposes.
- This new end-use visit understanding specifies procedures for conducting end-use visits, while also providing a mechanism on other end-use visit issues that may arise.



Should facilitate high tech trade with China



Licensing Statistics for Semiconductor Equipment and Materials (SEM)

- In 2004 (through November), BIS *approved* 198 export licenses, valued at \$480 Million:
 - Category 3B001 (Semiconductor Manufacturing Equipment) – most activity with 121 licenses valued at \$318 million
 - 136 of 198 licenses (value \$248 million) were for export to China
 - 32 of 198 licenses (value \$98 million) were for export to Taiwan; majority was semiconductor materials

- In 2004 (through November), BIS *rejected* 6 export licenses, valued at \$3 million:
 - All of the denials were for Chinese research institutes with end user concerns



License Processing Times for SME

■ ***For Exports to Taiwan:***

- In CY 2003, average processing time was 43 days
- In CY 2004, average processing time was 49 days

■ ***For Exports to China:***

- In CY 2003, average processing time was 74 days
- In CY 2004, average processing time was 55 days
 - Significant progress has been made in 2004



Developments In Controlled U.S-China Trade

■ Significant Liberalizations of Controls

- General Purpose Microprocessors (January 2003) billions in trade per year no longer needs license
- High Performance Computers (March 2002): only computers above 190,000 MTOPS require a license

■ International Cooperation

- End Use Visit Understanding – April 2004
- Visits by U.S. Government Officials to Major Semiconductor Plants
- Seminars on Export Controls



Developments In Controlled U.S-China Trade, Continued

- **Special Comprehensive License** – allows multiple shipments under single application (benefits U.S. exporters to China's electronics sector)
- **Multilateral List Review:** We are participating in international efforts to review/update the control lists for semiconductor equipment entries



New Initiatives

- Our overall goal is to facilitate legitimate commercial trade with China
- Reduce license processing time to 40 day process through increased transparency, information sharing
- Dependent on:
 - Our ability to conduct end user visits to verify the bona fides of purchasers of U.S. semiconductor equipment
 - End User ability to demonstrate compliance programs, justify purchases with business plans, technology roadmaps
 - Requires the cooperation of all parties: US Government agencies, U.S. exporters, Foreign Partners, PRC Government organizations
- Also striving to streamline/standardize license conditions
- We are seeking Industry Input/Cooperation on these initiatives