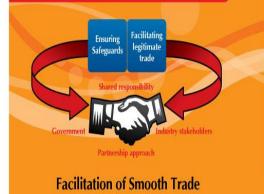
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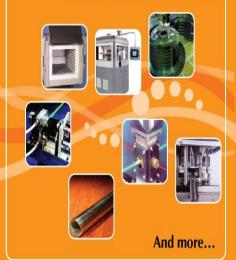
Additional Protocol

In 1993 a program was initiated to strengthen and extend the classical nuclear safeguards system, and a model protocol was agreed by the IAEA Board of Governors 1997. The measures boosted the IAEA's ability to detect undeclared nuclear activities, including those with no connection to the civil fuel cycle.



On 22 Nov 2005, Malaysia had signed an Additional Protocol to the Safeguards Agreements that will expand the control to include nuclear related items, components and technology. These items may not be nuclear materials but such high technology equipment that can also be used in other high technology industries such as petrochemical, electronics as well as other relevant industries.

Atomic Energy Licensing Board (AELB) is the nuclear regulatory body in Malaysia and is the agency responsible to provide on the performance of the obligation arising from treaties related to nuclear matters. In carrying out this duty, AELB is reviewing the status of Malaysia industries especially manufacturing capabilities of these sensitive and high technology items and components. Do You Own or Manufacture Such Materials?







ATOMIC ENERGY LICENSING BOARD

QUESTIONNAIRES ADDITIONAL PROTOCOL (AP) REVIEWING

MANUFACTURING INDUSTRIES

DATE :_____

COMPANY NAME AND ADDRES	Company : Address :	Postcode:
COMPANY CORE PRODUCT & BUSINESS	Brief Introduction:	
DEPARTMENT		
HEAD OF DEPARTMENT	Name : Contact number : Office : HP:	
OFFICER IN CHARGE	Name : Contact number : Office : HP:	
ANY OTHER OFFICER IN CHARGE		

Category of			
Materials listed in ANNEX II	1	Capability of producing	
	T	- Zirconium tubes	
		- Coolant pumps	
* Please tick at the	2		
relevant facility and material that	2	Non-nuclear material	
is being		- Deuterium and Heavy Water	
used/produced/		- High Grade Graphite	
available/trade/		Plants for the representing of irredicted fuel elements, and equipment	
<u>kept/import and</u> <u>export or any</u>	3	Plants for the reprocessing of irradiated fuel elements, and equipment especially designed or prepared therefor	
<u>others.</u>		- Irradiated fuel element chopping machines	
		- Dissolvers	
		- Solvent extractors and solvent extraction equipment	
		- Chemical holding or storage vessels	
		- Nitrate to oxide conversion system	
		- Oxide to metal production system	
	4	Plants for the fabrication of fuel elements	
	5	Gas centrifuges and assemblies and components especially designed or prepared for use in gas centrifuges	
	5.1.1	Rotating Components	
		- Complete rotor assemblies	
		- Rotor tubes	
		- Rings or Bellows	
		- Baffles	
		- Top caps/Bottom caps	
	5.1.2	Static components	
	5.1.2	- Magnetic suspension bearings	
		- Bearings/Dampers	
		- Molecular pumps	
		- Motor stators	
		- Centrifuge housing/recipients	
		- Scoops	

5.2	Especially designed or prepared auxiliary systems, equipment and
	component for gas enrichment plants

- Machine header piping systems
- Feed systems/product and tails withdrawal systems
- Mass spectrometer / ion sources
- Frequency changers
- 5.3 Especially designed or prepared assemblies and components for use in gaseous enrichment.
 - Gaseous diffusion barriers
 - Diffuser housings
 - Compressors and gas blowers
 - Rotary shaft seals
 - Heat exchanger for cooling
- 5.4 Especially designed or prepared auxiliary systems, equipment and components for use in gaseous diffusion enrichment
 - Feed systems/product and tails withdrawal systems
 - Head piping systems
 - Vacuum systems
 - Special shut-off and control valves
 - Mass spectrometer / ion sources
- 5.5 Especially designed or prepared systems, equipment and components for use in aerodynamic plants
 - Separation nozzles
 - Vortex tubes
 - Compressors and gas blowers
 - Rotary shaft seals
 - Heat exchangers for gas cooling
 - Separation element housings
 - Feed systems/product and tails withdrawal systems
 - Header piping systems
 - Vacuum systems and pumps
 - Special shut-off and control valves
 - Mass spectrometer / ion sources
 - gas separation systems

1	1

5.6 Especially designed or prepared systems, equipment and components for use in chemical exchange or ion exchange enrichment plants - Liquid-liquid exchange columns (Chemical exchange) - Liquid-liquid centrifugal contactors (Chemical exchange) - Reduction systems and equipment (chemical exchange) - Feed preparation systems (chemical exchange) - Oxidation systems (Chemical exchange) - Fast-reacting ion exchange resin/adsorbents (ion exchange) - Ion exchange columns (ion exchange) - Ion exchange reflux systems (Ion exchange) 5.7 Especially designed or prepared systems equipment and components for use in laser-based enrichment plants - Vaporization (AVLIS) - Liquid metal handling systems (AVLIS) - Metal 'product' and 'tails' collector assemblies (AVLIS) - Separator module housings (AVLIS) - Supersonic expansion nozzles (MLIS) - Pentafluoride products collectors (MLIS) - Gas compressors (MLIS) - Rotary shaft seals (MLIS) - Fluorination systems (MLIS) - Mass spectrometer / ion sources (MLIS) - Feed systems/product and tails withdrawal systems (MLIS) - Gas separation systems (MLIS) - Laser systems (AVLIS, MLIS and CRISLA) Especially designed or prepared systems, equipment and components for 5.8 use in plasma separation enrichment plants - Microwave power sources and antennae - Ion excitation coils - Plasma generation systems - Liquid metal handling systems - Metal 'product' and 'tails' collector assemblies - Separator module housings

5.9	Especially designed or prepared systems, equipment and components for use in electromagnetic enrichment plants
	- Electromagnetic isotope separators
	i) Ion Source
	ii) Ion Collectors
	iii) Vacuum housings
	- High Voltage power supplies
	- Magnet power supplies
	- Water - Hydrogen sulphide exchange towers
	 Water - Hydrogen sulphide exchange towers Blowers and compressors Ammonia-Hydrogen exchange towers Tower internals and stage pumps Ammonia Crakers Infrared absorption analyzers

Please kindly submit the details of equipments or materials that are ticked in softcopy in one (1) week from the date of receiving this to <u>sionghu@aelb.gov.my</u> or <u>fitriah@aelb.gov.my</u> or hardcopy in two (2) weeks to the following address:-

Policy Code and Standard Division Atomic Energy Licensing Board Batu 24, Jalan Dengkil 43800 Dengkil Selangor Darul Ehsan <u>www.aelb.gov.my</u> (Attention: Tn. Hj. Mohd Pauzi Bin Mohd Sobari)

If there are any enquiries, please kindly contact

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•	Mr. Yeoh Siong Hu	<u>sionghu@aelb.gov.my</u>	+603 8922 5888 Ext 5747