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GOVERNMENT OF INDIA
MINISTRY of EXTERNAL AFFAIRS
Order
New Delhi, the 21 April 2017

S.O. (E).-- Whereas the Security Council of the United Nations adopted Resolution 1718 (2006) on 14 October 2006 at its 5551st Meeting, Resolution 1874 (2009) on 12 June 2009 at its 6141st Meeting, Resolution 2087 (2013) on 22 January 2013 at its 6904th Meeting, Resolution 2094 (2013) on 7 March 2013 at its 6932nd Meeting, Resolution 2270 (2016) on 2 March 2016 at its 7638th Meeting and Resolution 2321 (2016) on 30 November 2016 at its 7821st meeting (appended to this Order as Schedules I, II, III, IV, V and VI respectively) under Chapter VII of the Charter of the United Nations requiring all States to take certain measures;

And whereas, the Central Government considers it necessary and expedient to issue an Order under the United Nations (Security Council) Act, 1947 (43 of 1947) to implement the said Resolutions of the Security Council adopted under Article 41 of Chapter VII of the Charter of the United Nations;

Now, therefore, in exercise of the powers conferred by section 2 of the United Nations (Security Council) Act, 1947 (43 of 1947), and in supersession of the Implementation of Security Council Resolution on Democratic People's Republic of Korea Order, 2007 [S.O.131(E) dated 7 February 2007 and S.O. 2374 (E) dated 15 September 2009], except as respects things done or omitted to be done before such supersession, the Central Government hereby makes the following Order to give effect to the Resolutions referred therein, namely:-

1. **Short title and commencement. -** (1) This Order may be called the Implementation of Security Council Resolution on Democratic People's Republic of Korea Order, 2017.

(2) It shall come into force on the date of its publication in the Official Gazette.

2. **Definitions.-** In this Order, unless the context otherwise requires,-

   (a) "Resolutions" mean the United Nations Security Council Resolutions under Chapter VII of the Charter of the United Nations on Democratic People's Republic of Korea, namely, 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016) and 2321 (2016);

   (b) "Committee" means the Committee of the United Nations Security Council set up in terms of paragraph 12 of Resolution 1718 (2006) and paragraph 39 of Resolution 2321 (2016);

(c) Words and expressions used but not defined in this Order and defined in any law for the time being in force shall have the meanings respectively assigned to them in such laws.

3. The Central Government shall have all the powers to take measures to,-

(a) prevent the direct or indirect supply, sale, transfer or export, through its territories or by its nationals, or using its flag vessels or aircraft, and whether or not originating in its territories, to the Democratic People's Republic of Korea, of:-

(i) any battle tanks, armoured combat vehicles, large calibre artillery systems, combat aircraft, attack helicopters, warships, missiles or missile systems as defined for the purpose of the United Nations Register on Conventional Arms, or related materiel including spare parts;

(ia) all arms and related materiel, including small arms and light weapons and their related materiel, as well as financial transactions, technical training, advice, services or assistance related to the provision, manufacture, maintenance or use of such arms and related materiel;

(ii) all items, materials, equipment, goods and technology as set out in the United Nations Security Council and International Atomic Energy Agency documents, namely,

1. S/2006/853* (Appendix I to this Order);
2. S/2006/853/Corr.1 (Appendix II to this Order);
3. Part B of S/2009/364 (Appendix III to this Order),
4. Annex III of Resolution 2094 (2013);
5. S/2016/1069 (Appendix IV to this Order);
6. Annex A to INFCIRC/254/Rev.12/Part1 (International Atomic Energy Agency document);
7. Annex to INFCIRC/254/Rev.9/Part2 (International Atomic Energy Agency document);
8. S/2014/253 (Appendix V to this Order);
9. S/2016/308 (Appendix VI to this Order);
10. Annex III of Resolution 2321 (2016); and
11. other items, materials, equipment, goods and technology, as determined by the Central Government, which could contribute to Democratic People's Republic of Korea's nuclear-related, ballistic missile-related or other weapons of mass destruction related programmes;

(iii) luxury goods, including, but not limited to, the items specified in Annex IV of Resolution 2094 (2013), Annex IV of Resolution 2270 (2016) and Annex IV of Resolution 2321 (2016);

(iv) items as determined by the Central Government, except food or medicine, that could directly contribute to the development of the Democratic People's Republic of Korea's operational capabilities of its armed forces. This measure is subject to the exemptions set out in paragraph 8 (a) and (b) of Resolution 2270 (2016);

(b) prohibit the procurement, by its nationals, or using its flagged vessels or aircraft, and whether or not originating in the territory of the Democratic People's Republic of Korea, of items covered in sub-paragraphs (a)(i), (a)(ia), (a)(ii) and (a)(iv) above, from the Democratic People's Republic of Korea. This prohibition includes the hosting of trainers, advisors, or other officials for the purpose of military-, paramilitary- or police-related training;

(c) prevent any transfers to the Democratic People's Republic of Korea by Indian nationals or from Indian territory, or from the Democratic People's Republic of Korea by its nationals or from its territory, of technical training, advice, services or assistance related to the provision, manufacture, maintenance or use of the items in sub-paragraphs (a)(i) and (a)(ii) above.

(d) freeze immediately the funds, other financial assets and economic resources which are on its territories, that are owned or controlled, directly or indirectly, by the persons or entities set out in

1. Part A and Part C of S/2009/364 (Appendix III to this Order);
2. Annex I and II of Resolution 2087 (2013);
3. Annex I and II of Resolution 2094 (2013);
4. Annex I, II and III of Resolution 2270 (2016), as amended by Security Council Press Release SC/12636 of 17 December 2016 (Appendix VII to this Order); and
5. Annex I and II of Resolution 2321 (2016)

as being engaged in or providing support for, including through other illicit means, Democratic People's Republic of Korea's nuclear-related, other weapons of mass destruction-related and ballistic missile-related programmes, or by persons or entities acting on their behalf or at their direction, and ensure that any funds, financial assets or economic resources are prevented from being made available by its nationals or by any persons or entities within India, to or for the benefit of such persons or entities.

Note 1: The asset freeze shall apply to all the funds, other financial assets and economic resources outside of the Democratic People's Republic of Korea that are owned or controlled, directly or indirectly, by entities of the Government of the Democratic People's Republic of Korea or the Worker's Party of Korea, or by individuals or entities acting on their behalf or at their direction, or by entities owned or controlled by them, that the Central Government determines are associated with the Democratic People's Republic of Korea's nuclear or ballistic missile programs or other activities prohibited by the Resolutions .

Note 2: These measures are subject to the exemptions set out in paragraph 9 of Resolution 1718 (2006) and paragraph 32 of Resolution 2270 (2016);

(e) prevent the entry into or transit through India of the persons listed in

1. Part C of S/2009/364 (Appendix III to this Order);
2. Annex II of Resolution 2087 (2013);
3. Annex II of Resolution 2094 (2013);
4. Annex II of Resolution 2270 (2016); and
5. Annex II of Resolution 2321 (2016)

as being responsible for, including through supporting or promoting, Democratic People's Republic of Korea policies in relation to the Democratic People's Republic of Korea's nuclear-related, ballistic missile-related and other weapons of mass destruction-related programmes, together with their family members, provided that nothing contained above shall oblige the Central Government to refuse its own nationals entry into its territory.

Note: The travel ban measures are subject to the exemptions set out in paragraph 10 of Resolution 1718 (2006) and paragraph 10 of Resolution 2094 (2013);

(f) inspect, in accordance with provisions of all laws for the time being in force, all cargo (including cargo transported by rail or by road and personal or checked baggage of individuals) within or transiting through its territory, that has originated in the Democratic People's Republic of Korea, or that is destined for the Democratic People's Republic of Korea, or has been brokered or facilitated by the Democratic People's Republic of Korea or its nationals, or by individuals or entities acting on their behalf or at their direction, or entities owned or controlled by them, or by designated individuals or entities, or that is being transported on Democratic People's Republic of Korea-flagged aircraft or maritime vessels, for the purpose of ensuring that no items are transferred in violation of the Resolutions;

(g) prohibit its nationals, persons subject to its jurisdiction and entities incorporated in its territory or subject to its jurisdiction from providing insurance or re-insurance services to vessels owned, controlled, or operated, including through illicit means, by the Democratic People's Republic of Korea;

(h) prohibit the provision by its nationals or from its territory, of bunkering services, such as provision of fuel or supplies, or other servicing of vessels, to Democratic People's Republic of Korea vessels if there are reasonable grounds to believe that they are carrying items the supply, sale, transfer, or export of which is prohibited by the Resolutions;

(i) prevent the provision of financial services or the transfer to, through, or from its territory, or to or by its nationals or entities organised under its laws (including branches abroad), or persons or financial institutions in its territory, of any financial or other assets or resources including bulk cash, and transfers of gold, including through gold couriers, transiting to and from the Democratic People's Republic of Korea, that could contribute to the Democratic People's Republic of Korea's nuclear or ballistic missile programme, or other activities prohibited by the Resolutions or to the evasion of measures imposed by the Resolutions, including by freezing any financial or other assets or resources on its territories or that hereafter come within its territories, or that are subject to its jurisdiction or that hereafter become subject to its jurisdiction, that are associated with such programmes or activities and applying enhanced monitoring to prevent all such transactions in accordance with its national authorities and legislation;

(j) prohibit public and private financial support from within its territory or by persons or entities subject to its jurisdiction for trade with the Democratic

People's Republic of Korea (including the granting of export credits, guarantees or insurance to its nationals or entities involved in such trade), except as approved in advance by the Committee on a case-by-case basis;

(k) expel an individual from its territory for the purpose of repatriation to the Democratic People's Republic of Korea, consistent with applicable law, if it is determined by the Central Government that such individual, being a Democratic People's Republic of Korea diplomat, governmental representative, or other Democratic People's Republic of Korea national acting in a governmental capacity, or working on behalf of or at the direction of a Democratic People's Republic of Korea bank or financial institution, or working on behalf or at the direction of a designated individual or entity, or of an individual or entities assisting in the evasion of sanctions or violating the provisions of the Resolutions. This measure is subject to the exemptions set out in paragraph 13 of Resolution 2270 (2016);

(l) expel an individual who is not an Indian from its territories for the purpose of repatriation to the individual's State of nationality, consistent with applicable national and international law, if it is determined by the Central Government that the individual is working on behalf of or at the direction of a designated individual or entity or assisting the evasion of sanctions or violating the provisions of the Resolutions. This measure is subject to the exemptions set out in paragraph 14 of Resolution 2270 (2016);

(m) prevent specialized teaching or training of Democratic People's Republic of Korea nationals within its territories or by its nationals of disciplines which could contribute to the Democratic People's Republic of Korea's proliferation sensitive nuclear activities or the development of nuclear weapons delivery systems, including teaching or training in advanced physics, advanced computer simulation and related computer sciences, geospatial navigation, nuclear engineering, aerospace engineering, aeronautical engineering and related disciplines, advanced materials science, advanced chemical engineering, advanced mechanical engineering, advanced electrical engineering and advanced industrial engineering;

(n) suspend scientific and technical cooperation involving persons or groups officially sponsored by or representing the Democratic People's Republic of Korea except for medical exchanges unless-

(i) in the case of scientific or technical cooperation in the fields of nuclear science and technology, aerospace and aeronautical engineering and technology, or advanced manufacturing production techniques and methods, the Committee has determined on a case-by-case basis that a particular activity will not contribute to the Democratic People's Republic of Korea's proliferation sensitive nuclear activities or ballistic missile-related programmes; or

(ii) in the case of all other scientific or technical cooperation, the Central Government determines that the particular activity will not contribute to the Democratic People's Republic of Korea's proliferation sensitive nuclear activities or ballistic missile-related programmes and notifies the Committee in advance of such determination;

(o) prohibit its nationals from procuring vessel and aircraft crewing services from the Democratic People's Republic of Korea;

(p) prohibit its nationals and those in its territories from leasing or chartering its flagged vessels or aircraft or providing crew services to the Democratic People's Republic of Korea without exception unless approved in advance by the Committee;

(q) prevent the direct or indirect supply, sale or transfer, through its territories or by its nationals, or using its flag vessels or aircraft, and whether or not originating in its territories, of new helicopters and vessels, to the Democratic People's Republic of Korea, except as approved in advance by the Committee on a case-by-case basis;

(r) prohibit Indian nationals, persons subject to Indian jurisdiction and entities incorporated in its territory or subject to its jurisdiction from registering vessels in the Democratic People's Republic of Korea, obtaining authorisation for a vessel to use the Democratic People's Republic of Korea flag, and from owning, leasing, operating, providing any vessel classification, certification or associated service, or insuring any vessel flagged by the Democratic People's Republic of Korea. The said provisions would apply without exception, unless the Committee approves on a case-by-case basis in advance;

(s) de-register any vessel that is owned, controlled, operated or crewed by the Democratic People's Republic of Korea, and not register any such vessel that has been de-registered by another Member State pursuant to this measure;

(t) deny permission to any aircraft to take off from, land in or overfly, unless under the condition of landing for inspection, their territory, if it has information that provides reasonable grounds to believe that the aircraft contains items the supply, sale, transfer or export of which is prohibited by the Resolutions, except in the case of an emergency landing;

(u) prohibit the procurement, by its nationals, or using its flag vessels or aircraft, and whether or not originating in the Democratic People's Republic of Korea, of coal, iron and iron ore, from the Democratic People's Republic of Korea. This measure is subject to the exemptions set out in paragraph 26 (a), (b) and (c) of Resolution 2321 (2016). The procurement of coal from the Democratic People's Republic of Korea shall be reported by the Central Government to the Committee in the manner prescribed in paragraph 26 (b) of Resolution 2321 (2016);

(v) prohibit the procurement, by its nationals, or using its flag vessels or aircraft, whether or not originating in the territory of the Democratic People's Republic of Korea, of gold, titanium ore, vanadium ore, and rare earth minerals, from the Democratic People's Republic of Korea;

(w) prohibit the procurement, by its nationals, or using its flag vessels or aircraft, whether or not originating in the territory of the Democratic People's

Republic of Korea, of copper, nickel, silver and zinc, from the Democratic People's Republic of Korea;

(x) prohibit the procurement, by its nationals, or using its flag vessels or aircraft, whether or not originating in the territory of the Democratic People's Republic of Korea, of statues, from the Democratic People's Republic of Korea unless the Committee approves on a case-by-case basis in advance;

(y) prevent the sale or supply, by its nationals or from its territories or using its flag vessels or aircraft, of aviation fuel, including aviation gasoline, naptha-type jet fuel, kerosene-type jet fuel, and kerosene-type rocket fuel, whether or not originating in its territory, to the territory of the Democratic People's Republic of Korea and in this regard exercise vigilance to ensure that no more fuel is provided to Democratic People's Republic of Korea-flagged civil passenger aircraft than is necessary for the relevant flight, including a standard margin for safety of flight. This provision shall not apply with respect to the sale or supply of aviation fuel to civilian passenger aircraft outside the Democratic People's Republic of Korea, exclusively for consumption during its flight to the Democratic People's Republic of Korea and its return flight;

(z) prohibit in its territories the opening and operation of new branches, subsidiaries, and representative offices of Democratic People's Republic of Korea banks; and prohibit financial institutions within its territories or subject to its jurisdiction from establishing new joint ventures and from taking an ownership interest in or establishing or maintaining correspondent relationships with Democratic People's Republic of Korea banks, unless such transactions have been approved by the Committee in advance; and take the necessary measures to close such existing branches, subsidiaries and representative offices, and also terminate such joint ventures, ownership interests and correspondent banking relationships with Democratic People's Republic of Korea banks;

(za) take the necessary measures to close existing representative offices, subsidiaries or banking accounts in the Democratic People's Republic of Korea unless the Committee determines on a case-by-case basis that such offices, subsidiaries or accounts are required for the delivery of humanitarian assistance or the activities of diplomatic missions in the Democratic People's Republic of Korea pursuant to the Vienna Convention on Diplomatic Relations or the activities of the United Nations or its specialized agencies or related organisations, or for any other purposes consistent with the objectives of the Resolutions;

(zb) prohibit financial institutions within India or its jurisdiction from opening new representative offices or subsidiaries, branches or banking accounts in the Democratic People's Republic of Korea;

(zc) take steps to limit the number of bank accounts to one per Democratic People's Republic of Korea diplomatic mission and consular post, and one per accredited Democratic People's Republic of Korea diplomat and consular officer, at banks in India;

(zd) restrict the entry into or transit through its territory of members of the Government of the Democratic People's Republic of Korea, officials of that Government, and members of the Democratic People's Republic of Korea armed forces, if it is determined by the Central Government that such members or officials are associated with the Democratic People's Republic of Korea's nuclear or ballistic missile programmes or other activities prohibited by the Resolutions;

(ze) prohibit the Democratic People's Republic of Korea from using real property that it owns or leases in India for any purpose other than diplomatic or consular activities.

Appendix-I

United Nations S/2006/853*

Security Council

Distr.: General
7 November 2006

Original: English

Letter dated 1 November 2006 from the Chairman of the Security Council Committee established pursuant to resolution 1718 (2006) concerning the Democratic People's Republic of Korea addressed to the President of the Security Council**

Please find attached a list of items, materials, equipment, goods and technology related to other weapons of mass destruction programmes (see annex). I should be grateful if you would make the necessary arrangements for this list to be issued as a Security Council document.

(*Signed*) Peter **Burian**
Chairman
Security Council Committee established pursuant to resolution 1718 (2006)
concerning the Democratic People's Republic of Korea

* Reissued for technical reasons.

** The present document supersedes the communication dated 13 October 2006 from the Permanent Representative of France to the United Nations addressed to the President of the Security Council (S/2006/816).

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Annex

Chemical Precursors

1,3-Bis(2-chloroethylthio)-n-propane	(63905-10-2)
1,4-Bis(2-chloroethylthio)-n-butane	(142868-93-7)
1,5-Bis(2-chloroethylthio)-n-pentane	(142868-94-8)
2-Chloroethanol	(107-07-3)
2-Chloroethylchloromethylsulfide	(2625-76-5)
3-Hydroxy-1-methylpiperidine	(3554-74-3)
3-Quinuclidinol	(1619-34-7)
3-Quinuclidone	(3731-38-2)
Alkyl (Me, Et, n-Pr or i-Pr) phosphonyldifluorides	
Amiton: O,O-Diethyl S-[2-(diethylamino)ethyl] phosphorothiolate and corresponding alkylated or protonated salts	(78-53-5)
Ammonium bifluoride	(1341-49-7)
Arsenic trichloride	(7784-34-1)
Benzilic acid	(76-93-7)
Bis(2-chloroethylthio)methane	(63869-13-6)
Bis(2-chloroethylthiomethyl)ether	(63918-90-1)
BZ: 3-Quinuclidinyl benzilate	(6581-06-2)
Chloropicrin: Trichloronitromethane	(76-06-2)
Chlorosarin: O-Isopropyl methylphosphonochloridate	(1445-76-7)
Chlorosoman: O-Pinacolyl methylphosphonochloridate	(7040-57-5)
Cyanogen chloride	(506-77-4)
Dialkyl (Me, Et, n-Pr or i-Pr) N,N-dialkyl (Me, Et, n-Pr or i-Pr)-phosphoramidates	
Diethyl ethylphosphonate	(78-38-6)
Diethyl methylphosphonate	(683-08-9)
Diethyl methylphosphonite	(15715-41-0)
Diethyl N,N-dimethylosphoramidate	(2404-03-7)
Diethyl phosphite	(762-04-9)
Diethylaminoethanol	(100-37-8)
Diisopropylamine	(108-18-9)
Dimethyl ethylphosphonate	(6163-75-3)
Dimethyl methylphosphonate	(756-79-6)
Dimethyl phosphite (DMP)	(868-85-9)
Dimethylamine hydrochloride	(506-59-2)

Dimethylamine	(124-40-3)
Ethyldiethanolamine	(139-87-7)
Ethylphosphinyl dichloride	(1498-40-4)
Ethylphosphinyl difluoride	(430-78-4)
Ethylphosphonyl dichloride	(1066-50-8)
Ethylphosphonyl difluoride	(753-98-0)
HN1: Bis(2-chloroethyl)ethylamine	(538-07-8)
HN2: Bis(2-chloroethyl)methylamine	(51-75-2)
HN3: Tris(2-chloroethyl)amine	(555-77-1)
Hydrogen cyanide	(74-90-8)
Hydrogen fluoride	(7664-39-3)
Lewisite 1: 2-Chlorovinyldichloroarsine	(541-25-3)
Lewisite 2: Bis(2-chlorovinyl)chloroarsine	(40334-69-8)
Lewisite 3: Tris(2-chlorovinyl)arsine	(40334-70-1)
Methyl benzilate	(76-89-1)
Methyldiethanolamine	(105-59-9)
Methylphosphinyl dichloride	(676-83-5)
Methylphosphinyl difluoride	(753-59-3)
Methylphosphonic acid	(993-13-5)
Methylphosphonothioic dichloride	(676-98-2)
Methylphosphonyl dichloride (DC)	(676-97-1)
Methylphosphonyl difluoride (DF)	(676-99-3)
Mustard gas: Bis(2-chloroethyl)sulfide	(505-60-2)
N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-ols and corresponding protonated salts*	
N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-thiols and corresponding protonated salts	
N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethyl-2-chlorides and corresponding protonated salts	
N,N-Dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidic dihalides	
N,N-Diisopropyl-(beta)-aminoethane thiol	(5842-07-9)
N,N-Diisopropyl-(beta)-amino-ethanol	(96-80-0)
N,N-Diisopropyl-(beta)-aminoethyl chloride	(96-79-7)
N,N-Diisopropyl-2-aminoethyl chloride hydrochloride	(4261-68-1)
N,N-Dimethylaminophosphoryl dichloride	(677-43-0)

O-Alkyl (<C10, incl. cycloalkyl) alkyl (Me, Et, n-Pr or i-Pr)-phosphonofluoridates	
e.g. Sarin: O-Isopropyl methylphosphonofluoridate	(107-44-8)
Soman: O-Pinacolyl methylphosphonofluoridate	(96-64-0)
O-Alkyl (<C10, incl. cycloalkyl) N,N-dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidocyanidates	
O-Alkyl (H or <C10, incl. cycloalkyl) O-2-dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et, n-Pr or i-Pr) phosphonites and corresponding alkylated or protonated salts	
O-Alkyl (H or <C10, incl. cycloalkyl) S-2-dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et, n-Pr or i-Pr) phosphonothiolates and corresponding alkylated or protonated salts	
O-Ethyl 2-diisopropylaminoethyl methylphosphonite (QL)	(57856-11-8)
O-Mustard: Bis(2-chloroethylthioethyl)ether	(63918-89-8)
PFIB: 1,1,3,3,3-Pentafluoro-2-(trifluoromethyl)-1-propene	(382-21-8)
Phosgene: Carbonyl dichloride	(75-44-5)
Phosphorus oxychloride	(10025-87-3)
Phosphorus pentachloride	(10026-13-8)
Phosphorus pentasulphide	(1314-80-3)
Phosphorus trichloride	(7719-12-2)
Pinacolone	(75-97-8)
Pinacolyl alcohol	(464-07-3)
Potassium bifluoride	(7789-29-9)
Potassium cyanide	(151-50-8)
Potassium fluoride	(7789-23-3)
Sesquimustard: 1,2-Bis(2-chloroethylthio)ethane	(3563-36-8)
Sodium bifluoride	(1333-83-1)
Sodium cyanide	(143-33-9)
Sodium fluoride	(7681-49-4)
Sodium sulphide	(1313-82-2)
Sulphur dichloride	(10545-99-0)
Sulphur monochloride	(10025-67-9)
Tabun (GA): O-Ethyl N,N-dimethyl phosphoramidocyanidate	(77-81-6)
Thiodiglycol	(111-48-8)
Thionyl chloride	(7719-09-7)
Triethanolamine	(102-71-6)
Triethanolamine hydrochloride	(637-39-8)
Triethyl phosphite	(122-52-1)

Trimethyl phosphite (TMP)	(121-45-9)
VX: O-Ethyl S-2-diisopropylaminoethyl methyl phosphonothiolate	(50782-69-9)

Dual-Use Chemical Manufacturing Facilities and Equipment and Related Technology

I. MANUFACTURING FACILITIES AND EQUIPMENT

Note 1: The objective of these controls should not be defeated by the transfer of any non-controlled item containing one or more controlled components where the controlled component or components are the principal element of the item and can feasibly be removed or used for other purposes.

N.B. In judging whether the controlled component or components are to be considered the principal element, governments should weigh the factors of quantity, value, and technological know-how involved and other special circumstances which might establish the controlled component or components as the principal element of the item being procured.

Note 2: The objective of these controls should not be defeated by the transfer of a whole plant, on any scale, which has been designed to produce any CW agent or controlled precursor chemical.

1. Reaction Vessels, Reactors or Agitators

Reaction vessels or reactors, with or without agitators, with total internal (geometric) volume greater than 0.1 m^3 (100 l) and less than 20 m^3 (20000 l), where all surfaces that come in direct contact with the chemical(s) being processed or contained are made from the following materials:
(a) nickel or alloys with more than 40% nickel by weight;
(b) alloys with more than 25% nickel and 20% chromium by weight;
(c) fluoropolymers;
(d) glass or glass-lined (including vitrified or enamelled coating);
(e) tantalum or tantalum alloys;
(f) titanium or titanium alloys; or
(g) zirconium or zirconium alloys.

Agitators for use in the above-mentioned reaction vessels or reactors, where all surfaces of the agitator or component that come in direct contact with the chemical(s) being processed or contained are made from the following materials:
(a) nickel or alloys with more than 40% nickel by weight;
(b) alloys with more than 25% nickel and 20% chromium by weight;
(c) fluoropolymers;
(d) glass or glass-lined (including vitrified or enamelled coating);
(e) tantalum or tantalum alloys;
(f) titanium or titanium alloys; or
(g) zirconium or zirconium alloys.

2. Storage Tanks, Containers or Receivers

Storage tanks, containers or receivers with a total internal (geometric) volume greater than 0.1 m^3 (100 l) where all surfaces that come in direct contact with the chemical(s) being processed or contained are made from the following materials:
(a) nickel or alloys with more than 40% nickel by weight;
(b) alloys with more than 25% nickel and 20% chromium by weight;
(c) fluoropolymers;
(d) glass or glass-lined (including vitrified or enamelled coating);
(e) tantalum or tantalum alloys;
(f) titanium or titanium alloys; or
(g) zirconium or zirconium alloys.

3. Heat Exchangers or Condensers

Heat exchangers or condensers with a heat transfer surface area less than 20 m^2, where all surfaces that come in direct contact with the chemical(s) being processed are made from the following materials:
(a) nickel or alloys with more than 40% nickel by weight;
(b) alloys with more than 25% nickel and 20% chromium by weight;
(c) fluoropolymers;
(d) glass or glass-lined (including vitrified or enamelled coating);
(e) graphite;
(f) tantalum or tantalum alloys;
(g) titanium or titanium alloys;
(h) zirconium or zirconium alloys.

4. Distillation or Absorption Columns

Distillation or absorption columns of internal diameter greater than 0.1 m, where all surfaces that come in direct contact with the chemical(s) being processed are made from the following materials:
(a) nickel or alloys with more than 40% nickel by weight;
(b) alloys with more than 25% nickel and 20% chromium by weight;
(c) fluoropolymers;
(d) glass or glass-lined (including vitrified or enamelled coating);
(e) graphite;
(f) tantalum or tantalum alloys;
(g) titanium or titanium alloys; or
(h) zirconium or zirconium alloys.

5. Filling Equipment

Remotely operated filling equipment in which all surfaces that come in direct contact with the chemical(s) being processed are made from the following materials:
(a) nickel or alloys with more than 40% nickel by weight; or
(b) alloys with more than 25% nickel and 20% chromium by weight.

6. Valves

Valves, in which all surfaces that come in direct contact with the chemical(s) being produced, processed, or contained are made from the following materials:
(a) nickel or alloys with more than 40% nickel by weight;
(b) alloys with more than 25% nickel and 20% chromium by weight;
(c) fluoropolymers;
(d) glass or glass-lined (including vitrified or enamelled coating);
(e) tantalum or tantalum alloys;
(f) titanium or titanium alloys; or
(g) zirconium or zirconium alloys.

7. Multi-Walled Piping

Multi-walled piping incorporating a leak detection port, in which all surfaces that come in direct contact with the chemical(s) being processed or contained are made from the following materials:
(a) nickel or alloys with more than 40% nickel by weight;
(b) alloys with more than 25% nickel and 20% chromium by weight;
(c) fluoropolymers;
(d) glass or glass-lined (including vitrified or enamelled coating);
(e) graphite;
(f) tantalum or tantalum alloys;
(g) titanium or titanium alloys; or
(h) zirconium or zirconium alloys.

8. Pumps

Pumps with manufacturer's specified maximum flow-rate greater than 0.6 m3/h, or vacuum pumps with manufacturer's specified maximum flow-rate greater than 5 m^3/h (under standard temperature (273 K (0o C)) and pressure (101.3 kPa) conditions), in which all surfaces that come into direct contact with the chemical(s) being processed are made from any of the following materials:
(a) nickel or alloys with more than 40% nickel by weight;
(b) alloys with more than 25% nickel and 20% chromium by weight;
(c) fluoropolymers;
(d) glass or glass-lined (including vitrified or enamelled coating);
(e) graphite;
(f) tantalum or tantalum alloys;

(g) titanium or titanium alloys;
(h) zirconium or zirconium alloys;
(i) ceramics; or
(j) ferrosilicon.

9. Incinerators

Incinerators designed to destroy CW agents, controlled precursors or chemical munitions, having specially designed waste supply systems, special handling facilities, and an average combustion chamber temperature greater than 1000o C, in which all surfaces in the waste supply system that come into direct contact with the waste products are made from or lined with the following materials:
(a) nickel or alloys with more than 40% nickel by weight;
(b) alloys with more than 25% nickel and 20% chromium by weight; or
(c) ceramics.

II. TOXIC GAS MONITORING SYSTEMS AND DETECTORS

Toxic gas monitoring systems and dedicated detectors:
(a) designed for continuous operation and usable for the detection of chemical warfare agents or controlled precursors at concentrations of less than 0.3 mg/m^3; or
(b) designed for the detection of cholinesterase-inhibiting activity.

III. RELATED TECHNOLOGY

The transfer of 'technology', including licenses, directly associated with:
(a) CW agents;
(b) controlled precursors; or
(c) controlled dual-use equipment items,
to the extent permitted by national legislation.

Technical assistance is subject to control. Controls on 'technology' transfer, including 'technical assistance', do not apply to information 'in the public domain' or to 'basic scientific research' or the minimum necessary information for patent application.

The approval for export of any controlled item of dual-use equipment also authorizes the export to the same end-user of the minimum 'technology' required for the installation, operation, maintenance or repair of that item.

Definition of Terms

'Technology': Specific information necessary for the 'development', 'production' or 'use' of a product. The information takes the form of 'technical data' or 'technical assistance'.

‘Basic scientific research’: Experimental or theoretical work undertaken principally to acquire new knowledge of the fundamental principles of phenomena or observable facts, not primarily directed towards a specific practical aim or objective.

‘Development’: ‘Development’ is related to all phases before ‘production’ such as:
(a) design;
(b) design research;
(c) design analysis;
(d) design concepts;
(e) assembly of prototypes;
(f) pilot production schemes;
(g) design data;
(h) process or transforming design data into a product;
(i) configuration design;
(j) integration design; and/or
(k) layouts.

‘In the public domain’: ‘In the public domain’, as it applies herein, means technology that has been made available without restrictions upon its further dissemination. (Copyright restrictions do not remove technology from being in the public domain).

‘Production’: Production means all production phases such as:
(a) construction;
(b) production engineering;
(c) manufacture;
(d) integration;
(e) assembly (mounting);
(f) inspection;
(g) testing; and/or
(h) quality assurance.

‘Technical assistance’: May take forms, such as: instruction, skills, training, working knowledge, consulting services.

N.B. ‘Technical assistance’ may involve transfer of ‘technical data’.

‘Technical data’: May take forms such as blueprints, plans, diagrams, models, formulae, tables, engineering designs and specifications, manuals and instructions written or recorded on other media or devices such as disk, tape, read-only memories.

‘Use’: Operation, installation (including on-site installation), maintenance (checking), repair, overhaul or refurbishing.

'Export': An actual shipment or transmission of controlled items out of the country. This includes transmission of technology by electronic media, fax or telephone.

Biological Agents

Viruses

Chikungunya virus
Congo-Crimean haemorrhagic fever virus
Dengue fever virus
Eastern equine encephalitis virus
Ebola virus
Hantaan virus
Junin virus
Lassa fever virus
Lymphocytic choriomeningitis virus
Machupo virus
Marburg virus
Monkey pox virus
Rift Valley fever virus
Tick-borne encephalitis virus (Russian Spring-Summer encephalitis virus)
Variola virus
Venezuelan equine encephalitis virus
Western equine encephalitis virus
White pox
Yellow fever virus
Japanese encephalitis virus
Kyasanur Forest virus
Louping ill virus
Murray Valley encephalitis virus
Omsk haemorrhagic fever virus
Oropouche virus
Powassan virus
Rocio virus
St Louis encephalitis virus

Rickettsiae

Coxiella burnetii
Bartonella quintana (Rochalimea quintana, Rickettsia quintana)
Rickettsia prowazeki
Rickettsia rickettsii

Bacteria

Bacillus anthracis
Brucella abortus
Brucella melitensis
Brucella suis
Chlamydia psittaci
Clostridium botulinum
Francisella tularensis
Burkholderia mallei (Pseudomonas mallei)
Burkholderia pseudomallei (Pseudomonas pseudomallei)
Salmonella typhi
Shigella dysenteriae
Vibrio cholerae
Yersinia pestis
Clostridium perfringens, epsilon toxin producing types
Enterohaemorrhagic Escherichia coli, serotype O157 and other verotoxin producing serotypes

Toxins as follow[1]

Botulinum toxins[2]
Clostridium perfringens toxins
Conotoxin
Ricin
Saxitoxin
Shiga toxin
Staphylococcus aureus toxins
Tetrodotoxin
Verotoxin
Microcystin (Cyanginosin)
Abrin
Cholera toxin
T-2 toxin
HT-2 toxin

[1] Excluding immunotoxins.
[2] Excluding botulinum toxins and conotoxins in product form meeting all of the following criteria:
- are pharmaceutical formulations designed for testing and human administration in the treatment of medical conditions;
- are pre-packaged for distribution as clinical or medical products; and,
- are authorized by a state authority to be marketed as clinical or medical products.

Genetically-modified Organisms

1. Genetically modified organisms or genetic elements from microorganisms in the list that contain nucleic acid sequences associated with pathogenicity.
2. Genetically modified organisms or genetic elements that contain nucleic acid sequences coding for any of the toxins on the list.

Plant Pathogens

Bacteria
Xanthomonas albilineans
Xanthomonas campestris pv. citri
Xanthomonas oryzae pv. oryzae (Pseudomonas campestris pv. oryzae)

Fungi
Colletotrichum coffeanum var. virulans (Colletotrichum kahawae)
Cochliobolus miyabeanus (Helminthosporium oryzae)
Microcyclus ulei (syn. Dothidella ulei)
Puccinia graminis (syn. Puccinia graminis f. sp. tritici)
Puccinia striiformis (syn. Puccinia glumarum)
Pyricularia grisea / Pyricularia oryzae

Genetically-modified Organisms

Genetically modified organisms or genetic elements from microorganisms in the list that contain nucleic acid sequences associated with pathogenicity.

Animal Pathogens

Viruses

African swine fever virus
Avian influenza virus 2
Bluetongue virus
Foot and mouth disease virus
Goat pox virus
Herpes virus (Aujeszky's disease)
Hog cholera virus (synonym: swine fever virus)
Lyssa virus
Newcastle disease virus
Peste des petits ruminants virus
Porcine enterovirus type 9 (synonym: swine vesicular disease virus)
Rinderpest virus

Sheep pox virus
Teschen disease virus
Vesicular stomatitis virus

Bacteria
Mycoplasma mycoides

Genetically-modified Organisms

Genetically modified organisms or genetic elements from microorganisms in the list that contain nucleic acid sequences associated with pathogenicity.

Dual-Use Biological Equipment and Related Technology

I. Equipment

1. Complete containment facilities at P3 or P4 containment level:

Complete containment facilities that meet the criteria for P3 or P4 (BL3, BL4, L3, L4) containment as specified in the WHO Laboratory Biosafety manual (2nd edition, Geneva, 1993) should be subject to export control.

2. Fermenters:

Fermenters capable of cultivation of pathogenic micro-organisms, viruses or for toxin production, without the propagation of aerosols, having a capacity of 100 litres or greater. Fermenters include bioreactors, chemostats and continuous-flow systems.

3. Centrifugal Separators:

Centrifugal separators capable of the continuous separation of pathogenic micro-organisms, without the propagation of aerosols, and having all the following characteristics:
- one or more sealing joints within the steam containment area;
- a flow rate greater than 100 litres per hour;
- components of polished stainless steel or titanium;
- capable of in-situ steam sterilisation in a closed state.
Technical note: Centrifugal separators include decanters.

4. Cross (tangential) Flow Filtration Equipment:

Cross (tangential) flow filtration equipment capable of continuous separation of pathogenic micro-organisms, viruses, toxins or cell cultures, without the propagation of aerosols, having all the following characteristics:

- a total filtration area equal to or greater than 5 square metres;
- capable of being steam-sterilized without preliminary dismantling.

5. Freeze-drying Equipment:

Steam sterilisable freeze-drying equipment with a condenser capacity of 50 kgs of ice or greater in 24 hours and less than 1000 kgs of ice in 24 hours.

6. As follows:
(a) Protective suits with full or partial ventilation.
(b) Class III biological safety cabinets or isolators with similar performance standards (e.g. flexible isolators, dry boxes, anaerobic chambers, glove boxes, or laminar flow hoods (closed with vertical flow)).

7. Aerosol inhalation chambers:

Chambers designed for aerosol challenge testing with micro-organisms, viruses or toxins and having a capacity of 1 cubic meter or greater.

8. Complete spraying systems specially designed or modified for dissemination of biological agents.

9. Equipment for the micro-encapsulation of live micro-organisms and toxins in the range of 1-10 um particle size, specifically:
(a) interfacial polycondensors;
(b) phase separators.

10. Fermenters of less than 20 litre capacity with special emphasis on aggregate orders or designs for use in combined systems.

11. Conventional or turbulent air-flow clean-air rooms and self-contained fan-HEPA filter units that may be used for P3 or P4 (BL3, BL4, L3, L4) containment facilities.

II. Related Technology

The transfer of ‘technology’ for ‘development’ or ‘production’ of:
(a) controlled biological agents; or
(b) controlled dual-use biological equipment items.

Controls on ‘technology’ transfer do not apply to information ‘in the public domain’ or to ‘basic scientific research’ or the minimum necessary information for patent application.

The approval for export of any controlled item of dual-use equipment also authorizes the export to the same end-user of the minimum ‘technology’ required for the installation, operation, maintenance, or repair of that item.

Definition of Terms

‘Basic scientific research’: Experimental or theoretical work undertaken principally to acquire new knowledge of the fundamental principles of phenomena or observable facts, not primarily directed towards a specific practical aim or objective.

‘Development’: ‘Development’ is related to all phases before ‘production’ such as:

(a) design;
(b) design research;
(c) design analysis;
(d) design concepts;
(e) assembly of prototypes;
(f) pilot production schemes;
(g) design data;
(h) process or transforming design data into a product;
(i) configuration design;
(j) integration design; and/or
(k) layouts.

‘In the public domain’: ‘In the public domain’, as it applies herein, means technology that has been made available without restrictions upon its further dissemination. (Copyright restrictions do not remove technology from being in the public domain).

‘Production’: Production means all production phases such as:

(a) construction;
(b) production engineering;
(c) manufacture;
(d) integration;
(e) assembly (mounting);
(f) inspection;
(g) testing; and/or
(h) quality assurance.

‘Technical assistance’: May take forms, such as: instruction, skills, training, working knowledge, consulting services. ‘Technical assistance’ may involve transfer of ‘technical data’.

‘Technical data’: May take forms such as blueprints, plans, diagrams, models, formulae, tables, engineering designs and specifications, manuals and instructions written or recorded on other media or devices such as disk, tape, read-only memories.

‘Technology’: Specific information necessary for the ‘development’, ‘production’, or ‘use’ of a product. The information takes the form of ‘technical data’ or ‘technical assistance’.

‘Use’: Operation, installation, (including on-site installation), maintenance, (checking), repair, overhaul or refurbishing.

United Nations S/2006/853/Corr.1

Security Council

Distr.: General
14 November 2006

Original: English

Letter dated 1 November 2006 from the Chairman of the Security Council Committee established pursuant to resolution 1718 (2006) concerning the Democratic People's Republic of Korea addressed to the President of the Security Council

Corrigendum

Annex, section I.3

Entry (g) *should read*

(g) titanium or titanium alloys; or

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Appendix-III

United Nations S/2009/364

Security Council

Distr.: General
16 July 2009

Original: English

Letter dated 16 July 2009 from the Acting Chairman of the Security Council Committee established pursuant to resolution 1718 (2006) addressed to the President of the Security Council

On behalf of the Security Council Committee established pursuant to resolution 1718 (2006), I have the honour to transmit herewith the report of the Committee dated 16 July 2009, submitted in accordance with paragraph 24 of resolution 1874 (2009) (see annex).

(*Signed*) Fazli **Çorman**
Acting Chairman
Security Council Committee established
pursuant to resolution 1718 (2006)

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Annex

Report of the Security Council Committee established pursuant to resolution 1718 (2006) prepared in accordance with paragraph 24 of resolution 1874 (2009)

By paragraph 24 of resolution 1874 (2009), the Security Council decided to adjust the measures imposed by paragraph 8 of its resolution 1718 (2006), including through the designation of entities, goods, and individuals, and directed the Committee to undertake its tasks to this effect and to report to the Council.

Pursuant to paragraph 24 of resolution 1874 (2009), the Committee adopted, on 16 July 2009, the decision attached to the present report (see enclosure).

The Committee will continue to undertake its tasks as mandated in paragraph 12 of resolution 1718 (2006).

Enclosure

Decision of the Security Council Committee established pursuant to resolution 1718 (2006) dated 16 July 2009

In accordance with paragraph 24 of resolution 1874 (2009), the Committee has made the following decision to designate additional entities, goods, and individuals.

A. Entities

The Committee designates the following entities to be subject to the measures imposed in paragraph 8 (d) of resolution 1718 (2006):

1. NAMCHONGANG TRADING CORPORATION

Description: Namchongang is a DPRK trading company subordinate to the General Bureau of Atomic Energy (GBAE). Namchongang has been involved in the procurement of Japanese origin vacuum pumps that were identified at a DPRK nuclear facility, as well as nuclear-related procurement associated with a German individual. It has further been involved in the purchase of aluminium tubes and other equipment specifically suitable for a uranium enrichment programme from the late 1990s. Its representative is a former diplomat who served as DPRK's representative for the IAEA inspection of the Yongbyon nuclear facilities in 2007. Namchongang's proliferation activities are of grave concern given the DPRK's past proliferation activities.

Location: Pyongyang.

A.K.A.: NCG; NAMCHONGANG TRADING; NAM CHON GANG CORPORATION; NOMCHONGANG TRADING CO.; NAM CHONG GAN TRADING CORPORATION

2. HONG KONG ELECTRONICS

Description: owned or controlled by, or acts or purports to act for or on behalf of Tanchon Commercial Bank and KOMID. Hong Kong Electronics has transferred millions of dollars of proliferation-related funds on behalf of Tanchon Commercial Bank and KOMID (both designated by the Committee in April 2009) since 2007. Hong Kong Electronics has facilitated the movement of money from Iran to the DPRK on behalf of KOMID.

Location: Sanaee St., Kish Island, Islamic Republic of Iran.

A.K.A.: HONG KONG ELECTRONICS KISH CO.

3. KOREA HYOKSIN TRADING CORPORATION

Description: a DPRK company based in Pyongyang that is subordinate to Korea Ryonbong General Corporation (designated by the Committee in April 2009) and is involved in the development of weapons of mass destruction.

Location: Rakwon-dong, Pothonggang District, Pyongyang.

A.K.A.: KOREA HYOKSIN EXPORT AND IMPORT CORPORATION

4. GENERAL BUREAU OF ATOMIC ENERGY (GBAE)

Description: The GBAE is responsible for the DPRK's nuclear programme, which includes the Yongbyon Nuclear Research Center and its 5 MWe (25 MWt) plutonium production research reactor, as well as its fuel fabrication and reprocessing facilities. The GBAE has held nuclear-related meetings and discussions with the International Atomic Energy Agency. GBAE is the primary DPRK government agency that oversees nuclear programmes, including the operation of the Yongbyon Nuclear Research Center.

Location: Haeudong, Pyongchen District, Pyongyang.

A.K.A.: General Department of Atomic Energy (GDAE)

5. KOREAN TANGUN TRADING CORPORATION

Description: Korea Tangun Trading Corporation is subordinate to DPRK's Second Academy of Natural Sciences and is primarily responsible for the procurement of commodities and technologies to support DPRK's defence research and development programmes, including, but not limited to, weapons of mass destruction and delivery system programmes and procurement, including materials that are controlled or prohibited under relevant multilateral control regimes.

Location: Pyongyang.

Note on subsidiaries (such as those in S/AC.49/2009/COMM.1): The Committee agrees to continue working on an expedited basis to identify entities that are acting on behalf or at the direction of previously designated entities. The Committee recalls in this context that Member States are obligated to impose the measures in paragraph 8 (d) of resolution 1718 (2006) on "persons or entities designated by the Committee or by the Security Council" as well as "persons or entities acting on [the] behalf or at [the] direction [of designated entities]."

B. Goods

The Committee determines that these items shall be specified for the purpose of paragraph 8 (a) (ii) of resolution 1718 (2006):

1) "Graphite designed or specified for use in Electrical Discharge Machining (EDM) machines"

2) "Para-aramid fibre (Kevlar and other Kevlar-like), filament and tape"

Note: The Committee agrees to continue working on an expedited basis to identify additional items, materials, equipment, goods and technology to be specified for the purpose of paragraphs 8 (a) (i) and 8 (a) (ii) of resolution 1718 (2006). The Committee intends to specify items in each of the following categories: 1) sensitive dual-use goods, 2) ballistic missile-related items and 3) nuclear-related items. The Committee will provide the latest information on these efforts in its regular report to the Security Council.

C. Individuals

The Committee designates the following individuals to be subject to the provisions of the measures imposed in paragraphs 8 (d) and 8 (e) of resolution 1718 (2006):

1. Yun Ho-jin: Director of Namchongang Trading Corporation; oversees the import of items needed for the uranium enrichment programme. (Additional information: born 13 October 1944; also known as Yun Ho-chin)

2. Ri Je-son: Director of the General Bureau of Atomic Energy (GBAE), chief agency directing DPRK's nuclear programme; facilitates several nuclear endeavours including GBAE's management of Yongbyon Nuclear Research Center and Namchongang Trading Corporation. (Additional information: born 1938; also known as Ri Che-son)

3. Hwang Sok-hwa: Director in the General Bureau of Atomic Energy (GBAE); involved in DPRK's nuclear programme; as Chief of the Scientific Guidance Bureau in the GBAE, served on the Science Committee inside the Joint Institute for Nuclear Research.

4. Ri Hong-sop: Former director, Yongbyon Nuclear Research Center, oversaw three core facilities that assist in the production of weapons-grade plutonium: the Fuel Fabrication Facility, the Nuclear Reactor, and the Reprocessing Plant. (Additional information: born 1940)

5. Han Yu-ro: Director of Korea Ryongaksan General Trading Corporation; involved in DPRK's ballistic missile programme.

United Nations S/2016/1069

Security Council

Distr.: General
16 December 2016

Original: English

Letter dated 16 December 2016 from the Chair of the Security Council Committee established pursuant to resolution 1718 (2006) addressed to the President of the Security Council

On behalf of the Security Council Committee established pursuant to resolution 1718 (2006), I have the honour to transmit herewith a report of the Committee dated 16 December 2016 that was prepared in accordance with paragraph 7 of resolution 2321 (2016).

I would appreciate it if the present letter and the report were brought to the attention of the members of the Security Council and issued as a document of the Council.

(*Signed*) Román **Oyarzun Marchesi**
Chair
Security Council Committee established
pursuant to resolution 1718 (2006)

Report of the Security Council Committee established pursuant to resolution 1718 (2006) prepared in accordance with paragraph 7 of resolution 2321 (2016)

1. On 30 November 2016, the Security Council, by its resolution 2321 (2016), decided that the measures imposed in paragraphs 8 (a), (b) and (c) of resolution 1718 (2016) would also apply to the items listed in a new conventional arms dual-use list to be adopted by the Security Council Committee established pursuant to resolution 1718 (2006) and directed the Committee to adopt that list within 15 days and to report to the Council to that effect.

2. To fulfil that task, the Committee considered a conventional arms dual-use list. All items, materials, equipment, goods and technology contained in the following list are listed only for the purpose of the implementation of resolution 2321 (2016) and shall not be considered to be setting precedents for international and multilateral mechanisms, regimes, instruments, principles and practices in the spheres of non-proliferation and export control.

3. On 15 December 2016, the Committee acted in line with the directive of the Security Council and approved the following list:

Special materials and related equipment

Systems, equipment and components

"Composite" structures or laminates

"Composite" structures or laminates consisting of a metal or carbon "matrix" and any of the following:

(a) Carbon "fibrous or filamentary materials" having a "specific modulus" exceeding 10.15 x 10^6 m and a "specific tensile strength" exceeding 17.7 x 10^4 m;

(b) Inorganic "fibrous or filamentary materials" with a "specific modulus" exceeding 2.54 x 10^6 m and a melting, softening, decomposition or sublimation point exceeding 1,649°C in an inert environment.

Metals and alloys

1. Materials specially designed for use as absorbers of electromagnetic waves, or intrinsically conductive polymers including materials for absorbing frequencies exceeding 2 x 10^8 Hz but less than 3 x 10^{12} Hz.

2. Materials for absorbing frequencies exceeding 1.5 x 10^{14} Hz but less than 3.7 x 10^{14} Hz and not transparent to visible light.

3. Intrinsically conductive polymeric materials with a bulk electrical conductivity exceeding 10,000 S/m or a sheet (surface) resistivity of less than 100 ohms/square, based on any of the following polymers: polyaniline, polypyrrole, polythiophene, Poly phenylene-vinylene, poly thienylene-vinylene.

4. Ceramic-ceramic "composite" materials with a glass or oxide "matrix" and reinforced with fibres having all of the following and made from the following

materials: Si-N, Si-C, Si-Al-O-N or Si-O-N; and having a “specific tensile strength” exceeding 12.7 x 10^3 m.

5. Ceramic-ceramic “composite” materials, incorporating particles, whiskers or fibres, where carbides or nitrides of silicon, zirconium or boron form the “matrix”.

6. Inorganic “fibrous or filamentary materials”, having all of the following: “specific modulus” exceeding 2.54 x 10^6 m; and melting, softening, decomposition or sublimation point exceeding 1,649°C in an inert environment.

7. Plutonium in any form with a plutonium isotopic assay of plutonium-238 of more than 50 per cent by weight.

8. Previously separate neptunium-237 in any form.

Software

“Software” for the “development” of the materials listed above.

Technology

“Technology” for the “development” or “production” of the equipment or materials listed above.

Test, inspection and production equipment

1. “Tow-placement machines”, of which the motions for positioning and laying tows are coordinated and programmed in two or more “primary servo positioning” axes, specially designed for the manufacture of “composite” airframe or missile structures.

2. Equipment for producing metal alloys, metal alloy powder or alloyed materials, specially designed to avoid contamination and specially designed for use in one of the processes specified “controlled environment processes” outlined in the fourth paragraph of section 2 of the “Materials” section.

3. Tools, dies, moulds or fixtures, for “superplastic forming” or “diffusion bonding” titanium, aluminium or their alloys, specially designed for the manufacture of any of the following:

(a) Airframe or aerospace structures;

(b) Aircraft or aerospace engines; or

(c) Specially designed components for airframe or aerospace structures or for aircraft or aerospace engines.

Materials processing equipment

Software

“Software” for electronic devices, even when residing in an electronic device or system, enabling such devices or systems to function as a “numerical control” unit, capable of coordinating simultaneously more than 4 axes for “contouring control”.

Technology

1. “Technology” for the “development” or “production” of “software” or equipment for electronic devices, even when residing in an electronic device or system, enabling such devices or systems to function as a “numerical control” unit, capable of coordinating simultaneously more than 4 axes for “contouring control”, including:

(a) Machine tools for turning, having two or more axes which can be coordinated simultaneously for “contouring control”, having any of the following:

1. “Unidirectional positioning repeatability” equal to or less (better) than 0.9 µm along one or more linear axis with a travel length less than 1.0 m; or

2. “Unidirectional positioning repeatability” equal to or less (better) than 1.1 µm along one or more linear axis with a travel length equal to or greater than 1.0 m;

(b) Machine tools for milling having any of the following:

1. Three linear axes plus one rotary axis which can be coordinated simultaneously for “contouring control” having any of the following:

a. “Unidirectional positioning repeatability” equal to or less (better) than 0.9 µm along one or more linear axis with a travel length less than 1.0 m; or

b. “Unidirectional positioning repeatability” equal to or less (better) than 1.1 µm along one or more linear axis with a travel length equal to or greater than 1.0 m.

2. Five or more axes which can be coordinated simultaneously for “contouring control” having any of the following:

(a) “Unidirectional positioning repeatability” equal to or less (better) than 0.9 µm along one or more linear axis with a travel length less than 1.0 m;

(b) “Unidirectional positioning repeatability” equal to or less (better) than 1.4 µm along one or more linear axis with a travel length equal to or greater than 1 m and less than 4 m; and having a “unidirectional positioning repeatability” equal to or less (better) than 0.9 µm along one or more linear axis; or

(c) “Unidirectional positioning repeatability” equal to or less (better) than 6.0 µm along one or more linear axis with a travel length equal to or greater than 4 m.

3. A “unidirectional positioning repeatability” for jig boring machines equal to or less (better) than 1.1 µm along one or more linear axis.

4. Electrical discharge machines of the non-wire type which have two or more rotary axes which can be coordinated simultaneously for “contouring control”.

5. Deep-hole-drilling machines and turning machines modified for deep-hole-drilling, having a maximum depth-of-bore capability exceeding 5 m.

6. “Numerically controlled” or manual machine tools, and specially designed components, controls and accessories therefor, specially designed for the shaving,

finishing, grinding or honing of hardened (Rc = 40 or more) spur, helical and double-helical gears with a pitch diameter exceeding 1,250 mm and a face width of 15 per cent of pitch diameter or larger finished to a quality of AGMA 14 or better (equivalent to ISO 1328 class 3).

Electronics

Systems, equipment and components

"Space-qualified" atomic frequency standards.

Software

"Software" specially designed for the "development" or "production" of atomic frequency standards being any of the following:

(a) "Space-qualified";

(b) Non-rubidium and having a long-term stability less (better) than 1×10^{-11}/month; or

(c) Non-"space-qualified" and having all of the following:

1. Being a rubidium standard;

2. Long-term stability less (better) than 1×10^{-11}/month; and

3. Total power consumption of less than 1 watt.

Technology

"Technology" for the "development" or "production" of the electronic systems, equipment and components listed above.

Telecommunications

Systems, equipment and components

1. Counter-improvised explosive device equipment and related equipment, as follows:

(a) Radio frequency transmitting equipment, not specified by 5.A.1.f., designed or modified for prematurely activating or preventing the initiation of improvised explosive devices;

(b) Equipment using techniques designed to enable radio communications in the same frequency channels on which co-located equipment specified by 5.A.1.h.1. is transmitting.

2. Mobile telecommunications interception or jamming equipment, and monitoring equipment therefor, as follows, and specially designed components therefor:

(a) Interception equipment designed for the extraction of voice or data, transmitted over the air interface; or

(b) Interception equipment designed for the extraction of client device or subscriber identifiers (e.g., IMSI, TIMSI or IMEI), signalling or other metadata transmitted over the air interface.

Software

"Software" specially designed or modified for the "development", "production" or "use" of telecommunication systems, equipment and components.

Technology

"Technology" for the "development" or "production" of equipment, functions or features of telecommunications systems, equipment, components and accessories.

Sensors and "lasers"

Systems, equipment and components

1. Systems or transmitting and receiving arrays, designed for object detection or location, having any of the following:

(a) A transmitting frequency below 5 kHz or a sound pressure level exceeding 224 dB (reference 1 µPa at 1 m) for equipment with an operating frequency in the band from 5 kHz to 10 kHz inclusive;

(b) Sound pressure level exceeding 224 dB (reference 1 µPa at 1 m) for equipment with an operating frequency in the band from 10 kHz to 24 kHz inclusive;

(c) Sound pressure level exceeding 235 dB (reference 1 µPa at 1 m) for equipment with an operating frequency in the band between 24 kHz and 30 kHz;

(d) Forming beams of less than 1° on any axis and having an operating frequency of less than 100 kHz;

(e) Designed to operate with an unambiguous display range exceeding 5,120 m; or

(f) Designed to withstand pressure during normal operation at depths exceeding 1,000 m and having transducers with any of the following:

1. Dynamic compensation for pressure; or

2. Incorporating other than lead zirconate titanate as the transduction element.

2. Active individual sonars, specially designed or modified to detect, locate and automatically classify swimmers or divers, having all of the following, and specially designed transmitting and receiving acoustic arrays therefor:

(a) Detection range exceeding 530 m;

(b) Determined position error of less than 15 m rms (root mean square) when measured at a range of 530 m; and

(c) Transmitted pulse signal and width exceeding 3 kHz.

3. Processing equipment, specially designed for real-time application with towed acoustic hydrophone arrays, having "user accessible programmability" and time or frequency domain processing and correlation, including spectral analysis, digital filtering and beamforming using Fast Fourier or other transforms or processes.

4. Processing equipment, specially designed for real-time application with bottom or bay cable systems, having "user accessible programmability" and time or frequency domain processing and correlation, including spectral analysis, digital filtering and beamforming using Fast Fourier or other transforms or processes.

Optical sensors

1. Optical sensors or equipment and components thereof as follows:

(a) "Space-qualified" solid-state detectors having all of the following:

1. A peak response in the wavelength range exceeding 10 nm but not exceeding 300 nm; and

2. A response of less than 0.1 per cent relative to the peak response at a wavelength exceeding 400 nm;

3. A peak response in the wavelength range exceeding 900 nm but not exceeding 1,200 nm; and

4. A response "time constant" of 95 ns or less;

5. Having a peak response in the wavelength range exceeding 1,200 nm but not exceeding 30,000 nm.

2. "Space-qualified" "focal plane arrays" having more than 2,048 elements per array and having a peak response in the wavelength range exceeding 300 nm but not exceeding 900 nm.

3. Image intensifier tubes having all of the following:

(a) A peak response in the wavelength range exceeding 400 nm but not exceeding 1,050 nm;

(b) Electron image amplification using any of the following:

1. A microchannel plate with a hole pitch (centre-to-centre spacing) of 12 µm or less; or

2. An electron-sensing device with a non-binned pixel pitch of 500 µm or less, specially designed or modified to achieve "charge multiplication" other than by a microchannel plate; and

(c) Any of the following photocathodes:

1. Multialkali photocathodes (e.g., S-20 and S-25) having a luminous sensitivity exceeding 700 µA/lm;

2. GaAs or GaInAs photocathodes; or

3. Other "III/V compound" semiconductor photocathodes having a maximum "radiant sensitivity" exceeding 10 mA/W.

4. Image intensifier tubes having all of the following:

(a) A peak response in the wavelength range exceeding 1,050 nm but not exceeding 1,800 nm;

(b) Electron image amplification using any of the following:

1. A microchannel plate with a hole pitch (centre-to-centre spacing) of 12 µm or less; or

2. An electron-sensing device with a non-binned pixel pitch of 500 µm or less, specially designed or modified to achieve "charge multiplication" other than by a microchannel plate; and

(c) "III/V compound" semiconductor (e.g., GaAs or GaInAs) photocathodes and transferred electron photocathodes, having a maximum "radiant sensitivity" exceeding 15 mA/W.

5. Non-"space-qualified" "focal plane arrays" as follows:

(a) Having all of the following:

1. Individual elements with a peak response within the wavelength range exceeding 900 nm but not exceeding 1,050 nm; and

2. Any of the following:

a. A response "time constant" of less than 0.5 ns; or

b. Specially designed or modified to achieve "charge multiplication" and having a maximum "radiant sensitivity" exceeding 10 mA/W;

3. Having all of the following:

a. Individual elements with a peak response in the wavelength range exceeding 1,050 nm but not exceeding 1,200 nm; and

b. Any of the following:

1. A response "time constant" of 95 ns or less; or

2. Specially designed or modified to achieve "charge multiplication" and having a maximum "radiant sensitivity" exceeding 10 mA/W.

6. Non-"space-qualified" non-linear (2-dimensional) "focal plane arrays" having individual elements with a peak response in the wavelength range exceeding 1,200 nm but not exceeding 30,000 nm.

7. Non-"space-qualified" linear (1-dimensional) "focal plane arrays" having all of the following:

(a) Individual elements with a peak response in the wavelength range exceeding 1,200 nm but not exceeding 3,000 nm; and

(b) Any of the following:

1. A ratio of "scan direction" dimension of the detector element to the "cross-scan direction" dimension of the detector element of less than 3.8; or

2. Signal processing in the detector elements.

8. Non-“space-qualified” linear (1-dimensional) “focal plane arrays” having individual elements with a peak response in the wavelength range exceeding 3,000 nm but not exceeding 30,000 nm;

9. Non-“space-qualified” non-linear (2-dimensional) infrared “focal plane arrays” based on “microbolometer” material having individual elements with an unfiltered response in the wavelength range equal to or exceeding 8,000 nm but not exceeding 14,000 nm.

10. Non-“space-qualified” “focal plane arrays” having all of the following:

(a) Individual detector elements with a peak response in the wavelength range exceeding 400 nm but not exceeding 900 nm;

(b) Specially designed or modified to achieve “charge multiplication” and having a maximum “radiant sensitivity” exceeding 10 mA/W for wavelengths exceeding 760 nm; and

(c) Greater than 32 elements.

11. “Direct view” imaging equipment incorporating any of the following:

(a) Image intensifier tubes having the characteristics listed in section 3 or 4 under “Optical sensors”;

(b) “Focal plane arrays” having the characteristics listed in sections 5-12 under “Optical sensors”; or

(c) Solid-state detectors having the characteristics listed in section 1 under “Optical sensors”.

Cameras

1. Imaging cameras incorporating image intensifier tubes having the characteristics listed in sections 3 and 4 under “Optical sensors”.

(a) Imaging cameras incorporating “focal plane arrays” specified in sections 5-11 under “Optical sensors”;

2. Imaging cameras incorporating solid-state detectors specified in section 1 or 2 under “Optical sensors”.

Radar

1. Radar systems, equipment and assemblies, having any of the following, and specially designed components therefor:

(a) Capable of operating in synthetic aperture radar mode, inverse synthetic aperture radar mode or sidelooking airborne radar mode;

(b) Employing processing of radar signals and using any of the following:

1. “Radar spread spectrum” techniques; or

2. “Radar frequency agility” techniques; or

(c) Having “signal processing” subsystems using “pulse compression” and having any of the following:

1. A “pulse compression” ratio exceeding 150; or

2. A compressed pulse width of less than 200 ns.

2. Pulse radar cross-section measurement systems having transmit pulse widths of 100 ns or less, and specially designed components therefor.

Software

1. “Software” specially designed for the “development” or “production” of items in the “Optics” section or the “Radar” section.

2. “Software” as follows:

(a) “Software” specially designed for acoustic beam forming for the “real-time processing” of acoustic data for passive reception using towed hydrophone arrays;

(b) “Source code” for the “real- time processing” of acoustic data for passive reception using towed hydrophone arrays;

(c) “Software” specially designed for acoustic beam forming for the “real-time processing” of acoustic data for passive reception using bottom or bay cable systems;

(d) “Source code” for the “real-time processing” of acoustic data for passive reception using bottom or bay cable systems;

(e) “Software” or “source code”, specially designed for all of the following:

1. “Real-time processing” of acoustic data from sonar systems;

2. Automatically detecting, classifying and determining the location of divers or swimmers.

Technology

“Technology” for the “development” or “production” of any item on this list.

Navigation and avionics

Software

1. “Source code” for the operation or maintenance of any inertial navigation equipment, except “source code” for gimballed attitude and heading reference systems.

2. “Software” specially designed or modified to improve the operational performance or reduce the navigational error of systems.

3. “Source code” for hybrid integrated systems which improves the operational performance or reduces the navigational error of systems by continuously combining heading data with any of the following:

(a) Doppler radar or sonar velocity data;

(b) Global Navigation Satellite Systems reference data; or

(c) Data from “Data-Based Referenced Navigation” systems.

4. “Source code” incorporating “development” “technology” for any of the following:

(a) Digital flight management systems for “total control of flight”;

(b) Integrated propulsion and flight control systems;

(c) “Fly-by-wire systems” or “fly-by-light systems”;

(d) Fault-tolerant or self-reconfiguring “active flight control systems”;

(e) Air data systems based on surface static data; or

(f) Three-dimensional displays.

Note: Does not apply to “source code” associated with common computer elements and utilities (e.g., input signal acquisition, output signal transmission, computer program and data loading, built-in test, task scheduling mechanisms) not providing a specific flight control system function.

Technology

1. “Technology” for the “development” or “production” of systems, equipment and components for navigation and avionics.

2. “Technology” for the “development” of “software” for systems, equipment and components for navigation and avionics.

Marine systems, equipment and components

Systems, equipment and components

1. Manned, untethered submersible vehicles having any of the following:

(a) Designed to “operate autonomously” and having a lifting capacity of all the following:

1. 10 per cent or more of their weight in air; and

2. 15 kN or more;

(b) Designed to operate at depths exceeding 1,000 m; or

(c) Having all of the following:

1. Designed to continuously “operate autonomously” for 10 hours or more; and

2. “Range” of 25 nautical miles or more.

Technical notes

1. The term "operate autonomously" means fully submerged, without snorkel, all systems working and cruising at minimum speed at which the submersible can safely control its depth dynamically by using its depth planes only, with no need for a support vessel or support base on the surface, seabed or shore, and containing a propulsion system for submerged or surface use.

2. The term "range" means half the maximum distance that a submersible vehicle can "operate autonomously".

2. Unmanned, tethered submersible vehicles designed to operate at depths exceeding 1,000 m and having any of the following:

(a) Designed for self-propelled manoeuvre using direct current propulsion motors or thrusters; or

(b) Fibre-optic data link.

3. Unmanned, untethered submersible vehicles having any of the following:

(a) Designed for deciding a course relative to any geographical reference without real-time human assistance;

(b) Acoustic data or command link; or

(c) Optical data or command link exceeding 1,000 m.

4. Systems specially designed or modified for the automated control of the motion of submersible vehicles using navigation data, having closed-loop servo-controls and having any of the following:

(a) Enabling a vehicle to move within 10 m of a predetermined point in the water column;

(b) Maintaining the position of the vehicle within 10 m of a predetermined point in the water column; or

(c) Maintaining the position of the vehicle within 10 m while following a cable on or under the seabed.

5. "Robots" specially designed for underwater use, controlled by using a dedicated computer and having any of the following:

(a) Systems that control the "robot" using information from sensors which measure force or torque applied to an external object, distance to an external object or tactile sense between the "robot" and an external object; or

(b) The ability to exert a force of 250 N or more or a torque of 250 Nm or more and using titanium based alloys or "composite" "fibrous or filamentary materials" in their structural members.

6. Noise reduction systems designed for use on vessels of 1,000 tonnes displacement or more, as follows:

(a) Systems that attenuate underwater noise at frequencies below 500 Hz and consist of compound acoustic mounts for the acoustic isolation of diesel engines, diesel generator sets, gas turbines, gas turbine generator sets, propulsion motors or

propulsion reduction gears, specially designed for sound or vibration isolation and having an intermediate mass exceeding 30 per cent of the equipment to be mounted;

(b) "Active noise reduction or cancellation systems" or magnetic bearings, specially designed for power transmission systems.

Software

"Software" for marine systems, equipment, components, test, inspection and "production" equipment and other related technology.

Technology

"Technology" for marine systems, equipment, components, test, inspection and "production" equipment and other related technology.

Aerospace and propulsion

Systems, equipment and components

Ramjet, scramjet or combined cycle engines, and specially designed components therefor.

Software

"Software" and "technology" for aerospace and propulsion systems, equipment, components, test, inspection and "production" equipment and other related technology.

Technology

"Technology" for aerospace and propulsion systems, equipment, components, test, inspection and "production" equipment and other related technology.

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Letter dated 8 April 2014 from the Chair of the Security Council Committee established pursuant to resolution 1718 (2006) addressed to the President

On behalf of the Committee established pursuant to resolution 1718 (2006), I have the honour to transmit herewith the report of the Committee dated 2 April 2014 (see annex), submitted in accordance with paragraph 21 of resolution 2094 (2013) and presidential statement S/PRST/2012/13 of 16 April 2012.

I would appreciate it if the present letter and its annex were brought to the attention of the members of the Security Council and issued as a document of the Council.

(*Signed*) Sylvie **Lucas**
Chair
Security Council Committee established pursuant to
resolution 1718 (2006)

Annex

Report of the Security Council Committee established pursuant to resolution 1718 (2006) prepared in accordance with paragraph 21 of resolution 2094 (2013) and presidential statement S/PRST/2012/13

On 16 April 2012, by presidential statement S/PRST/2012/13, the Security Council directed the Committee established pursuant to resolution 1718 (2006) to, among other things, update on an annual basis the consolidated list of individuals and entities which are subject to the assets freeze and/or travel ban. The list was last updated on 31 December 2013.

In addition, the Security Council, in paragraph 21 of resolution 2094 (2013), directed the Committee to review and update the items contained in the lists specified in paragraph 5 (b) of resolution 2087 (2013), namely INFCIRC/254/Rev.11/Part 1 and INFCIRC/254/Rev.8/Part 2 (nuclear-related items) as well as document S/2012/947 (ballistic missile-related items), no later than 7 March 2014 and on an annual basis thereafter.

In order to fulfil these tasks, the Committee held informal consultations on 24 January and 24 February 2014. The Chair of the Committee also sent a note verbale to all Member States requesting them to provide additional information to update these lists.

On 2 April 2014, the Committee acted in line with the Security Council's directive and approved the following:

A. Update to the identifying information contained in the Committee's consolidated list of individuals and entities

The Committee adds the name "朝鲜联合机械贸易会社" to the list of aliases used by Korea Ryonha Machinery Joint Venture Corporation.

B. Update to the items contained in the lists specified in paragraph 5 (b) of resolution 2087 (2013)

The Committee determines that the list of items in INFCIRC/254/Rev.11/Part 1 and INFCIRC/254/Rev.8/Part 2 is superseded by the list of items in INFCIRC/254/Rev.12/Part 1 and INFCIRC/254/Rev.9/Part 2. The list of items contained in INFCIRC/254/Rev.12/Part 1 and INFCIRC/254/Rev.9/Part 2 shall thus be subject to the measures imposed in paragraphs 8 (a), (b) and (c) of resolution 1718 (2006).

The Committee also determines that the items, materials, equipment, goods and technology related to ballistic missile programmes in document S/2012/947 is superseded by the list of items attached hereto. The attached list of items shall thus be subject to the measures imposed in paragraphs 8 (a), (b) and (c) of resolution 1718 (2006).

Items, materials, equipment, goods and technology related to ballistic missile programmes

The changes to document S/2012/947 are shown in bold in the following items: Introduction (d): General Software Note, definitions of "payload" for space launch vehicles, 2.A.1.c. and Note to 2.A.1.c., 2.D.6. Note 1, 3.A.1.a.2., 3.A.5., 3.A.9., 4.B.3.a. and corresponding Note, 4.B.3.d., 4.D.1., 6.D.1., Technical Note 4 to 9.A.3., 9.B.1., 12.A.3., 15.B.4.a.2. and 20.A.1.b.

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(Reserved For Future Use)

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(Reserved For Future Use)

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UNITS, CONSTANTS, ACRONYMS AND ABBREVIATIONS USED IN THIS ANNEX

TABLE OF CONVERSIONS

STATEMENT OF UNDERSTANDING

Introduction, definitions, terminology

1. INTRODUCTION

(a) This Annex consists of two categories of items, which term includes equipment, materials, "software" or "technology". Category I items, all of which are in Annex Items 1 and 2, are those items of greatest sensitivity. If a Category I item is included in a system, that system will also be considered as Category I, except when the incorporated item cannot be separated, removed or duplicated. Category II items are those items in the Annex not designated Category I.

(b) In reviewing the proposed applications for transfers of complete rocket and unmanned aerial vehicle systems described in Items 1 and 19, and of equipment, materials, "software" or "technology" which is listed in the Technical Annex, for potential use in such systems, the Government will take account of the ability to trade off "range" and "payload".

(c) **General Technology Note:**

The transfer of "technology" directly associated with any goods controlled in the Annex is controlled according to the provisions in each Item to the extent permitted by national legislation. The approval of any Annex item for export also authorizes the export to the same end-user of the minimum "technology" required for the installation, operation, maintenance, or repair of the item.

Note:

Controls do not apply to "technology" "in the public domain" or to "basic scientific research".

(d) **General Software Note:**

The Annex does not control "software" which is either:

1. Generally available to the public by being:
   a. Sold from stock at retail selling points without restriction, by means of:
      1. Over-the-counter transactions;
      2. Mail order transactions; or
      3. **Electronic transactions; or**
      4. Telephone call transactions; and
   b. Designed for installation by the user without further substantial support by the supplier; or
2. "In the public domain".

Note:

The General Software Note only applies to general purpose, mass market "software".

(e) Chemical Abstracts Service (CAS) Numbers:

In some instances chemicals are listed by name and CAS number. Chemicals of the same structural formula (including hydrates) are controlled regardless of name or CAS number. CAS numbers are shown to assist in identifying whether a particular chemical or mixture is controlled, irrespective of nomenclature. CAS numbers cannot be used as unique identifiers because some forms of the listed chemical have different CAS numbers, and mixtures containing a listed chemical may also have different CAS numbers.

2. DEFINITIONS

For the purpose of this Annex, the following definitions apply:

"Accuracy"
Usually measured in terms of inaccuracy, means the maximum deviation, positive or negative, of an indicated value from an accepted standard or true value.

"Basic scientific research"
Experimental or theoretical work undertaken principally to acquire new knowledge of the fundamental principles of phenomena or observable facts, not primarily directed towards a specific practical aim or objective.

"Development"
Is related to all phases prior to "production" such as:
- design
- design research
- design analysis
- design concepts
- assembly and testing of prototypes
- pilot production schemes
- design data
- process of transforming design data into a product
- configuration design
- integration design
- layouts

"In the public domain"
This means "software" or "technology" which has been made available without restrictions upon its further dissemination. (Copyright restrictions do not remove "software" or "technology" from being "in the public domain".)

"Microcircuit"
A device in which a number of passive and/or active elements are considered as indivisibly associated on or within a continuous structure to perform the function of a circuit.

"Microprogrammes"
A sequence of elementary instructions maintained in a special storage, the execution of which is initiated by the introduction of its reference instruction register.

"Payload"

The total mass that can be carried or delivered by the specified rocket system or unmanned aerial vehicle (UAV) system that is not used to maintain flight.

Note:

The particular equipment, subsystems, or components to be included in the "payload" depends on the type and configuration of the vehicle under consideration.

Technical Notes:

1. Ballistic Missiles

a. "Payload" for systems with separating re-entry vehicles (RVs) includes:
1. The RVs, including:
a. Dedicated guidance, navigation, and control equipment;
b. Dedicated countermeasures equipment;
2. Munitions of any type (e.g. explosive or non-explosive);
3. Supporting structures and deployment mechanisms for the munitions (e.g. hardware used to attach to, or separate the RV from, the bus/post-boost vehicle) that can be removed without violating the structural integrity of the vehicle;
4. Mechanisms and devices for safing, arming, fuzing or firing;
5. Any other countermeasures equipment (e.g. decoys, jammers or chaff dispensers) that separate from the RV bus/post-boost vehicle;
6. The bus/post-boost vehicle or attitude control/velocity trim module not including systems/subsystems essential to the operation of the other stages.

b. "Payload" for systems with non-separating re-entry vehicles includes:
1. Munitions of any type (e.g. explosive or non-explosive);
2. Supporting structures and deployment mechanisms for the munitions that can be removed without violating the structural integrity of the vehicle;
3. Mechanisms and devices for safing, arming, fuzing or firing;
4. Any countermeasures equipment (e.g. decoys, jammers or chaff dispensers) that can be removed without violating the structural integrity of the vehicle.

2. Space Launch Vehicles

"Payload" includes:
a. Spacecraft (single or multiple), including satellites;
b. Spacecraft-to-launch vehicle adapters including, if applicable, apogee/perigee kick motors or similar manoeuvering systems ***and separation systems****.*

3. Sounding Rockets

"Payload" includes:
a. Equipment required for a mission, such as data gathering, recording or transmitting devices for mission-specific data;

b. Recovery equipment (e.g. parachutes) that can be removed without violating the structural integrity of the vehicle.

4. Cruise Missiles

"Payload" includes:
a. Munitions of any type (e.g. explosive or non-explosive);
b. Supporting structures and deployment mechanisms for the munitions that can be removed without violating the structural integrity of the vehicle;
c. Mechanisms and devices for safing, arming, fuzing or firing;
d. Countermeasures equipment (e.g. decoys, jammers or chaff dispensers) that can be removed without violating the structural integrity of the vehicle;
e. Signature alteration equipment that can be removed without violating the structural integrity of the vehicle.

5. Other UAVs

"Payload" includes:
a. Munitions of any type (e.g. explosive or non-explosive);
b. Mechanisms and devices for safing, arming, fuzing or firing;
c. Countermeasures equipment (e.g. decoys, jammers or chaff dispensers) that can be removed without violating the structural integrity of the vehicle;
d. Signature alteration equipment that can be removed without violating the structural integrity of the vehicle;
e. Equipment required for a mission such as data gathering, recording or transmitting devices for mission-specific data and supporting structures that can be removed without violating the structural integrity of the vehicle;
f. Recovery equipment (e.g. parachutes) that can be removed without violating the structural integrity of the vehicle.
g. Munitions supporting structures and deployment mechanisms that can be removed without violating the structural integrity of the vehicle.

"Production"
Means all production phases such as:
- production engineering
- manufacture
- integration
- assembly (mounting)
- inspection
- testing
- quality assurance

"Production equipment"
Means tooling, templates, jigs, mandrels, moulds, dies, fixtures, alignment mechanisms, test equipment, other machinery and components therefor, limited to those specially designed or modified for "development" or for one or more phases of "production".

"Production facilities"
Means "production equipment" and specially designed "software" therefor integrated into installations for "development" or for one or more phases of "production".

"Programmes"
A sequence of instructions to carry out a process in, or convertible into, a form executable by an electronic computer.

"Radiation hardened"
Means that the component or equipment is designed or rated to withstand radiation levels which meet or exceed a total irradiation dose of 5×10^5 rads (Si).

"Range"
The maximum distance that the specified rocket system or unmanned aerial vehicle (UAV) system is capable of travelling in the mode of stable flight as measured by the projection of its trajectory over the surface of the Earth.

Technical Notes:

1. *The maximum capability based on the design characteristics of the system, when fully loaded with fuel or propellant, will be taken into consideration in determining "range".*

2. *The "range" for both rocket systems and UAV systems will be determined independently of any external factors such as operational restrictions, limitations imposed by telemetry, data links or other external constraints.*

3. *For rocket systems, the "range" will be determined using the trajectory that maximises "range", assuming ICAO standard atmosphere with zero wind.*

4. *For UAV systems, the "range" will be determined for a one-way distance using the most fuel-efficient flight profile (e.g. cruise speed and altitude), assuming ICAO standard atmosphere with zero wind.*

"Software"
A collection of one or more "programmes", or "micro-programmes", fixed in any tangible medium of expression.

"Technology"
Means specific information which is required for the "development", "production" or "use" of a product. The information may take the form of "technical data" or "technical assistance".

"Technical assistance"
May take forms such as:
- instruction
- skills
- training
- working knowledge
- consulting services

"Technical data"
May take forms such as:
- blueprints
- plans
- diagrams
- models
- formulae
- engineering designs and specifications
- manuals and instructions written or recorded on other media or devices such as:
  - disk
  - tape
  - read-only memories

"Use"
Means:
- operation
- installation (including on-site installation)
- maintenance
- repair
- overhaul
- refurbishing

3. TERMINOLOGY

Where the following terms appear in the text, they are to be understood according to the explanations below:

(a) "Specially designed" describes equipment, parts, components, materials or "software" which, as a result of "development", have unique properties that distinguish them for certain predetermined purposes. For example, a piece of equipment that is "specially designed" for use in a missile will only be considered so if it has no other function or use. Similarly, a piece of manufacturing equipment that is "specially designed" to produce a

certain type of component will only be considered such if it is not capable of producing other types of components.

(b) "Designed or modified" describes equipment, parts or components which, as a result of "development," or modification, have specified properties that make them fit for a particular application. "Designed or modified" equipment, parts, components or "software" can be used for other applications. For example, a titanium coated pump designed for a missile may be used with corrosive fluids other than propellants.

(c) "Usable in", "usable for", "usable as" or "capable of" describes equipment, parts, components**,** materials or "software" which are suitable for a particular purpose. There is no need for the equipment, parts, components or "software" to have been configured, modified or specified for the particular purpose. For example, any military specification memory circuit would be "capable of" operation in a guidance system.

(d) "Modified" in the context of "software" describes "software" which has been intentionally changed such that it has properties that make it fit for specified purposes or applications. Its properties may also make it suitable for purposes or applications other than those for which it was "modified".

CATEGORY I; ITEM 1

CATEGORY I

ITEM 1 COMPLETE DELIVERY SYSTEMS

1.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

1.A.1. Complete rocket systems (including ballistic missile systems, space launch vehicles, and sounding rockets) capable of delivering at least a 500 kg “payload” to a “range” of at least 300 km.

1.A.2. Complete unmanned aerial vehicle systems (including cruise missile systems, target drones and reconnaissance drones) capable of delivering at least a 500 kg “payload” to a “range” of at least 300 km.

1.B. TEST AND PRODUCTION EQUIPMENT

1.B.1. “Production facilities” specially designed for the systems specified in 1.A.

1.C. MATERIALS

None.

1.D. SOFTWARE

1.D.1. “Software” specially designed or modified for the “use” of “production facilities” specified in 1.B.

1.D.2. “Software” which coordinates the function of more than one subsystem, specially designed or modified for “use” in systems specified in 1.A.

1.E. TECHNOLOGY

1.E.1. “Technology”, in accordance with the General Technology Note, for the “development”, “production” or “use” of equipment or “software” specified in 1.A., 1.B., or 1.D.

CATEGORY I; ITEM 2

ITEM 2 COMPLETE SUBSYSTEMS USABLE FOR COMPLETE DELIVERY SYSTEMS

2.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

2.A.1. Complete subsystems usable in the systems specified in 1.A., as follows:

a. Individual rocket stages usable in the systems specified in 1.A.;

b. Re-entry vehicles, and equipment designed or modified therefor, usable in the systems specified in 1.A., as follows, except as provided in the Note below 2.A.1. for those designed for non-weapon payloads:
   1. Heat shields, and components therefor, fabricated of ceramic or ablative materials;
   2. Heat sinks and components therefor**,** fabricated of light-weight, high heat capacity materials;
   3. Electronic equipment specially designed for re-entry vehicles;

c. Rocket propulsion subsystems, usable in the systems specified in 1.A., as follows:
   1. Solid propellant rocket motors or hybrid rocket motors having a total impulse capacity equal to or greater than 1.1 x 10^6 Ns;
   2. Liquid propellant rocket engines integrated, or designed or modified to be integrated, into a liquid propellant propulsion system which has a total impulse capacity equal to or greater than 1.1 x 10^6 Ns;

Note:

*Liquid propellant apogee engines **or** station-keeping engines specified in **2.A.1.c.2.**, designed or modified for use on satellites, may be treated as Category II, if the subsystem is exported subject to end-use statements and quantity limits appropriate for the excepted end-use stated above, when having a vacuum thrust not greater than 1kN.*

d. "Guidance sets", usable in the systems specified in 1.A., capable of achieving system accuracy of 3.33% or less of the "range" (e.g. a "CEP" of 10 km or less at a "range" of 300 km), except as provided in the Note below 2.A.1. for those designed for missiles with a "range" under 300 km or manned aircraft;

Technical Notes:

1. A "guidance set" integrates the process of measuring and computing a vehicle's position and velocity (i.e. navigation) with that of computing and sending commands to the vehicle's flight control systems to correct the trajectory.

2. *"CEP" (circle of equal probability) is a measure of accuracy, defined as the radius of the circle centred at the target, at a specific range, in which 50% of the payloads impact.*

e. Thrust vector control sub-systems, usable in the systems specified in 1.A., except as provided in the Note below 2.A.1. for those designed for rocket systems that do not exceed the "range"/"payload" capability of systems specified in 1.A.;

Technical Note:

2.A.1.e. includes the following methods of achieving thrust vector control:
a. Flexible nozzle;
b. Fluid or secondary gas injection;
c. Movable engine or nozzle;
d. Deflection of exhaust gas stream (jet vanes or probes);
e. Use of thrust tabs.

f. Weapon or warhead safing, arming, fuzing, and firing mechanisms, usable in the systems specified in 1.A., except as provided in the Note below 2.A.1. for those designed for systems other than those specified in 1.A.

Note:

The exceptions in 2.A.1.b., 2.A.1.d., 2.A.1.e. and 2.A.1.f. above may be treated as Category II if the subsystem is exported subject to end-use statements and quantity limits appropriate for the excepted end-use stated above.

2.B. TEST AND PRODUCTION EQUIPMENT

2.B.1. "Production facilities" specially designed for the subsystems specified in 2.A.

2.B.2. "Production equipment" specially designed for the subsystems specified in 2.A.

2.C. MATERIALS

None.

2.D. SOFTWARE

2.D.1. "Software" specially designed or modified for the "use" of "production facilities" specified in 2.B.1.

2.D.2. “Software” specially designed or modified for the “use” of rocket motors or engines specified in 2.A.1.c.

2.D.3. “Software”, specially designed or modified for the “use” of “guidance sets” specified in 2.A.1.d.

Note:

2.D.3. includes “software”, specially designed or modified to enhance the performance of ´guidance sets´ to achieve or exceed the accuracy specified in 2.A.1.d.

2.D.4. “Software” specially designed or modified for the “use” of subsystems or equipment specified in 2.A.1.b.3.

2.D.5. “Software” specially designed or modified for the “use” of systems in 2.A.1.e.

2.D.6. “Software” specially designed or modified for the “use” of systems in 2.A.1.f.

Note:

Subject to end-use statements appropriate for the excepted end-use, “software” controlled by 2.D.2.-2.D.6. may be treated as Category II as follows:

1. Under 2.D.2. if specially designed or modified for liquid propellant apogee engines **or station keeping engines**, designed or modified for satellite applications as specified in the Note to **2.A.1.c.2.**;

2. *Under 2.D.3. if designed for missiles with a “range” of under 300 km or manned aircraft;*

3. *Under 2.D.4. if specially designed or modified for re-entry vehicles designed for non-weapon payloads;*

4. *Under 2.D.5. if designed for rocket systems that do not exceed the “range” “payload” capability of systems specified in 1.A.;*

5. *Under 2.D.6. if designed for systems other than those specified in 1.A.*

2.E. TECHNOLOGY

2.E.1. “Technology”, in accordance with the General Technology Note, for the “development”, “production” or “use” of equipment or “software” specified in 2.A., 2.B. or 2.D.

CATEGORY II; ITEM 3

CATEGORY II

ITEM 3 PROPULSION COMPONENTS AND EQUIPMENT

3.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

3.A.1. Turbojet and turbofan engines, as follows:

a. Engines having both of the following characteristics:
   1. "Maximum thrust value" greater than 400 N (achieved un-installed) excluding civil certified engines with a "maximum thrust value" greater than 8.89 kN (achieved un-installed); and
   2. Specific fuel consumption of 0.15 kg N^{-1} h^{-1} or less (at maximum continuous power at **sea level static conditions using the ICAO standard atmosphere**);

Technical Note:

In 3.A.1.a.1., "maximum thrust value" is the manufacturer's demonstrated maximum thrust for the engine type un-installed. The civil type certified thrust value will be equal to or less than the manufacturer's demonstrated maximum thrust for the engine type.

b. Engines designed or modified for systems specified in 1.A. or 19.A.2., regardless of thrust or specific fuel consumption.

Note:

Engines specified in 3.A.1. may be exported as part of a manned aircraft or in quantities appropriate for replacement parts for a manned aircraft.

3.A.2. Ramjet/scramjet/pulse jet/ "combined cycle engines", including devices to regulate combustion, and specially designed components therefor, usable in the systems specified in 1.A. or 19.A.2.

Technical Note:
In Item 3.A.2., "combined cycle engines" are the engines that employ two or more cycles of the following types of engines: gas-turbine engine (turbojet, turboprop, turbofan and turboshaft), ramjet, scramjet, pulse jet, pulse detonation engine, rocket motor (liquid/solid-propellant and hybrid).

3.A.3. Rocket motor cases, "insulation" components and nozzles therefor, usable in the systems specified in 1.A. or 19.A.1.

Technical Note:

In 3.A.3. "insulation" intended to be applied to the components of a rocket motor, i.e. the case, nozzle inlets, case closures, includes cured or semi-cured compounded rubber components comprising sheet stock containing an insulating or refractory material. It may also be incorporated as stress relief boots or flaps.

Note:

Refer to 3.C.2. for ´insulation´ material in bulk or sheet form.

3.A.4. Staging mechanisms, separation mechanisms, and interstages therefor, usable in the systems specified in 1.A.

Note:

See also Item 11.A.5.

3.A.5. Liquid, slurry **and gel** propellant (including oxidisers) control systems, and specially designed components therefor, usable in the systems specified in 1.A., designed or modified to operate in vibration environments greater than 10 g rms between 20 Hz and 2 kHz.

Notes:

1. *The only servo valves and pumps specified in 3.A.5. are the following:*
   a. *Servo valves designed for flow rates equal to or greater than 24 litres per minute, at an absolute pressure equal to or greater than 7 MPa, that have an actuator response time of less than 100 ms.*
   b. *Pumps, for liquid propellants, with shaft speeds equal to or greater than 8,000 rpm or with discharge pressures equal to or greater than 7 MPa.*

2. *Systems and components specified in 3.A.5. may be exported as part of a satellite.*

3.A.6. Specially designed components for hybrid rocket motors specified in 2.A.1.c. and 20.A.1.b.

3.A.7. Radial ball bearings having all tolerances specified in accordance with ISO 492 Tolerance Class 2 (or ANSI/ABMA Std 20 Tolerance Class ABEC-9 or other national equivalents), or better and having all the following characteristics:

a. An inner ring bore diameter between 12 and 50 mm;

b. An outer ring outside diameter between 25 and 100 mm; and

c. A width between 10 and 20 mm.

3.A.8. Liquid propellant tanks specially designed for the propellants controlled in Item 4.C. or other liquid propellants used in the systems specified in 1.A.1.

3.A.9. "Turboprop engine systems" specially designed for the systems in 1.A.2. or 19.A.2., and specially designed components therefor, having a maximum power greater than 10 kW (achieved uninstalled at **sea level static conditions using the ICAO standard atmosphere**), excluding civil certified engines.

Technical Note:

For the purposes of Item 3.A.9., a "turboprop engine system" incorporates all of the following:
a. Turboshaft engine; and
b. Power transmission system to transfer the power to a propeller.

3.B. TEST AND PRODUCTION EQUIPMENT

3.B.1. "Production facilities" specially designed for equipment or materials specified in 3.A.1., 3.A.2., 3.A.3., 3.A.4., 3.A.5., 3.A.6., 3.A.8., 3.A.9. or 3.C.

3.B.2. "Production equipment" specially designed for equipment or materials specified in 3.A.1., 3.A.2., 3.A.3., 3.A.4., 3.A.5., 3.A.6.,3.A.8., 3.A.9**.** or 3.C.

3.B.3. Flow-forming machines, and specially designed components therefor, which:

a. According to the manufacturers technical specification can be equipped with numerical control units or a computer control, even when not equipped with such units at delivery; and

b. Have more than two axes which can be co-ordinated simultaneously for contouring control.

Note:

This item does not include machines that are not usable in the "production" of propulsion components and equipment (e.g. motor cases) for systems specified in 1.A.

Technical Note:

Machines combining the function of spin-forming and flow-forming are, for the purpose of this item, regarded as flow-forming machines.

3.C. MATERIALS

3.C.1. "Interior lining" usable for rocket motor cases in the systems specified in 1.A. or specially designed for systems specified in 19.A.1. or 19.A.2.

Technical Note:

In 3.C.1. "interior lining" suited for the bond interface between the solid propellant and the case or insulating liner is usually a liquid polymer based dispersion of refractory or insulating materials e.g. carbon filled HTPB or other polymer with added curing agents to be sprayed or screeded over a case interior.

3.C.2. "Insulation" material in bulk form usable for rocket motor cases in the systems specified in 1.A. or specially designed for systems specified in 19.A.1. or 19.A.2.

Technical Note:

In 3.C.2. "insulation" intended to be applied to the components of a rocket motor, i.e. the case, nozzle inlets, case closures, includes cured or semi-cured compounded rubber sheet stock containing an insulating or refractory material. It may also be incorporated as stress relief boots or flaps specified in 3.A.3.

3.D. SOFTWARE

3.D.1. "Software" specially designed or modified for the "use" of "production facilities" and flow forming machines specified in 3.B.1. or 3.B.3.

3.D.2. "Software" specially designed or modified for the "use" of equipment specified in 3.A.1., 3.A.2., 3.A.4., 3.A.5., 3.A.6. or 3.A.9.

Notes:

1. *"Software" specially designed or modified for the "use" of engines specified in 3.A.1. may be exported as part of a manned aircraft or as replacement "software" therefor.*

2. *"Software" specially designed or modified for the "use" of propellant control systems specified in 3.A.5. may be exported as part of a satellite or as replacement "software" therefor.*

3.D.3. "Software" specially designed or modified for the "development" of equipment specified in 3.A.2., 3.A.3. or 3.A.4.

3.E. TECHNOLOGY

3.E.1. “Technology”, in accordance with the General Technology Note, for the “development”, “production” or “use” of equipment, materials or “software” specified in 3.A.1., 3.A.2., 3.A.3., 3.A.4., 3.A.5., 3.A.6., 3.A.8.,3.A.9., 3.B., 3.C. or 3.D.

CATEGORY II; ITEM 4

ITEM 4 PROPELLANTS, CHEMICALS AND PROPELLANT PRODUCTION

4.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

None.

4.B. TEST AND PRODUCTION EQUIPMENT

4.B.1. "Production equipment", and specially designed components therefor, for the "production", handling or acceptance testing of liquid propellants or propellant constituents specified in 4.C.

4.B.2. "Production equipment", other than that described in 4.B.3., and specially designed components therefor, for the production, handling, mixing, curing, casting, pressing, machining, extruding or acceptance testing of solid propellants or propellant constituents specified in 4.C.

4.B.3. Equipment as follows, and specially designed components therefor:

a. Batch mixers with provision for mixing under vacuum in the range of zero to 13.326 kPa and with temperature control capability of the mixing chamber and having all of the following:

1. A total volumetric capacity of 110 litres or more; and
2. *At least one "mixing/kneading shaft" mounted off centre;*

Note:

In Item 4.B.3.a.2. the term "mixing/kneading shaft" does not refer to deagglomerators or knife-spindles.

b. Continuous mixers with provision for mixing under vacuum in the range of zero to 13.326 kPa and with a temperature control capability of the mixing chamber having any of the following:
   1. Two or more mixing/kneading shafts; or
   2. A single rotating shaft which oscillates and having kneading teeth/pins on the shaft as well as inside the casing of the mixing chamber;

c. Fluid energy mills usable for grinding or milling substances specified in 4.C.;

d. Metal powder "production equipment" usable for the "production", in a controlled environment, of spherical, spheroidal **or atomised materials specified in 4.C.2.c., 4.C.2.d. or 4.C.2.e.**

Note:

4.B.3.d. includes:

a. Plasma generators (high frequency arc-jet) usable for obtaining sputtered or spherical metallic powders with organization of the process in an argon-water environment;

b. Electroburst equipment usable for obtaining sputtered or spherical metallic powders with organization of the process in an argon-water environment;

c. Equipment usable for the "production" of spherical aluminium powders by powdering a melt in an inert medium (e.g. nitrogen).

Notes:

1. The only batch mixers, continuous mixers, usable for solid propellants or propellants constituents specified in 4.C., and fluid energy mills specified in 4.B., are those specified in 4.B.3.

2. Forms of metal powder "production equipment" not specified in 4.B.3.d. are to be evaluated in accordance with 4.B.2.

4.C. MATERIALS

4.C.1. Composite and composite modified double base propellants.

4.C.2. Fuel substances as follows:

a. Hydrazine (CAS 302-01-2) with a concentration of more than 70%;

b. Hydrazine derivatives as follows:
   1. Monomethylhydrazine (MMH) (CAS 60-34-4);
   2. Unsymmetricaldimethylhydrazine (UDMH) (CAS 57-14-7);
   3. Hydrazine mononitrate;
   4. Trimethylhydrazine(CAS 1741-01-1);
   5. Tetramethylhydrazine(CAS 6415-12-9);
   6. N,N diallylhydrazine;
   7. Allylhydrazine(CAS 7422-78-8);
   8. Ethylenedihydrazine;
   9. Monomethylhydrazinedinitrate;
   10. Unsymmetricaldimethylhydrazine nitrate;
   11. Hydraziniumazide (CAS 14546-44-2);
   12. Dimethylhydraziniumazide;

13. Hydraziniumdinitrate;
14. Diimido oxalic acid dihydrazine (CAS 3457-37-2);
15. 2-hydroxyethylhydrazine nitrate (HEHN);
16. Hydrazinium perchlorate (CAS 27978-54-7);
17. Hydrazinium diperchlorate (CAS 13812-39-0);
18. Methylhydrazine nitrate (MHN);
19. Diethylhydrazine nitrate (DEHN);
20. 3,6-dihydrazino tetrazine nitrate (DHTN);

Technical note:

3,6-dihydrazino tetrazine nitrate is also referred to as 1,4-dihydrazine nitrate

c. Spherical or spheroidal aluminium powder (CAS 7429-90-5) in particle size of less than 200 x 10^{-6} m (200 μm) and an aluminium content of 97% by weight or more, if at least 10% of the total weight is made up of particles of less than 63 μm, according to ISO 2591:1988 or national equivalents;

Technical Note:

A particle size of 63 μm (ISO R-565) corresponds to 250 mesh (Tyler) or 230 mesh (ASTM standard E-11).

d. Metal powders of any of the following: zirconium (CAS 7440-67-7), beryllium (CAS 7440-41-7), magnesium (CAS 7439-95-4) or alloys of these, if at least 90% of the total particles by particle volume or weight are made up of particles of less than 60 μm (determined by measurement techniques such as using a sieve, laser diffraction or optical scanning), whether spherical, atomised, spheroidal, flaked or ground, consisting of 97% by weight or more of any of the above mentioned metals;

Note:

In a multimodal particle distribution (e.g. mixtures of different grain sizes) in which one or more modes are controlled, the entire powder mixture is controlled.

Technical Note:

The natural content of hafnium (CAS 7440-58-6) in the zirconium (typically 2% to 7%) is counted with the zirconium.

e. Metal powders of either boron (CAS 7440-42-8) or boron alloys with a boron content of 85% or more by weight, if at least 90% of the total particles by particle volume or weight are made up of particles of less than 60 μm (determined by measurement techniques such

as using a sieve, laser diffraction or optical scanning), whether spherical, atomised, spheroidal, flaked or ground;

Note:

In a multimodal particle distribution (e.g. mixtures of different grain sizes) in which one or more modes are controlled, the entire powder mixture is controlled.

f. High energy density materials, usable in the systems specified in 1.A. or 19.A., as follows:

1. Mixed fuels that incorporate both solid and liquid fuels, such as boron slurry, having a mass- based energy density of 40 x 10^6 J/kg or greater;

2. Other high energy density fuels and fuel additives (e.g., cubane, ionic solutions, JP-10) having a volume-based energy density of 37.5 x 10^9 J/m^3 or greater, measured at 20°C and one atmosphere (101.325 kPa) pressure.

Note:

Item 4.C.2.f.2. does not control fossil refined fuels and biofuels produced from vegetables, including fuels for engines certified for use in civil aviation, unless specifically formulated for systems specified in 1.A. or 19.A.

4.C.3. Oxidisers/Fuels as follows:

Perchlorates, chlorates or chromates mixed with powdered metals or other high energy fuel components.

4.C.4. Oxidiser substances as follows:

a. Oxidiser substances usable in liquid propellant rocket engines as follows:
1. Dinitrogen trioxide (CAS 10544-73-7);
2. Nitrogen dioxide (CAS 10102-44-0) / dinitrogen tetroxide (CAS 10544-72-6);
3. Dinitrogenpentoxide (CAS 10102-03-1);
4. Mixed Oxides of Nitrogen (MON);
5. Inhibited Red Fuming Nitric Acid (IRFNA) (CAS 8007-58-7);
6. Compounds composed of fluorine and one or more of other halogens, oxygen or nitrogen;

Note:

Item 4.C.4.a.6. does not control Nitrogen Trifluoride (NF_3) (CAS 7783-54-2) in a gaseous state as it is not usable for missile applications.

Technical Note:

Mixed Oxides of Nitrogen (MON) are solutions of Nitric Oxide (NO) in Dinitrogen Tetroxide/Nitrogen Dioxide (N_2O_4/NO_2) that can be used in missile systems. There are a range of compositions that can be denoted as MONi or MONij where i and j are integers representing the percentage of Nitric Oxide in the mixture (e.g. MON3 contains 3% Nitric Oxide, MON25 25% Nitric Oxide. An upper limit is MON40, 40% by weight).

b. Oxidiser substances usable in solid propellant rocket motors as follows:
   1. Ammonium perchlorate (AP) (CAS 7790-98-9);
   2. Ammonium dinitramide (ADN) (CAS 140456-78-6);
   3. Nitro-amines (cyclotetramethylene - tetranitramine (HMX) (CAS 2691-41-0); cyclotrimethylene - trinitramine (RDX) (CAS 121-82-4);
   4. Hydraziniumnitroformate (HNF) (CAS 20773-28-8);
   5. 2,4,6,8,10,12-Hexanitrohexaazaisowurtzitane (CL-20) (CAS 135285-90-4).

4.C.5. Polymeric substances, as follows:

a. Carboxy - terminated polybutadiene(including carboxyl - terminated polybutadiene) (CTPB);

b. Hydroxy - terminated polybutadiene(including hydroxyl - terminated polybutadiene) (HTPB);

c. Glycidylazide polymer (GAP);

d. Polybutadiene - Acrylic Acid (PBAA);

e. Polybutadiene - Acrylic Acid - Acrylonitrile (PBAN)**;**

f. Polytetrahydrofuran polyethylene glycol (TPEG).

Technical Note:

Polytetrahydrofuran polyethylene glycol (TPEG) is a block co-polymer of poly 1,4-Butanediol and polyethylene glycol (PEG).

4.C.6. Other propellant additives and agents as follows:

a. Bonding agents as follows:
   1. Tris (1-(2-methyl)aziridinyl) phosphine oxide (MAPO) (CAS 57-39-6);
   2. 1,1′,1″-trimesoyl-tris(2-ethylaziridine) (HX-868, BITA) (CAS 7722-73-8);

3. Tepanol (HX-878), reaction product of tetraethlylenepentamine, acrylonitrile and glycidol(CAS 68412-46-4);
4. Tepan (HX-879), reaction product of tetraethlylenepentamine and acrylonitrile (CAS 68412-45-3);
5. **Polyfunctionalaziridine amides with isophthalic, trimesic, isocyanuric, or trimethyladipic backbone also having a 2-methyl or 2-ethyl aziridine group;**

Note:

Item 4.C.6.a.5. includes:
1. *1,1'-Isophthaloyl-bis(2-methylaziridine) (HX-752) (CAS 7652-64-4);*
2. *2,4,6-tris(2-ethyl-1-aziridinyl)-1,3,5-triazine (HX-874) (CAS 18924-91-9);*
3. *1,1'-trimethyladipoylbis(2-ethylaziridine) (HX-877) (CAS 71463-62-2).*

b. Curing reaction catalysts as follows:
Triphenyl bismuth (TPB) (CAS 603-33-8);

c. Burning rate modifiers, as follows:
1. Carboranes, decaboranes, pentaboranes and derivatives thereof;
2. Ferrocene derivatives, as follows:
   a. Catocene(CAS 37206-42-1);
   b. Ethyl ferrocene (CAS 1273-89-8);
   c. Propyl ferrocene;
   d. n-Butyl ferrocene(CAS 31904-29-7);
   e. Pentylferrocene(CAS 1274-00-6);
   f. Dicyclopentylferrocene;
   g. Dicyclohexylferrocene;
   h. Diethyl ferrocene (CAS 1273-97-8);
   i. Dipropylferrocene;
   j. Dibutylferrocene(CAS 1274-08-4);
   k. Dihexylferrocene(CAS 93894-59-8);
   l. Acetyl ferrocene (CAS 1271-55-2) / 1,1'-diacetyl ferrocene (CAS 1273-94-5);
   m. Ferrocene carboxylic acid (CAS 1271-42-7) / 1,1'-Ferrocenedicarboxylic acid (CAS 1293-87-4);
   n. Butacene(CAS 125856-62-4);
   o. Other ferrocene derivatives usable as rocket propellant burning rate modifiers;

Note:

Item 4.C.6.c.2.o does not control ferrocene derivatives that contain a six carbon aromatic functional group attached to the ferrocene molecule.

d. Esters and plasticisers as follows:
   1. Triethylene glycol dinitrate (TEGDN) (CAS 111-22-8);
   2. Trimethylolethane trinitrate (TMETN) (CAS 3032-55-1);
   3. 1,2,4-butanetriol trinitrate (BTTN) (CAS 6659-60-5);
   4. Diethylene glycol dinitrate (DEGDN) (CAS 693-21-0);
   5. 4,5 diazidomethyl-2-methyl-1,2,3-triazole (iso- DAMTR);
   6. Nitratoethylnitramine (NENA) based plasticisers, as follows:
      a. Methyl-NENA (CAS 17096-47-8);
      b. Ethyl-NENA (CAS 85068-73-1);
      c. Butyl-NENA (CAS 82486-82-6);
   7. Dinitropropyl based plasticisers, as follows:
      a. Bis (2,2-dinitropropyl) acetal (BDNPA) (CAS 5108-69-0);
      b. Bis (2,2-dinitropropyl) formal (BDNPF) (CAS 5917-61-3);

e. Stabilisers as follows:
   1. 2-Nitrodiphenylamine (CAS 119-75-5);
   2. N-methyl-p-nitroaniline(CAS 100-15-2).

4.D. SOFTWARE

4.D.1. “Software” specially designed or modified for the **operation or maintenance** of equipment specified in 4.B. for the “production” and handling of materials specified in 4.C.

4.E. TECHNOLOGY

4.E.1 “Technology”, in accordance with the General Technology Note, for the “development”, “production” or “use” of equipment or materials specified in 4.B. and 4.C.

CATEGORY II; ITEM 5

RESERVED FOR FUTURE USE

ITEM 6 PRODUCTION OF STRUCTURAL COMPOSITES, PYROLYTIC DEPOSITION AND DENSIFICATION, AND STRUCTURAL MATERIALS

6.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

6.A.1. Composite structures, laminates, and manufactures thereof, specially designed for use in the systems specified in 1.A., 19.A.1. or 19.A.2. and the subsystems specified in 2.A. or 20.A.

6.A.2. Resaturated pyrolised (i.e. carbon-carbon) components having all of the following:

a. Designed for rocket systems; and

b. Usable in the systems specified in 1.A. or 19.A.1.

6.B. TEST AND PRODUCTION EQUIPMENT

6.B.1. Equipment for the "production" of structural composites, fibres, prepregs or preforms, usable in the systems specified in 1.A., 19.A.1. or 19.A.2., as follows, and specially designed components, and accessories therefor:

a. Filament winding machines or fibre placement machines, of which the motions for positioning, wrapping and winding fibres can be co-ordinated and programmed in three or more axes, designed to fabricate composite structures or laminates from fibrous or filamentary materials, and co-ordinating and programming controls;

b. Tape-laying machines of which the motions for positioning and laying tape and sheets can be co-ordinated and programmed in two or more axes, designed for the manufacture of composite airframes and missile structures;

c. Multi-directional, multi-dimensional weaving machines or interlacing machines, including adapters and modification kits for weaving, interlacing or braiding fibres to manufacture composite structures;

Note:

6.B.1.c. does not control textile machinery not modified for the end-uses stated.

d. Equipment designed or modified for the production of fibrous or filamentary materials as follows:

1. Equipment for converting polymeric fibres (such as polyacrylonitrile, rayon, or polycarbosilane) including special provision to strain the fibre during heating;

2. Equipment for the vapour deposition of elements or compounds on heated filament substrates;

3. Equipment for the wet-spinning of refractory ceramics (such as aluminium oxide);

e. Equipment designed or modified for special fibre surface treatment or for producing prepregs and preforms, including rollers, tension stretchers, coating equipment, cutting equipment and clicker dies.

Note:

Examples of components and accessories for the machines specified in 6.B.1. are moulds, mandrels, dies, fixtures and tooling for the preform pressing, curing, casting, sintering or bonding of composite structures, laminates and manufactures thereof.

6.B.2. Nozzles specially designed for the processes referred to in 6.E.3.

6.B.3. Isostatic presses having all of the following characteristics:

a. Maximum working pressure equal to or greater than 69 MPa;

b. Designed to achieve and maintain a controlled thermal environment of 600^{o} C or greater; and

c. Possessing a chamber cavity with an inside diameter of 254 mm or greater.

6.B.4. Chemical vapour deposition furnaces designed or modified for the densification of carbon-carbon composites.

6.B.5. Equipment and process controls, other than those specified in 6.B.3. or 6.B.4., designed or modified for densification and pyrolysis of structural composite rocket nozzles and re-entry vehicle nose tips.

6.C. MATERIALS

6.C.1. Resin impregnated fibreprepregs and metal coated fibre preforms, for the goods specified in 6.A.1., made either with organic matrix or metal matrix utilising fibrous or filamentary reinforcements having a specific tensile strength greater than 7.62×10^4 m and a specific modulus greater than 3.18×10^6 m.

Note:

The only resin impregnated fibreprepregs specified in 6.C.1. are those using resins with a glass transition temperature (Tg), after cure, exceeding 145°C as determined by ASTM D4065 or national equivalents.

Technical Notes:

1. *In Item 6.C.1. "specific tensile strength" is the ultimate tensile strength in N/m^2 divided by the specific weight in N/m^3, measured at a temperature of (296 ± 2)K ((23 ± 2)°C) and a relative humidity of (50 ± 5)%.*

2. *In Item 6.C.1. "specific modulus" is the Young's modulus in N/m^2 divided by the specific weight in N/m^3, measured at a temperature of (296 ± 2)K ((23 ± 2)°C) and a relative humidity of (50 ± 5)%.*

6.C.2. Resaturated pyrolised (i.e. carbon-carbon) materials having all of the following:

a. Designed for rocket systems; and

b. Usable in the systems specified in 1.A. or 19.A.1.

6.C.3. Fine grain graphites with a bulk density of at least 1.72 g/cc measured at 15ºC and having a grain size of 100×10^{-6} m (100 μm) or less, usable for rocket nozzles and re-entry vehicle nose tips, which can be machined to any of the following products:

a. Cylinders having a diameter of 120 mm or greater and a length of 50 mm or greater;

b. Tubes having an inner diameter of 65 mm or greater and a wall thickness of 25 mm or greater and a length of 50 mm or greater; or

c. Blocks having a size of 120 mm x 120 mm x 50 mm or greater.

6.C.4. Pyrolytic or fibrous reinforced graphites usable for rocket nozzles and re-entry vehicle nose tips usable in systems specified in 1.A. or 19.A.1.

6.C.5. Ceramic composite materials (dielectric constant less than 6 at any frequency from 100 MHz to 100 GHz) for use in missile radomes usable in systems specified in 1.A. or 19.A.1.

6.C.6. Silicon-carbide materials as follows:

a. Bulk machinable silicon-carbide reinforced unfired ceramic usable for nose tips usable in systems specified in 1.A. or 19.A.1.;

b. Reinforced silicon-carbide ceramic composites usable for nose tips, re-entry vehicles, nozzle flaps, usable in systems specified in 1.A. or 19.A.1.

6.C.7. Materials for the fabrication of missile components in the systems specified in 1.A., 19.A.1. or 19.A.2, as follows:

a. Tungsten and alloys in particulate form with a tungsten content of 97% by weight or more and a particle size of 50 x10^{-6} m (50 µm) or less;

b. Molybdenum and alloys in particulate form with a molybdenum content of 97% by weight or more and a particle size of 50 x10^{-6} m (50 µm) or less;

c. Tungsten materials in the solid form having all of the following:

1. Any of the following material compositions:
- **i. Tungsten and alloys containing 97% by weight or more of tungsten;**
- **ii. Copper infiltrated tungsten containing 80% by weight or more of tungsten; or**
- **iii. Silver infiltrated tungsten containing 80% by weight or more of tungsten; and**

2. Able to be machined to any of the following products:
- **i. Cylinders having a diameter of 120 mm or greater and a length of 50 mm or greater;**
- **ii. Tubes having an inner diameter of 65 mm or greater and a wall thickness of 25 mm or greater and a length of 50 mm or greater; or**
- **iii. Blocks having a size of 120 mm x 120 mm x 50 mm or greater.**

6.C.8. Maraging steels, usable in the systems specified in 1.A. or 19.A.1., having all of the following:

a. Having an ultimate tensile strength, measured at 20° C, equal to or greater than:

1. 0.9 GPa in the solution annealed stage; or

2. 1.5 GPa in the precipitation hardened stage; and

b. Any of the following forms:

1. Sheet, plate or tubing with a wall or plate thickness equal to or less than 5.0 mm; or

2. Tubular forms with a wall thickness equal to or less than 50 mm and having an inner diameter equal to or greater than 270 mm.

Technical Note:

Maraging steels are iron alloys:

a. Generally characterised by high nickel, very low carbon content and use substitutional elements or precipitates to produce strengthening and age-hardening of the alloy; and

b. Subjected to heat treatment cycles to facilitate the martensitic transformation process (solution annealed stage) and subsequently age hardened (precipitation hardened stage).

6.C.9. Titanium-stabilized duplex stainless steel (Ti-DSS) usable in the systems specified in 1.A. or 19.A.1. and having all of the following:

a. Having all of the following characteristics:

1. Containing 17.0 - 23.0 weight percent chromium and 4.5 - 7.0 weight percent nickel;
2. Having a titanium content of greater than 0.10 weight percent; and
3. A ferritic-austenitic microstructure (also referred to as a two-phase microstructure) of which at least 10% is austenite by volume (according to ASTM E-1181-87 or national equivalents); and

b. Any of the following forms:

1. Ingots or bars having a size of 100 mm or more in each dimension;
2. Sheets having a width of 600 mm or more and a thickness of 3 mm or less; or
3. Tubes having an outer diameter of 600 mm or more and a wall thickness of 3 mm or less.

6.D. SOFTWARE

6.D.1. "Software" specially designed or modified for the **operation or maintenance** of equipment specified in 6.B.1.

6.D.2. "Software" specially designed or modified for the equipment specified in 6.B.3.,6.B.4. or 6.B.5.

6.E. TECHNOLOGY

6.E.1. “Technology”, in accordance with the General Technology Note, for the “development”, “production” or “use” of equipment, materials or “software” specified in 6.A., 6.B., 6.C. or 6.D.

6.E.2. “Technical data” (including processing conditions) and procedures for the regulation of temperature, pressures or atmosphere in autoclaves or hydroclaves when used for the production of composites or partially processed composites, usable for equipment or materials specified in 6.A. or 6.C.

6.E.3. “Technology” for producing pyrolytically derived materials formed on a mould, mandrel or other substrate from precursor gases which decompose in the 1,300^{o} C to 2,900^{o} C temperature range at pressures of 130 Pa (1 mm Hg) to 20 kPa (150 mm Hg) including “technology” for the composition of precursor gases, flow-rates, and process control schedules and parameters.

CATEGORY II; ITEM 7

RESERVED FOR FUTURE USE

CATEGORY II; ITEM 8

RESERVED FOR FUTURE USE

CATEGORY II; ITEM 9

ITEM 9 INSTRUMENTATION, NAVIGATION AND DIRECTION FINDING

9.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

9.A.1. Integrated flight instrument systems which include gyrostabilisers or automatic pilots, designed or modified for use in the systems specified in 1.A., or 19.A.1. or 19.A.2. and specially designed components therefor.

9.A.2. Gyro-astro compasses and other devices which derive position or orientation by means of automatically tracking celestial bodies or satellites, and specially designed components therefor.

9.A.3. Linear accelerometers, designed for use in inertial navigation systems or in guidance systems of all types, usable in the systems specified in 1.A., 19.A.1. or 19.A.2., having all of the following characteristics, and specially designed components therefor:

a. "Scale factor" "repeatability" less (better) than 1250 ppm; and

b. "Bias" "repeatability" less (better) than 1250 micro g.

Note:

Item 9.A.3. does not control accelerometers specially designed and developed as Measurement While Drilling (MWD) sensors for use in downhole well service operations.

Technical Notes:

1. *"Bias" is defined as the accelerometer output when no acceleration is applied.*
2. *"Scale factor" is defined as the ratio of change in output to a change in the input.*
3. *The measurement of "bias" and "scale factor" refers to one sigma standard deviation with respect to a fixed calibration over a period of one year.*
4. *"Repeatability" is defined according to IEEE Standard* ***for Inertial Sensor Terminology*** *528-2001* ***in the Definitions section paragraph 2.214 titled repeatability (gyro, accelerometer)*** *as follows: "The closeness of agreement among repeated measurements of the same variable under the same operating conditions when changes in conditions or non-operating periods occur between measurements".*

9.A.4. All types of gyros usable in the systems specified in 1.A., 19.A.1 or 19.A.2., with a rated "drift rate" "stability" of less than 0.5 degrees (1 sigma or rms) per hour in a 1 g environment, and specially designed components therefor.

Technical Notes:

1. *"Drift rate" is defined as the component of gyro output that is functionally independent of input rotation and is expressed as an angular rate. (IEEE STD 528-2001 paragraph 2.56)*

2. *"Stability" is defined as a measure of the ability of a specific mechanism or performance coefficient to remain invariant when continuously exposed to a fixed operating condition. (This definition does not refer to dynamic or servo stability.) (IEEE STD 528-2001 paragraph 2.247)*

9.A.5. Accelerometers or gyros of any type, designed for use in inertial navigation systems or in guidance systems of all types, specified to function at acceleration levels greater than 100 g, and specially designed components therefor.

Note :

9.A.5. does not include accelerometers that are designed to measure vibration or shock.

9.A.6. Inertial or other equipment using accelerometers specified in 9.A.3. or 9.A.5. or gyros specified in 9.A.4. or 9.A.5., and systems incorporating such equipment, and specially designed components therefor.

9.A.7. "Integrated navigation systems", designed or modified for the systems specified in 1.A., 19.A.1. or 19.A.2. and capable of providing a navigational accuracy of 200 m CEP or less.

Technical Note:

An "integrated navigation system" typically incorporates all of the following components:

a. *An inertial measurement device (e.g. an attitude and heading reference system, inertial reference unit, or inertial navigation system);*

b. *One or more external sensors used to update the position and/or velocity, either periodically or continuously throughout the flight (e.g. satellite navigation receiver, radar altimeter, and/or Doppler radar); and*

c. *Integration hardware and software.*

N.B. *For integration "software", see Item 9.D.4.*

9.A.8. Three axis magnetic heading sensors having all of the following characteristics, and specially designed components therefor:
a. Internal tilt compensation in pitch (+/- 90 degrees) and having roll (+/- 180 degrees) axes.
b. Capable of providing azimuthal accuracy better (less) than 0.5 degrees rms at latitudes of +/- 80 degrees, referenced to local magnetic field; and
c. Designed or modified to be integrated with flight control and navigation systems.

Note:

Flight control and navigation systems in Item 9.A.8. include gyrostabilisers, automatic pilots and inertial navigation systems.

9.B. TEST AND PRODUCTION EQUIPMENT

9.B.1. "Production equipment", and other test, calibration and alignment equipment, other than that described in 9.B.2., designed or modified to be used with equipment specified in 9.A.

Note:

Equipment specified in 9.B.1. includes the following:

a. For laser gyro equipment, the following equipment used to characterise mirrors, having the threshold accuracy shown or better:
1. Scatterometer (10 ppm);
2. Reflectometer (50 ppm);
3. Profilometer (5 Angstroms);
b. For other inertial equipment:
1. Inertial Measurement Unit (IMU) Module Tester;
2. IMU Platform Tester;
3. IMU Stable Element Handling Fixture;
4. IMU Platform Balance Fixture;
5. Gyro Tuning Test Station;
6. Gyro Dynamic Balance Station;
7. Gyro Run-In/Motor Test Station;
8. Gyro Evacuation and Filling Station;
9. Centrifuge Fixture for Gyro Bearings;
10. Accelerometer Axis Align Station;
11. Accelerometer Test Station;
12. Fiber Optic Gyro Coil Winding Machines.

9.B.2. Equipment as follows:

a. Balancing machines having all the following characteristics:

1. Not capable of balancing rotors/assemblies having a mass greater than 3 kg;

2. Capable of balancing rotors/assemblies at speeds greater than 12,500 rpm;

3. Capable of correcting unbalance in two planes or more; and

4. Capable of balancing to a residual specific unbalance of 0.2 g mm per kg of rotor mass;

b. Indicator heads (sometimes known as balancing instrumentation) designed or modified for use with machines specified in 9.B.2.a.;

c. Motion simulators/rate tables (equipment capable of simulating motion) having all of the following characteristics:

1. Two axes or more;

2. Designed or modified to incorporate sliprings or integrated non-contact devices capable of transferring electrical power, signal information, or both; and

3. Having any of the following characteristics:

a. For any single axis having all of the following:

1. Capable of rates of 400 degrees/s or more, or 30 degrees/s or less; and

2. A rate resolution equal to or less than 6 degrees/s and an accuracy equal to or less than 0.6 degrees/s;

b. Having a worst-case rate stability equal to or better (less) than plus or minus 0.05% averaged over 10 degrees or more; or

c. A positioning "accuracy" equal to or less (better) than 5 arc second;

d. Positioning tables (equipment capable of precise rotary positioning in any axes) having the following characteristics:

1. Two axes or more; and

2. A positioning "accuracy" equal to or less (better) than 5 arc second;

e. Centrifuges capable of imparting accelerations above 100 g and designed or modified to incorporate sliprings or integrated non-contact devices capable of transferring electrical power, signal information, or both.

Notes:

1. *The only balancing machines, indicator heads, motion simulators, rate tables, positioning tables and centrifuges specified in Item 9 are those specified in 9.B.2.*

2. *9.B.2.a. does not control balancing machines designed or modified for dental or other medical equipment.*

3. *9.B.2.c. and 9.B.2.d. do not control rotary tables designed or modified for machine tools or for medical equipment.*

4. *Rate tables not controlled by 9.B.2.c. and providing the characteristics of a positioning table are to be evaluated according to 9.B.2.d.*

5. *Equipment that has the characteristics specified in 9.B.2.d. which also meets the characteristics of 9.B.2.c. will be treated as equipment specified in 9.B.2.c.*

6. *Item 9.B.2.c. applies whether or not sliprings or integrated non-contact devices are fitted at the time of export.*

7. *Item 9.B.2.e. applies whether or not sliprings or integrated non-contact devices are fitted at the time of export.*

9.C. MATERIALS

None.

9.D. SOFTWARE

9.D.1. "Software" specially designed or modified for the "use" of equipment specified in 9.A. or 9.B.

9.D.2. Integration "software" for the equipment specified in 9.A.1.

9.D.3. Integration "software" specially designed for the equipment specified in 9.A.6.

9.D.4. Integration "software", designed or modified for the "integrated navigation systems" specified in 9.A.7.

Note:

A common form of integration "software" employs Kalman filtering.

9.E. TECHNOLOGY

9.E.1. "Technology", in accordance with the General Technology Note, for the "development", "production" or "use" of equipment or "software" specified in 9.A., 9.B. or 9.D.

Note:

Equipment or "software" specified in 9.A. or 9.D. may be exported as part of a manned aircraft, satellite, land vehicle, marine/submarine vessel or geophysical survey equipment or in quantities appropriate for replacement parts for such applications.

CATEGORY II; ITEM 10

ITEM 10 FLIGHT CONTROL

10.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

10.A.1. Hydraulic, mechanical, electro-optical, or electromechanical flight control systems (including fly-by-wire systems) designed or modified for the systems specified in 1.A.

10.A.2. Attitude control equipment designed or modified for the systems specified in 1.A.

10.A.3. Flight control servo valves designed or modified for the systems in 10.A.1. or 10.A.2., and designed or modified to operate in a vibration environment greater than 10 grms between 20 Hz and 2 kHz.

Note:

Systems, equipment or valves specified in 10.A. may be exported as part of a manned aircraft or satellite or in quantities appropriate for replacement parts for manned aircraft.

10.B. TEST AND PRODUCTION EQUIPMENT

10.B.1. Test, calibration, and alignment equipment specially designed for equipment specified in 10.A.

10.C. MATERIALS

None.

10.D. SOFTWARE

10.D.1. "Software" specially designed or modified for the "use" of equipment specified in 10.A. or 10.B.

Note:

"Software" specified in 10.D.1. may be exported as part of a manned aircraft or satellite or in quantities appropriate for replacement parts for manned aircraft.

10.E. TECHNOLOGY

10.E.1. Design "technology" for integration of air vehicle fuselage, propulsion system and lifting control surfaces, designed or modified for the systems specified in 1.A. or 19.A.2., to optimise aerodynamic performance throughout the flight regime of an unmanned aerial vehicle.

10.E.2. Design "technology" for integration of the flight control, guidance, and propulsion data into a flight management system, designed or modified for the systems specified in 1.A. or 19.A.1., for optimisation of rocket system trajectory.

10.E.3. "Technology", in accordance with the General Technology Note, for the "development", "production" or "use" of equipment or "software" specified in 10.A., 10.B. or 10.D.

CATEGORY II; ITEM 11

ITEM 11 AVIONICS

11.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

11.A.1. Radar and laser radar systems, including altimeters, designed or modified for use in the systems specified in 1.A.

Technical Note:

Laser radar systems embody specialised transmission, scanning, receiving and signal processing techniques for utilisation of lasers for echo ranging, direction finding and discrimination of targets by location, radial speed and body reflection characteristics.

11.A.2. Passive sensors for determining bearings to specific electromagnetic sources (direction finding equipment) or terrain characteristics, designed or modified for use in the systems specified in 1.A.

11.A.3. Receiving equipment for Global Navigation Satellite Systems (GNSS; e.g. GPS, GLONASS or Galileo), having any of the following characteristics, and specially designed components therefor:

a. Designed or modified for use in systems specified in 1.A.; or

b. Designed or modified for airborne applications and having any of the following:

1. Capable of providing navigation information at speeds in excess of 600 m/s;

2. Employing decryption, designed or modified for military or governmental services, to gain access to GNSS secure signal/data; or

3. Being specially designed to employ anti-jam features (e.g. null steering antenna or electronically steerable antenna) to function in an environment of active or passive countermeasures.

Note:

11.A.3.b.2. and 11.A.3.b.3. do not control equipment designed for commercial, civil or "Safety of Life" (e.g. data integrity, flight safety) GNSS services.

11.A.4. Electronic assemblies and components, designed or modified for use in the systems specified in 1.A. or 19.A. and specially designed for military use and operation at temperatures in excess of 125^{o} C.

Notes:

1. *Equipment specified in 11.A. includes the following:*
   a. *Terrain contour mapping equipment;*
   b. *Scene mapping and correlation (both digital and analogue) equipment;*
   c. *Doppler navigation radar equipment;*
   d. *Passive interferometer equipment;*
   e. *Imaging sensor equipment (both active and passive).*

2. *Equipment specified in 11.A. may be exported as part of a manned aircraft or satellite or in quantities appropriate for replacement parts for manned aircraft.*

11.A.5. Umbilical and interstage electrical connectors specially designed for systems specified in 1.A.1. or 19.A.1.

Technical Note:

Interstage connectors referred to in 11.A.5. also include electrical connectors installed between systems specified in 1.A.1. or 19.A.1. and their "payload".

11.B. TEST AND PRODUCTION EQUIPMENT

None.

11.C. MATERIALS

None.

11.D. SOFTWARE

11.D.1. "Software" specially designed or modified for the "use" of equipment specified in 11.A.1., 11.A.2. or 11.A.4.

11.D.2. "Software" specially designed for the "use" of equipment specified in 11.A.3.

11.E. TECHNOLOGY

11.E.1. Design “technology” for protection of avionics and electrical subsystems against Electromagnetic Pulse (EMP) and Electromagnetic Interference (EMI) hazards from external sources, as follows:

a. Design “technology” for shielding systems;

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

c. Design “technology” for determination of hardening criteria for the above.

11.E.2. “Technology”, in accordance with the General Technology Note, for the “development”, “production” or “use” of equipment or “software” specified in 11.A. or 11.D.

CATEGORY II; ITEM 12

ITEM 12 LAUNCH SUPPORT

12.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

12.A.1. Apparatus and devices, designed or modified for the handling, control, activation and launching of the systems specified in 1.A**.,** 19.A.1., or 19.A.2.

12.A.2. Vehicles designed or modified for the transport, handling, control, activation and launching of the systems specified in 1.A.

12.A.3. Gravity meters (gravimeters) **or gravity gradiometers, designed or modified for airborne or marine use, usable for systems specified in 1.A., as follows, and specially designed components therefor:**

a. Gravity meters having all the following:

1. A static or operational accuracy equal to or less (better) than 0.7 milligal (mgal); and

2. A time to steady-state registration of two minutes or less;

b. Gravity gradiometers.

12.A.4. Telemetry and telecontrol equipment, including ground equipment, designed or modified for systems specified in 1.A., 19.A.1. or 19.A.2.

Notes:

1. 12.A.4. does not control equipment designed or modified for manned aircraft or satellites.

2. 12.A.4. does not control ground based equipment designed or modified for terrestrial or marine applications.

3. 12.A.4. does not control equipment designed for commercial, civil or "Safety of Life" (e.g. data integrity, flight safety) GNSS services.

12.A.5. Precision tracking systems, usable for systems specified in 1.A., 19.A.1. or 19.A.2. as follows:

a. Tracking systems which use a code translator installed on the rocket or unmanned aerial vehicle in conjunction with either surface or airborne references or navigation satellite systems to provide real-time measurements of inflight position and velocity;

b. Range instrumentation radars including associated optical/infrared trackers with all of the following capabilities:

1. Angular resolution better than 1.5 mrad;

2. Range of 30 km or greater with a range resolution better than 10 m rms; and

3. Velocity resolution better than 3 m/s.

12.A.6. Thermal batteries designed or modified for the systems specified in 1.A., 19.A.1. or 19.A.2.

Note:

Item 12.A.6. does not control thermal batteries specially designed for rocket systems or unmanned aerial vehicles that are not capable of a "range" equal to or greater than 300 km.

Technical Note:

Thermal batteries are single use batteries that contain a solid non-conducting inorganic salt as the electrolyte. These batteries incorporate a pyrolytic material that, when ignited, melts the electrolyte and activates the battery.

12.B. TEST AND PRODUCTION EQUIPMENT

None.

12.C. MATERIALS

None.

12.D. SOFTWARE

12.D.1. "Software" specially designed or modified for the "use" of equipment specified in 12.A.1.

12.D.2. "Software" which processes post-flight, recorded data, enabling determination of vehicle position throughout its flight path, specially designed or modified for systems specified in 1.A., 19.A.1. or 19.A.2.

12.D.3. “Software” specially designed or modified for the “use” of equipment specified in 12.A.4. or 12.A.5., usable for systems specified in 1.A., 19.A.1. or 19.A.2.

12.E. TECHNOLOGY

12.E.1. “Technology”, in accordance with the General Technology Note, for the “development”, “production” or “use” of equipment or “software” specified in 12.A. or 12.D.

CATEGORY II; ITEM 13

ITEM 13 COMPUTERS

13.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

13.A.1. Analogue computers, digital computers or digital differential analysers, designed or modified for use in the systems specified in 1.A., having any of the following characteristics:

a. Rated for continuous operation at temperatures from below -45° C to above +55° C; or

b. Designed as ruggedised or "radiation hardened".

13.B. TEST AND PRODUCTION EQUIPMENT

None.

13.C. MATERIALS

None.

13.D. SOFTWARE

None.

13.E. TECHNOLOGY

13.E.1. "Technology", in accordance with the General Technology Note, for the "development", "production" or "use" of equipment specified in 13.A.

Note:

Item 13 equipment may be exported as part of a manned aircraft or satellite or in quantities appropriate for replacement parts for manned aircraft.

CATEGORY II; ITEM 14

ITEM 14 ANALOGUE TO DIGITAL CONVERTERS

14.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

14.A.1. Analogue-to-digital converters, usable in the systems specified in 1.A., having any of the following characteristics:

a. Designed to meet military specifications for ruggedised equipment; or

b. Designed or modified for military use and being any of the following types:

1. Analogue-to-digital converter "microcircuits", which are "radiation-hardened" or have all of the following characteristics:

a. Having a quantisation corresponding to 8 bits or more when coded in the binary system;

b. Rated for operation in the temperature range from below -54° C to above +125° C; and

c. Hermetically sealed; or

2. Electrical input type analogue-to-digital converter printed circuit boards or modules, having all of the following characteristics:

a. Having a quantisation corresponding to 8 bits or more when coded in the binary system;

b. Rated for operation in the temperature range from below -45° C to above +55° C; and

c. Incorporating "microcircuits" specified in 14.A.1.b.1.

14.B. TEST AND PRODUCTION EQUIPMENT

None.

14.C. MATERIALS

None.

14.D. SOFTWARE

None.

14.E. TECHNOLOGY

14.E.1. “Technology”, in accordance with the General Technology Note, for the “development”, “production” or “use” of equipment specified in 14.A.

CATEGORY II; ITEM 15

ITEM 15 TEST FACILITIES AND EQUIPMENT

15.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

None.

15.B. TEST AND PRODUCTION EQUIPMENT

15.B.1. Vibration test equipment, usable for the systems specified in 1.A., 19.A.1. or 19.A.2. or the subsystems specified in 2.A. or 20.A., and components therefor, as follows:

a. Vibration test systems employing feedback or closed loop techniques and incorporating a digital controller, capable of vibrating a system at an acceleration equal to or greater than 10 grms between 20 Hz and 2 kHz while imparting forces equal to or greater than 50 kN, measured "bare table";

b. Digital controllers, combined with specially designed vibration test "software", with a "real-time control bandwidth" greater than 5 kHz and designed for use with vibration test systems specified in 15.B.1.a.;

Technical Note:

"Real-time control bandwidth" is defined as the maximum rate at which a controller can execute complete cycles of sampling, processing data and transmitting control signals.

c. Vibration thrusters (shaker units), with or without associated amplifiers, capable of imparting a force equal to or greater than 50 kN, measured "bare table", and usable in vibration test systems specified in 15.B.1.a.;

d. Test piece support structures and electronic units designed to combine multiple shaker units into a complete shaker system capable of providing an effective combined force equal to or greater than 50 kN, measured "bare table", and usable in vibration test systems specified in 15.B.1.a.

Technical Note:

Vibration test systems incorporating a digital controller are those systems, the functions of which are, partly or entirely, automatically controlled by stored and digitally coded electrical signals.

15.B.2. "Aerodynamic test facilities" for speeds of Mach 0.9 or more, usable for the systems specified in 1.A. or 19.A. or the subsystems specified in 2.A. or 20.A.

Note:

Item 15.B.2 does not control wind-tunnels for speeds of Mach 3 or less with dimension of the "test cross section size" equal to or less than 250 mm.

Technical Notes:

1. *"Aerodynamic test facilities" includes wind tunnels and shock tunnels for the study of airflow over objects.*

2. *"Test cross section size" means the diameter of the circle, or the side of the square, or the longest side of the rectangle, or the major axis of the ellipse at the largest "test cross section" location. "Test cross section" is the section perpendicular to the flow direction.*

15.B.3. Test benches/stands, usable for the systems specified in 1.A.**,** 19.A.1. or 19.A.2. or the subsystems specified in 2.A. or 20.A., which have the capacity to handle solid or liquid propellant rockets, motors or engines having a thrust greater than 68kN, or which are capable of simultaneously measuring the three axial thrust components.

15.B.4. Environmental chambers as follows, usable for the systems specified in 1.A. or 19.A. or the subsystems specified in 2.A. or 20.A.:

a. Environmental chambers capable of simulating all the following flight conditions:

1. Having any of the following:

a. Altitude equal to or greater than 15 km; or

b. Temperature range from below –50º C to above 125º C; and

2. Incorporating, or designed or modified to incorporate, a shaker unit or other vibration test equipment to produce vibration environments equal to or greater than 10 grms, measured "bare table", between 20 Hz and 2 kHz **while** imparting forces equal to or greater than 5 kN;

Technical Notes:

1. Item 15.B.4.a.2. describes systems that are capable of generating a vibration environment with a single wave (e.g. a sine wave) and systems capable of generating a broad band random vibration (i.e. power spectrum).

2. In Item 15.B.4.a.2., designed or modified means the environmental chamber provides appropriate interfaces (e.g. sealing devices) to incorporate a shaker unit or other vibration test equipment as specified in this Item.

b. Environmental chambers capable of simulating all of the following flight conditions:

1. Acoustic environments at an overall sound pressure level of 140 dB or greater (referenced to 2 x 10^{-5} N/m^2) or with a total rated acoustic power output of 4 kW or greater; and

2. Any of the following:
   a. Altitude equal to or greater than 15 km; or
   b. Temperature range from below -50° C to above 125°C.

15.B.5. Accelerators capable of delivering electromagnetic radiation produced by bremsstrahlung from accelerated electrons of 2 MeV or greater, and equipment containing those accelerators, usable for the systems specified in 1.A., 19.A.1. or 19.A.2. or the subsystems specified in 2.A. or 20.A.

Note:

15.B.5. does not control equipment specially designed for medical purposes.

Technical Note:

In Item 15.B. "bare table" means a flat table, or surface, with no fixture or fittings.

15.C. MATERIALS

None.

15.D. SOFTWARE

15.D.1. "Software" specially designed or modified for the "use" of equipment specified in 15.B. usable for testing systems specified in 1.A., 19.A.1. or 19.A.2. or subsystems specified in 2.A. or 20.A.

15.E. TECHNOLOGY

15.E.1. “Technology”, in accordance with the General Technology Note, for the “development”, “production” or “use” of equipment or “software” specified in 15.B. or 15.D.

CATEGORY II; ITEM 16

ITEM 16 MODELLING-SIMULATION AND DESIGN INTEGRATION

16.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

16.A.1. Specially designed hybrid (combined analogue/digital) computers for modelling, simulation or design integration of systems specified in 1.A. or the subsystems specified in 2.A.

Note:

This control only applies when the equipment is supplied with "software" specified in 16.D.1.

16.B. TEST AND PRODUCTION EQUIPMENT

None.

16.C. MATERIALS

None.

16.D. SOFTWARE

16.D.1. "Software" specially designed for modelling, simulation, or design integration of the systems specified in 1.A. or the subsystems specified in 2.A or 20.A.

Technical Note:

The modelling includes in particular the aerodynamic and thermodynamic analysis of the systems.

16.E. TECHNOLOGY

16.E.1. "Technology", in accordance with the General Technology Note, for the "development", "production" or "use" of equipment or "software" specified in 16.A. or 16.D.

CATEGORY II; ITEM 17

ITEM 17 STEALTH

17.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

17.A.1. Devices for reduced observables such as radar reflectivity, ultraviolet/infrared signatures and acoustic signatures (i.e. stealth technology), for applications usable for the systems specified in 1.A. or 19.A. or the subsystems specified in 2.A. or 20.A.

17.B. TEST AND PRODUCTION EQUIPMENT

17.B.1. Systems, specially designed for radar cross section measurement, usable for the systems specified in 1.A., 19.A.1. or 19.A.2. or the subsystems specified in 2.A.

17.C. MATERIALS

17.C.1. Materials for reduced observables such as radar reflectivity, ultraviolet/infrared signatures and acoustic signatures (i.e. stealth technology), for applications usable for the systems specified in 1.A. or 19.A. or the subsystems specified in 2.A.

Notes:

1. *17.C.1. includes structural materials and coatings (including paints), specially designed for reduced or tailored reflectivity or emissivity in the microwave, infrared or ultraviolet spectra.*

2. *17.C.1. does not control coatings (including paints) when specially used for thermal control of satellites.*

17.D. SOFTWARE

17.D.1. “Software” specially designed for reduced observables such as radar reflectivity, ultraviolet/infrared signatures and acoustic signatures (i.e. stealth technology), for applications usable for the systems specified in 1.A. or 19.A. or the subsystems specified in 2.A.

Note:

17.D.1. includes "software" specially designed for analysis of signature reduction.

17.E. TECHNOLOGY

17.E.1. "Technology", in accordance with the General Technology Note, for the "development", "production" or "use" of equipment, materials or "software" specified in 17.A., 17.B., 17.C. or 17.D.

Note:

17.E.1. includes databases specially designed for analysis of signature reduction.

CATEGORY II; ITEM 18

ITEM 18 NUCLEAR EFFECTS PROTECTION

18.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

18.A.1. "Radiation Hardened" "microcircuits" usable in protecting rocket systems and unmanned aerial vehicles against nuclear effects (e.g. Electromagnetic Pulse (EMP), X-rays, combined blast and thermal effects), and usable for the systems specified in 1.A.

18.A.2. "Detectors" specially designed or modified to protect rocket systems and unmanned aerial vehicles against nuclear effects (e.g. Electromagnetic Pulse (EMP), X-rays, combined blast and thermal effects), and usable for the systems specified in 1.A.

Technical Note:

A ´detector´ is defined as a mechanical, electrical, optical or chemical device that automatically identifies and records, or registers a stimulus such as an environmental change in pressure or temperature, an electrical or electromagnetic signal or radiation from a radioactive material. This includes devices that sense by one time operation or failure.

18.A.3. Radomes designed to withstand a combined thermal shock greater than 4.184×10^6 J/m^2 accompanied by a peak over pressure of greater than 50 kPa, usable in protecting rocket systems and unmanned aerial vehicles against nuclear effects (e.g. Electromagnetic Pulse (EMP), X-rays, combined blast and thermal effects), and usable for the systems specified in 1.A.

18.B. TEST AND PRODUCTION EQUIPMENT

None.

18.C. MATERIALS

None.

18.D. SOFTWARE

None.

18.E. TECHNOLOGY

18.E.1. “Technology”, in accordance with the General Technology Note, for the “development”, “production” or “use” of equipment specified in 18.A.

CATEGORY II; ITEM 19

ITEM 19 OTHER COMPLETE DELIVERY SYSTEMS

19.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

19.A.1. Complete rocket systems (including ballistic missile systems, space launch vehicles, and sounding rockets), not specified in 1.A.1., capable of a "range" equal to or greater than 300 km.

19.A.2. Complete unmanned aerial vehicle systems (including cruise missile systems, target drones and reconnaissance drones), not specified in 1.A.2., capable of a "range" equal to or greater than 300 km.

19.A.3. Complete unmanned aerial vehicle systems, not specified in 1.A.2. or 19.A.2., having all of the following:

a. Having any of the following:

1. An autonomous flight control and navigation capability; or

2. Capability of controlled flight out of the direct vision range involving a human operator; and

b. Having any of the following:

1. Incorporating an aerosol dispensing system/mechanism with a capacity greater than 20 litres; or

2. Designed or modified to incorporate an aerosol dispensing system/mechanism with a capacity greater than 20 litres.

Note:

Item 19.A.3. does not control model aircraft, specially designed for recreational or competition purposes.

Technical Notes:

1. An aerosol consists of particulate or liquids other than fuel components, by-products or additives, as part of the "payload" to be dispersed in the atmosphere. Examples of aerosols include pesticides for crop dusting and dry chemicals for cloud seeding.

2. An aerosol dispensing system/mechanism contains all those devices (mechanical, electrical, hydraulic, etc.), which are necessary for storage and dispersion of an aerosol into the atmosphere. This includes the possibility of aerosol injection into the combustion exhaust vapour and into the propeller slip stream.

19.B. TEST AND PRODUCTION EQUIPMENT

19.B.1. "Production facilities" specially designed for the systems specified in 19.A.1 or 19.A.2.

19.C. MATERIALS

None.

19.D. SOFTWARE

19.D.1. "Software" which coordinates the function of more than one subsystem, specially designed or modified for "use" in the systems specified in 19.A.1. or 19.A.2.

19.E. TECHNOLOGY

19.E.1. "Technology", in accordance with the General Technology Note, for the "development", "production" or "use" of equipment specified in 19.A. 1. or 19.A.2.

CATEGORY II; ITEM 20

ITEM 20 OTHER COMPLETE SUBSYSTEMS

20.A. EQUIPMENT, ASSEMBLIES AND COMPONENTS

20.A.1. Complete subsystems as follows:

a. Individual rocket stages, not specified in 2.A.1., usable in systems specified in 19.A.;

b. Rocket propulsion subsystems, not specified in 2.A.1., usable in the systems specified in 19.A.1., as follows:

1. Solid propellant rocket motors or hybrid rocket motors having a total impulse capacity equal to or greater than 8.41 x 10^5 Ns, but less than 1.1 x 10^6 Ns;

2. Liquid propellant rocket engines integrated, or designed or modified to be integrated, into a liquid propellant propulsion system which has a total impulse capacity equal to or greater than 8.41 x 10^5 Ns, but less than 1.1 x 10^6 Ns;

20.B. TEST AND PRODUCTION EQUIPMENT

20.B.1. “Production facilities” specially designed for the subsystems specified in 20.A.

20.B.2. “Production equipment” specially designed for the subsystems specified in 20.A.

20.C. MATERIALS

None.

20.D. SOFTWARE

20.D.1. “Software” specially designed or modified for the systems specified in 20.B.1.

20.D.2. “Software”, not specified in 2.D.2., specially designed or modified for the “use” of rocket motors or engines specified in 20.A.1.b.

20.E. TECHNOLOGY

20.E.1. “Technology”, in accordance with the General Technology Note, for the “development”, “production” or “use” of equipment or “software” specified in 20.A., 20.B. or 20.D.

UNITS, CONSTANTS, ACRONYMS AND ABBREVIATIONS

UNITS, CONSTANTS, ACRONYMS AND ABBREVIATIONS USED IN THIS ANNEX

ABEC	Annular Bearing Engineers Committee
ABMA	American Bearing Manufactures Association
ANSI	American National Standards Institute
Angstrom	1 x 10^{-10} metre
ASTM	American Society for Testing and Materials
bar	unit of pressure
°C	degree Celsius
cc	cubic centimetre
CAS	Chemical Abstracts Service
CEP	Circle of Equal Probability
dB	decibel
g	gram; also, acceleration due to gravity
GHz	gigahertz
GNSS	Global Navigation Satellite System e.g.
	"Galileo"
	"GLONASS" – Global'nayaNavigatsionnayaSputnikovaya Sistema
	"GPS" – Global Positioning System
h	hour
Hz	hertz
HTPB	Hydroxy –Terminated Polybutadiene
ICAO	International Civil Aviation Organisation
IEEE	Institute of Electrical and Electronic Engineers
IR	Infrared

ISO	International Organization for Standardization
J	joule
JIS	Japanese Industrial Standard
K	Kelvin
kg	kilogram
kHz	kilohertz
km	kilometre
kN	kilonewton
kPa	kilopascal
kW	kilowatt
m	metre
MeV	million electron volt or mega electron volt
MHz	megahertz
milligal	10^{-5} m/s^2 (also called mGal, mgal or milligalileo)
mm	millimetre
mm Hg	mm of mercury
MPa	megapascal
mrad	milliradian
ms	millisecond
µm	micrometre
N	newton
Pa	pascal
ppm	parts per million
rads (Si)	radiation absorbed dose
RF	radio frequency
rms	root mean square

rpm	revolutions per minute
RV	Re-entry Vehicles
s	second
Tg	glass transition temperature
Tyler	Tyler mesh size, or Tyler standard sieve series
UAV	Unmanned Aerial Vehicle
UV	Ultra violet

TABLE OF CONVERSIONS

TABLE OF CONVERSIONS USED IN THIS ANNEX		
Unit (from)	Unit (to)	Conversion
bar	pascal (Pa)	1 bar = 100 kPa
g (gravity)	m/s^2	1 g = 9.806 65 m/s^2
mrad (millirad)	degrees (angle)	1 mrad ≈ 0.0573°
rads	ergs/gram of Si	1 rad (Si) = 100 ergs/gram of silicon (= 0.01 gray [Gy])
Tyler 250 mesh	mm	for a Tyler 250 mesh, mesh opening 0.063 mm

Statement of Understanding

Members agree that, in those cases where the term “national equivalents” are specifically allowed as alternatives to specified International Standards, the technical methods and parameters embodied in the national equivalent would ensure that the requirements of the standard set by the specified International Standards are met.

United Nations S/2016/308

Security Council

Distr.: General
4 April 2016

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Letter dated 4 April 2016 from the Chair of the Security Council Committee established pursuant to resolution 1718 (2006) addressed to the President of the Security Council

On behalf of the Committee established pursuant to resolution 1718 (2006), I have the honour to transmit herewith the report of the Committee dated 29 March 2016, submitted in accordance with paragraph 25 of resolution 2270 (2016) (see annex).

I would appreciate it if the present letter and its annex were brought to the attention of the members of the Security Council and issued as a document of the Council.

(*Signed*) Román **Oyarzun Marchesi**
Chair
Security Council Committee established
pursuant to resolution 1718 (2006)

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Annex

Report of the Security Council Committee established pursuant to resolution 1718 (2006) prepared in accordance with paragraph 25 of resolution 2270 (2016)

On 2 March 2016, the Security Council, by its resolution 2270 (2016), decided to adjust the measures imposed by paragraph 8 of resolution 1718 (2006) and resolution 2270 (2016) through the designation of additional goods, and directed the Committee to undertake its tasks to that effect and to report to the Council within 15 days of the adoption of resolution 2270 (2016).

In order to fulfil those tasks, the Committee considered a list of weapons of mass destruction-related items, materials, equipment, goods and technology to be identified and designated as sensitive goods.

All items, materials, equipment, goods and technology contained in the following list are only for the purpose of implementation of resolution 2270 (2016) and shall not be considered as setting precedents for international and multilateral mechanisms, regimes, instruments, principles and practices in the spheres of non-proliferation and export control.

On 29 March 2016, the Committee acted in line with the Security Council's directive and approved the following:

Items, materials, equipment, goods and technology

A. Nuclear- and/or missile-usable items

1. Ring magnets: permanent magnet materials having both of the following characteristics:

(a) Ring-shaped magnet with a relation between outer and inner diameter smaller or equal to 1.6:1;

(b) Made of any of the following magnetic materials: aluminium-nickel-cobalt, ferrites, samarium-cobalt or neodymium-iron-boron.

2. Maraging steel having both of the following characteristics:

(a) "Capable of" an ultimate tensile strength of 1,500 MPa or more at 293 K (20ºC);

(b) In bar or tube form, with an outer diameter of 75 mm or greater.

3. Magnetic alloy materials in sheet or thin strip form having both of the following characteristics:

(a) Thickness of 0.05 mm or less; or height of 25 mm or less;

(b) Made of any of the following magnetic alloy materials: iron-chromium-cobalt, iron-cobalt-vanadium, iron-chromium-cobalt-vanadium or iron-chromium.

4. Frequency changers (also known as converters or inverters) having all of the following characteristics, and specially designed software therefor:

(a) Multiphase frequency output;

(b) Capable of providing power of 40 W or greater;

(c) Capable of operating anywhere (at any one point or more) within the frequency range between 600 Hz and 2,000 Hz.

Technical notes:

1. Frequency changers are also known as converters or inverters.

2. The functionality specified above may be met by certain equipment described or marketed as electronic test equipment, AC power supplies, variable speed motor drives or variable frequency drives.

5. High-strength aluminium alloy having both of the following characteristics:

(a) "Capable of" an ultimate tensile of strength of 415 MPa or more at 293 K (20ºC);

(b) In bar or tube form, with an outer diameter of 75 mm or greater.

Technical note: The phrase "capable of" encompasses aluminium alloy before or after heat treatment.

6. Fibrous or filamentary materials and prepregs as follows:

(a) Carbon, aramid or glass "fibrous or filamentary materials" having both of the following characteristics:

(i) A "specific modulus" exceeding 3.18×10^6 m;

(ii) A "specific tensile strength" exceeding 76.2×10^3 m;

(b) Prepregs: thermoset resin-impregnated continuous "yarns", "rovings", "tows" or "tapes" with a width of 30 mm or less, made from carbon, aramid or glass "fibrous or filamentary materials" controlled in (a) above.

7. Filament winding machines and related equipment as follows:

(a) Filament winding machines having all of the following characteristics:

(i) Having motions for positioning, wrapping and winding fibres coordinated and programmed in two or more axes;

(ii) Specially designed to fabricate composite structures or laminates from "fibrous or filamentary materials";

(iii) Capable of winding cylindrical tubes of diameter of 75 mm or greater;

(b) Coordinating and programming controls for filament winding machines specified in (a) above;

(c) Mandrels for filament winding machines specified in (a) above.

8. Flow-forming machines as described in INFCIRC/254/Rev.9/Part 2 and S/2014/253

9. Laser welding equipment

10. 4- and 5-axis CNC machine tools

11. Plasma cutting equipment

12. Metal hydrides, such as zirconium hydride

B. Chemical/biological weapons-usable items

1. Additional chemicals suitable for the production of chemical warfare agents:

- Aluminium chloride (7446-70-0)
- Dichloromethane (75-09-2)
- N,N-Dimethylaniline (121-69-7)
- Isopropyl bromide (75-26-3)
- Isopropyl ether (108-20-3)
- Monoisopropylamine (75-31-0)
- Potassium bromide (7758-02-3)
- Pyridine (110-86-1)
- Sodium bromide (7647-15-6)
- Sodium metal (7440-23-5)
- Sulfur trioxide (7446-11-9)
- Tributylamine (102-82-9)
- Triethylamine (121-44-8)
- Trimethylamine (75-50-3)

2. Reaction vessels, reactors, agitators, heat exchangers, condensers, pumps, valves, storage tanks, containers, receivers, and distillation or absorption columns that meet performance parameters described in S/2006/853 and Corr.1

– Single-seal pumps with manufacturer's specified maximum flow rate greater than 0.6 m^3/h and casings (pump bodies), preformed casing liners, impellers, rotors or jet pump nozzles designed for such pumps, in which all surfaces that come into direct contact with the chemical(s) being processed are made from any of the following materials:

(a) Nickel or alloys with more than 40 per cent nickel by weight;

(b) Alloys with more than 25 per cent nickel and 20 per cent chromium by weight;

(c) Fluoropolymers (polymeric or elastomeric materials with more than 35 per cent fluorine by weight);

(d) Glass or glass-lined (including vitrified or enamelled coating);

(e) Graphite or carbon-graphite;

(f) Tantalum or tantalum alloys;

(g) Titanium or titanium alloys;

(h) Zirconium or zirconium alloys;

(i) Ceramics;

(j) Ferrosilicon (high silicon iron alloys); or

(k) Niobium (columbium) or niobium alloys.

3. Conventional or turbulent airflow clean-air rooms and self-contained fan-HEPA filter units that could be used for P3 or P4 (BSL 3, BSL 4, L3, L4) containment facilities.

Appendix-VII

United Nations Nations Unies

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REFERENCE: SCA/4/16 (12)

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The Chair of the Security Council Committee established pursuant to resolution 1718 (2006) presents his compliments to the Permanent Representatives and Observers to the United Nations and wishes to convey herewith United Nations press release SC/12636 of 17 December 2016, entitled "Security Council Committee Established Pursuant to Resolution 1718 (2006) Removes Names of Five Vessels from List of Economic Resources Controlled or Operated by Ocean Maritime Management".

18 December 2016

United Nations

Security Council

Press Release

Department of Public Information ◻ News and Media Division ◻ New York

SC/12636
17 December 2016

SECURITY COUNCIL COMMITTEE ESTABLISHED PURSUANT TO RESOLUTION 1718 (2006) REMOVES NAMES OF FIVE VESSELS FROM LIST OF ECONOMIC RESOURCES CONTROLLED OR OPERATED BY OCEAN MARITIME MANAGEMENT

On 17 December 2016, the Security Council Committee established pursuant to resolution 1718 (2006) decided that the following five vessels, specified in Annex III of resolution 2270 (2016) pursuant to paragraph 23 of the same resolution, are not economic resources controlled or operated by Ocean Maritime Management Company, Limited (OMM) and therefore not subject to the asset freeze imposed in paragraph 8 (d) of resolution 1718 (2006):

No. 4 *DAWNLIGHT* (IMO No. 9110236)
No. 5 *EVER BRIGHT 88* (J STAR, IMO No. 8914934)
No. 6 *GOLD STAR 3* (BENEVOLENCE 2, IMO No. 8405402)
No. 18 *ORION STAR* (RICHOCEAN, IMO No. 9333589)

No. 26 *SOUTH HILL 5* (IMO No. 9138680)

The Committee notes that new measures have been taken to establish confidence that these vessels are not operated or controlled by OMM. In light of these measures, the Committee has therefore decided to remove these vessels from the list of those operated or controlled by OMM. The Committee will continue to review available information and keep this list updated.

Schedule-I

United

Security Council

S/RES/2094

Distr.: General
7 March 2013

Resolution 1718 (2006)

Adopted by the Security Council at its 5551st meeting, on 14 October 2006

The Security Council,

Recalling its previous relevant resolutions, including resolution 825 (1993), resolution 1540 (2004) and, in particular, resolution 1695 (2006), as well as the statement of its President of 6 October 2006 (S/PRST/2006/41),

Reaffirming that proliferation of nuclear, chemical and biological weapons, as well as their means of delivery, constitutes a threat to international peace and security,

Expressing the gravest concern at the claim by the Democratic People's Republic of Korea (DPRK) that it has conducted a test of a nuclear weapon on 9 October 2006, and at the challenge such a test constitutes to the Treaty on the Non-Proliferation of Nuclear Weapons and to international efforts aimed at strengthening the global regime of non-proliferation of nuclear weapons, and the danger it poses to peace and stability in the region and beyond,

Expressing its firm conviction that the international regime on the non-proliferation of nuclear weapons should be maintained and recalling that the DPRK cannot have the status of a nuclear-weapon state in accordance with the Treaty on the Non-Proliferation of Nuclear Weapons,

Deploring the DPRK's announcement of withdrawal from the Treaty on the Non-Proliferation of Nuclear Weapons and its pursuit of nuclear weapons,

Deploring further that the DPRK has refused to return to the Six-Party talks without precondition,

Endorsing the Joint Statement issued on 19 September 2005 by China, the DPRK, Japan, the Republic of Korea, the Russian Federation and the United States,

Underlining the importance that the DPRK respond to other security and humanitarian concerns of the international community,

Expressing profound concern that the test claimed by the DPRK has generated increased tension in the region and beyond, and *determining* therefore that there is a clear threat to international peace and security, *Acting* under Chapter VII of the Charter of the United Nations, and taking measures under its Article 41,

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1. *Condemns* the nuclear test proclaimed by the DPRK on 9 October 2006 in flagrant disregard of its relevant resolutions, in particular resolution 1695 (2006), as well as of the statement of its President of 6 October 2006 (S/PRST/2006/41), including that such a test would bring universal condemnation of the international community and would represent a clear threat to international peace and security;

2. *Demands* that the DPRK not conduct any further nuclear test or launch of a ballistic missile;

3. *Demands* that the DPRK immediately retract its announcement of withdrawal from the Treaty on the Non-Proliferation of Nuclear Weapons;

4. *Demands* further that the DPRK return to the Treaty on the Non-Proliferation of Nuclear Weapons and International Atomic Energy Agency (IAEA) safeguards, and *underlines* the need for all States Parties to the Treaty on the Non-Proliferation of Nuclear Weapons to continue to comply with their Treaty obligations;

5. *Decides* that the DPRK shall suspend all activities related to its ballistic missile programme and in this context re-establish its pre-existing commitments to a moratorium on missile launching;

6. *Decides* that the DPRK shall abandon all nuclear weapons and existing nuclear programmes in a complete, verifiable and irreversible manner, shall act strictly in accordance with the obligations applicable to parties under the Treaty on the Non-Proliferation of Nuclear Weapons and the terms and conditions of its International Atomic Energy Agency (IAEA) Safeguards Agreement (IAEA INFCIRC/403) and shall provide the IAEA transparency measures extending beyond these requirements, including such access to individuals, documentation, equipments and facilities as may be required and deemed necessary by the IAEA;

7. *Decides* also that the DPRK shall abandon all other existing weapons of mass destruction and ballistic missile programme in a complete, verifiable and irreversible manner;

8. *Decides* that:

(a) All Member States shall prevent the direct or indirect supply, sale or transfer to the DPRK, through their territories or by their nationals, or using their flag vessels or aircraft, and whether or not originating in their territories, of:

(i) Any battle tanks, armoured combat vehicles, large calibre artillery systems, combat aircraft, attack helicopters, warships, missiles or missile systems as defined for the purpose of the United Nations Register on Conventional Arms, or related materiel including spare parts, or items as determined by the Security Council or the Committee established by paragraph 12 below (the Committee);

All items, materials, equipment, goods and technology as set out in the lists in documents S/2006/814 and S/2006/815, unless within 14 days of adoption of this resolution the Committee has amended or completed their provisions also taking into account the list in document S/2006/816, as well as other items, materials, equipment, goods and technology, determined by the Security Council or the Committee, which could contribute to DPRK's

nuclear-related, ballistic missile-related or other weapons of mass destruction-related programmes;

(iii) Luxury goods;

(b) The DPRK shall cease the export of all items covered in subparagraphs (a) (i) and (a) (ii) above and that all Member States shall prohibit the procurement of such items from the DPRK by their nationals, or using their flagged vessels or aircraft, and whether or not originating in the territory of the DPRK;

(c) All Member States shall prevent any transfers to the DPRK by their nationals or from their territories, or from the DPRK by its nationals or from its territory, of technical training, advice, services or assistance related to the provision, manufacture, maintenance or use of the items in subparagraphs (a) (i) and (a) (ii) above;

(d) All Member States shall, in accordance with their respective legal processes, freeze immediately the funds, other financial assets and economic resources which are on their territories at the date of the adoption of this resolution or at any time thereafter, that are owned or controlled, directly or indirectly, by the persons or entities designated by the Committee or by the Security Council as being engaged in or providing support for, including through other illicit means, DPRK's nuclear-related, other weapons of mass destruction-related and ballistic missile-related programmes, or by persons or entities acting on their behalf or at their direction, and ensure that any funds, financial assets or economic resources are prevented from being made available by their nationals or by any persons or entities within their territories, to or for the benefit of such persons or entities;

(e) All Member States shall take the necessary steps to prevent the entry into or transit through their territories of the persons designated by the Committee or by the Security Council as being responsible for, including through supporting or promoting, DPRK policies in relation to the DPRK's nuclear-related, ballistic missile-related and other weapons of mass destruction-related programmes, together with their family members, provided that nothing in this paragraph shall oblige a state to refuse its own nationals entry into its territory;

(f) In order to ensure compliance with the requirements of this paragraph, and thereby preventing illicit trafficking in nuclear, chemical or biological weapons, their means of delivery and related materials, all Member States are called upon to take, in accordance with their national authorities and legislation, and consistent with international law, cooperative action including through inspection of cargo to and from the DPRK, as necessary;

9. *Decides* that the provisions of paragraph 8 (d) above do not apply to financial or other assets or resources that have been determined by relevant States:

(a) To be necessary for basic expenses, including payment for foodstuffs, rent or mortgage, medicines and medical treatment, taxes, insurance premiums, and public utility charges, or exclusively for payment of reasonable professional fees and reimbursement of incurred expenses associated with the provision of legal services, or fees or service charges, in accordance with national laws, for routine holding or maintenance of frozen funds, other financial assets and economic resources, after notification by the relevant States to the Committee of the intention to authorize, where appropriate, access to such funds, other financial assets and economic resources and in the absence of a negative decision by the Committee within five working days of such notification;

(b) To be necessary for extraordinary expenses, provided that such determination has been notified by the relevant States to the Committee and has been approved by the Committee; or

(c) To be subject of a judicial, administrative or arbitral lien or judgement, in which case the funds, other financial assets and economic resources may be used to satisfy that lien or judgement provided that the lien or judgement was entered prior to the date of the present resolution, is not for the benefit of a person referred to in paragraph 8 (d) above or an individual or entity identified by the Security Council or the Committee, and has been notified by the relevant States to the Committee;

10. *Decides* that the measures imposed by paragraph 8 (e) above shall not apply where the Committee determines on a case-by-case basis that such travel is justified on the grounds of humanitarian need, including religious obligations, or where the Committee concludes that an exemption would otherwise further the objectives of the present resolution;

11. *Calls upon* all Member States to report to the Security Council within thirty days of the adoption of this resolution on the steps they have taken with a view to implementing effectively the provisions of paragraph 8 above;

12. *Decides* to establish, in accordance with rule 28 of its provisional rules of procedure, a Committee of the Security Council consisting of all the members of the Council, to undertake the following tasks:

(a) To seek from all States, in particular those producing or possessing the items, materials, equipment, goods and technology referred to in paragraph 8 (a) above, information regarding the actions taken by them to implement effectively the measures imposed by paragraph 8 above of this resolution and whatever further information it may consider useful in this regard;

(b) To examine and take appropriate action on information regarding alleged violations of measures imposed by paragraph 8 of this resolution;

(c) To consider and decide upon requests for exemptions set out in paragraphs 9 and 10 above;

(d) To determine additional items, materials, equipment, goods and technology to be specified for the purpose of paragraphs 8 (a) (i) and 8 (a) (ii) above;

(e) To designate additional individuals and entities subject to the measures imposed by paragraphs 8 (d) and 8 (e) above;

(f) To promulgate guidelines as may be necessary to facilitate the implementation of the measures imposed by this resolution;

(g) To report at least every 90 days to the Security Council on its work, with its observations and recommendations, in particular on ways to strengthen the effectiveness of the measures imposed by paragraph 8 above;

13 *Welcomes and encourages further* the efforts by all States concerned to intensify their diplomatic efforts, to refrain from any actions that might aggravate tension and to facilitate the early resumption of the Six-Party Talks, with a view to the expeditious implementation of the Joint Statement issued on 19 September 2005 by China, the DPRK, Japan, the Republic of Korea, the Russian Federation and the United States, to achieve the verifiable denuclearization of the Korean Peninsula and to maintain peace and stability on the Korean Peninsula and in north-east Asia;

14. *Calls upon* the DPRK to return immediately to the Six-Party Talks without precondition and to work towards the expeditious implementation of the Joint Statement issued on 19 September 2005 by China, the DPRK, Japan, the Republic of Korea, the Russian Federation and the United States;

15. *Affirms* that it shall keep DPRK's actions under continuous review and that it shall be prepared to review the appropriateness of the measures contained in paragraph 8 above, including the strengthening, modification, suspension or lifting of the measures, as may be needed at that time in light of the DPRK's compliance with the provisions of the resolution;

16. *Underlines* that further decisions will be required, should additional measures be necessary;

17. *Decides* to remain actively seized of the matter.

Schedule-II

United Nations S/RES/1874

Security Council

Distr.: General
12 June 2009

Resolution 1874 (2009)

Adopted by the Security Council at its 6141st meeting, on 12 June 2009

The Security Council,

Recalling its previous relevant resolutions, including resolution 825 (1993), resolution 1540 (2004), resolution 1695 (2006), and, in particular, resolution 1718 (2006), as well as the statements of its President of 6 October 2006 (S/PRST/2006/41) and 13 April 2009 (S/PRST/2009/7),

Reaffirming that proliferation of nuclear, chemical and biological weapons, as well as their means of delivery, constitutes a threat to international peace and security,

Expressing the gravest concern at the nuclear test conducted by the Democratic People's Republic of Korea ("the DPRK") on 25 May 2009 (local time) in violation of resolution 1718 (2006), and at the challenge such a test constitutes to the Treaty on Non-Proliferation of Nuclear Weapons ("the NPT") and to international efforts aimed at strengthening the global regime of non -proliferation of nuclear weapons towards the 2010 NPT Review Conference, and the danger it poses to peace and stability in the region and beyond,

Stressing its collective support for the NPT and commitment to strengthen the Treaty in all its aspects, and global efforts towards nuclear non-proliferation and nuclear disarmament, and *recalling* that the DPRK cannot have the status of a nuclear-weapon state in accordance with the NPT in any case,

Deploring the DPRK's announcement of withdrawal from the NPT and its pursuit of nuclear weapons,

Underlining once again the importance that the DPRK respond to other security and humanitarian concerns of the international community,

Underlining also that measures imposed by this resolution are not intended to have adverse humanitarian consequences for the civilian population of the DPRK,

Expressing its gravest concern that the nuclear test and missile activities carried out by the DPRK have further generated increased tension in the region and beyond, and *determining* that there continues to exist a clear threat to international peace and security,

Reaffirming the importance that all Member States uphold the purposes and principles of the Charter of the United Nations,

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Acting under Chapter VII of the Charter of the United Nations, and taking measures under its Article 41,

1. *Condemns* in the strongest terms the nuclear test conducted by the DPRK on 25 May 2009 (local time) in violation and flagrant disregard of its relevant resolutions, in particular resolutions 1695 (2006) and 1718 (2006), and the statement of its President of 13 April 2009 (S/PRST/2009/7);

2. *Demands* that the DPRK not conduct any further nuclear test or any launch using ballistic missile technology;

3. *Decides* that the DPRK shall suspend all activities related to its ballistic missile programme and in this context re-establish its pre-existing commitments to a moratorium on missile launches;

4. *Demands* that the DPRK immediately comply fully with its obligations under relevant Security Council resolutions, in particular resolution 1718 (2006);

5. *Demands* that the DPRK immediately retract its announcement of withdrawal from the NPT;

6. *Demands* further that the DPRK return at an early date to the NPT and International Atomic Energy Agency (IAEA) safeguards, bearing in mind the rights and obligations of States Parties to the NPT, and *underlines* the need for all States Parties to the NPT to continue to comply with their Treaty obligations;

7. *Calls upon* all Member States to implement their obligations pursuant to resolution 1718 (2006), including with respect to designations made by the Committee established pursuant to resolution 1718 (2006) ("the Committee") pursuant to the statement of its President of 13 April 2009 (S/PRST/2009/7);

8. *Decides* that the DPRK shall abandon all nuclear weapons and existing nuclear programs in a complete, verifiable and irreversible manner and immediately cease all related activities, shall act strictly in accordance with the obligations applicable to parties under the NPT and the terms and conditions of the IAEA Safeguards Agreement (IAEA INFCIRC/403) and shall provide the IAEA transparency measures extending beyond these requirements, including such access to individuals, documentation, equipment and facilities as may be required and deemed necessary by the IAEA;

9. *Decides* that the measures in paragraph 8 (b) of resolution 1718 (2006) shall also apply to all arms and related materiel, as well as to financial transactions, technical training, advice, services or assistance related to the provision, manufacture, maintenance or use of such arms or materiel;

10. *Decides* that the measures in paragraph 8 (a) of resolution 1718 (2006) shall also apply to all arms and related materiel, as well as to financial transactions, technical training, advice, services or assistance related to the provision, manufacture, maintenance or use of such arms, except for small arms and light weapons and their related materiel, and *calls upon* States to exercise vigilance over the direct or indirect supply, sale or transfer to the DPRK of small arms or light weapons, and further *decides* that States shall notify the Committee at least five days prior to selling, supplying or transferring small arms or light weapons to the DPRK;

11. *Calls upon* all States to inspect, in accordance with their national authorities and legislation, and consistent with international law, all cargo to and from the DPRK, in their territory, including seaports and airports, if the State concerned has information that provides reasonable grounds to believe the cargo contains items the supply, sale, transfer, or export of which is prohibited by paragraph 8 (a), 8 (b), or 8 (c) of resolution 1718 or by paragraph 9 or 10 of this resolution, for the purpose of ensuring strict implementation of those provisions;

12. *Calls upon* all Member States to inspect vessels, with the consent of the flag State, on the high seas, if they have information that provides reasonable grounds to believe that the cargo of such vessels contains items the supply, sale, transfer, or export of which is prohibited by paragraph 8 (a), 8 (b), or 8 (c) of resolution 1718 (2006) or by paragraph 9 or 10 of this resolution, for the purpose of ensuring strict implementation of those provisions;

13. *Calls upon* all States to cooperate with inspections pursuant to paragraphs 11 and 12, and, if the flag State does not consent to inspection on the high seas, *decides* that the flag State shall direct the vessel to proceed to an appropriate and convenient port for the required inspection by the local authorities pursuant to paragraph 11;

14. *Decides* to authorize all Member States to, and that all Member States shall, seize and dispose of items the supply, sale, transfer, or export of which is prohibited by paragraph 8 (a), 8 (b), or 8 (c) of resolution 1718 or by paragraph 9 or 10 of this resolution that are identified in inspections pursuant to paragraph 11, 12, or 13 in a manner that is not inconsistent with their obligations under applicable Security Council resolutions, including resolution 1540 (2004), as well as any obligations of parties to the NPT, the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction of 29 April 1997, and the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction of 10 April 1972, and *decides* further that all States shall cooperate in such efforts;

15. *Requires* any Member State, when it undertakes an inspection pursuant to paragraph 11, 12, or 13, or seizes and disposes of cargo pursuant to paragraph 14, to submit promptly reports containing relevant details to the Committee on the inspection, seizure and disposal;

16. *Requires* any Member State, when it does not receive the cooperation of a flag State pursuant to paragraph 12 or 13 to submit promptly to the Committee a report containing relevant details;

17. *Decides* that Member States shall prohibit the provision by their nationals or from their territory of bunkering services, such as provision of fuel or supplies, or other servicing of vessels, to DPRK vessels if they have information that provides reasonable grounds to believe they are carrying items the supply, sale, transfer, or export of which is prohibited by paragraph 8 (a), 8 (b), or 8 (c) of resolution 1718 (2006) or by paragraph 9 or 10 of this resolution, unless provision of such services is necessary for humanitarian purposes or until such time as the cargo has been inspected, and seized and disposed of if necessary, and *underlines* that this paragraph is not intended to affect legal economic activities;

18. *Calls upon* Member States, in addition to implementing their obligations pursuant to paragraphs 8 (d) and (e) of resolution 1718 (2006), to prevent the provision of financial services or the transfer to, through, or from their territory, or to or by their nationals or entities organized under their laws (including branches abroad), or persons or financial institutions in their territory, of any financial or other assets or resources that could contribute to the DPRK's nuclear-related, ballistic missile-related, or other weapons of mass destruction-related programs or activities, including by freezing any financial or other assets or resources on their territories or that hereafter come within their territories, or that are subject to their jurisdiction or that hereafter become subject to their jurisdiction, that are associated with such programs or activities and applying enhanced monitoring to prevent all such transactions in accordance with their national authorities and legislation;

19. *Calls upon* all Member States and international financial and credit institutions not to enter into new commitments for grants, financial assistance, or concessional loans to the DPRK, except for humanitarian and developmental purposes directly addressing the needs of the civilian population, or the promotion of denuclearization, and also *calls upon* States to exercise enhanced vigilance with a view to reducing current commitments;

20. *Calls upon* all Member States not to provide public financial support for trade with the DPRK (including the granting of export credits, guarantees or insurance to their nationals or entities involved in such trade) where such financial support could contribute to the DPRK's nuclear-related or ballistic missile-related or other WMD-related programs or activities;

21. *Emphasizes* that all Member States should comply with the provisions of paragraphs 8 (a) (iii) and 8 (d) of resolution 1718 (2006) without prejudice to the activities of the diplomatic missions in the DPRK pursuant to the Vienna Convention on Diplomatic Relations;

22. *Calls upon* all Member States to report to the Security Council within forty-five days of the adoption of this resolution and thereafter upon request by the Committee on concrete measures they have taken in order to implement effectively the provisions of paragraph 8 of resolution 1718 (2006) as well as paragraphs 9 and 10 of this resolution, as well as financial measures set out in paragraphs 18, 19 and 20 of this resolution;

23. *Decides* that the measures set out at paragraphs 8 (a), 8 (b) and 8 (c) of resolution 1718 (2006) shall also apply to the items listed in INFCIRC/254/Rev.9/Part 1a and INFCIRC/254/Rev.7/Part 2a;

24. *Decides* to adjust the measures imposed by paragraph 8 of resolution 1718 (2006) and this resolution, including through the designation of entities, goods, and individuals, and directs the Committee to undertake its tasks to this effect and to report to the Security Council within thirty days of adoption of this resolution, and further *decides* that, if the Committee has not acted, then the Security Council will complete action to adjust the measures within seven days of receiving that report;

25. *Decides* that the Committee shall intensify its efforts to promote the full implementation of resolution 1718 (2006), the statement of its President of 13 April 2009 (S/PRST/2009/7) and this resolution, through a work programme covering compliance, investigations, outreach, dialogue, assistance and cooperation, to be

submitted to the Council by 15 July 2009, and that it shall also receive and consider reports from Member States pursuant to paragraphs 10, 15, 16 and 22 of this resolution;

26. *Requests* the Secretary-General to create for an initial period of one year, in consultation with the Committee, a group of up to seven experts ("Panel of Experts"), acting under the direction of the Committee to carry out the following tasks: (a) assist the Committee in carrying out its mandate as specified in resolution 1718 (2006) and the functions specified in paragraph 25 of this resolution;
(b) gather, examine and analyze information from States, relevant United Nations bodies and other interested parties regarding the implementation of the measures imposed in resolution 1718 (2006) and in this resolution, in particular incidents of non-compliance; (c) make recommendations on actions the Council, or the Committee or Member States, may consider to improve implementation of the measures imposed in resolution 1718 (2006) and in this resolution; and (d) provide an interim report on its work to the Council no later than 90 days after adoption of this resolution, and a final report to the Council no later than 30 days prior to termination of its mandate with its findings and recommendations;

27. *Urges* all States, relevant United Nations bodies and other interested parties, to cooperate fully with the Committee and the Panel of Experts, in particular by supplying any information at their disposal on the implementation of the measures imposed by resolution 1718 (2006) and this resolution;

28. *Calls upon* all Member States to exercise vigilance and prevent specialized teaching or training of DPRK nationals within their territories or by their nationals, of disciplines which could contribute to the DPRK's proliferation sensitive nuclear activities and the development of nuclear weapon delivery systems;

29. *Calls upon* the DPRK to join the Comprehensive Nuclear-Test-Ban Treaty at the earliest date;

30. *Supports* peaceful dialogue, *calls upon* the DPRK to return immediately to the Six Party Talks without precondition, and *urges* all the participants to intensify their efforts on the full and expeditious implementation of the Joint Statement issued on 19 September 2005 and the joint documents of 13 February 2007 and 3 October 2007, by China, the DPRK, Japan, the Republic of Korea, the Russian Federation and the United States, with a view to achieving the verifiable denuclearization of the Korean Peninsula and to maintain peace and stability on the Korean Peninsula and in north-east Asia;

31. *Expresses* its commitment to a peaceful, diplomatic and political solution to the situation and welcomes efforts by Council members as well as other Member States to facilitate a peaceful and comprehensive solution through dialogue and to refrain from any actions that might aggravate tensions;

32. *Affirms* that it shall keep the DPRK's actions under continuous review and that it shall be prepared to review the appropriateness of the measures contained in paragraph 8 of resolution 1718 (2006) and relevant paragraphs of this resolution, including the strengthening, modification, suspension or lifting of the measures, as may be needed at that time in light of the DPRK's compliance with relevant provisions of resolution 1718 (2006) and this resolution;

33. *Underlines* that further decisions will be required, should additional measures be necessary;

34. *Decides* to remain actively seized of the matter.

United Nations S/RES/2087 (2013)

Security Council

Distr.: General
22 January 2013

Resolution 2087 (2013)

Adopted by the Security Council at its 6904th meeting, on 22 January 2013

The Security Council,

Recalling its previous relevant resolutions, including resolution 825 (1993), resolution 1540 (2004), resolution 1695 (2006), resolution 1718 (2006), resolution 1874 (2009), resolution 1887 (2009), as well as the statements of its President of 6 October 2006 (S/PRST/2006/41), 13 April 2009 (S/PRST/2009/7) and 16 April 2012 (S/PRST/2012/13),

Recognizing the freedom of all States to explore and use outer space in accordance with international law, including restrictions imposed by relevant Security Council resolutions,

1. *Condemns* the DPRK's launch of 12 December 2012, which used ballistic missile technology and was in violation of resolutions 1718 (2006) and 1874 (2009);

2. *Demands* that the DPRK not proceed with any further launches using ballistic missile technology, and comply with resolutions 1718 (2006) and 1874 (2009) by suspending all activities related to its ballistic missile program and in this context re-establish its pre-existing commitments to a moratorium on missile launches;

3. *Demands* that the DPRK immediately comply fully with its obligations under resolutions 1718 (2006) and 1874 (2009), including that it: abandon all nuclear weapons and existing nuclear programs in a complete, verifiable and irreversible manner; immediately cease all related activities; and not conduct any further launches that use ballistic missile technology, nuclear test or any further provocation;

4. *Reaffirms* its current sanctions measures contained in resolutions 1718 (2006) and 1874 (2009);

5. *Recalls* the measures imposed by paragraph 8 of resolution 1718 (2006), as modified by resolution 1874 (2009), and *determines* that:

(a) The measures specified in paragraph 8 (d) of resolution 1718 (2006) shall apply to the individuals and entities listed in Annex I and II, and the measures specified in paragraph 8 (e) of resolution 1718 (2006) shall apply to the individuals listed in Annex I; and,

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(b) The measures imposed in paragraph 8 (a), 8 (b) and 8 (c) of resolution 1718 (2006) shall apply to the items in INFCIRC/254/Rev.11/Part 1 and INFCIRC/254/Rev.8/Part 2 and S/2012/947;

6. *Recalls* paragraph 18 of resolution 1874 (2009), and *calls upon* Member States to exercise enhanced vigilance in this regard, including monitoring the activities of their nationals, persons in their territories, financial institutions, and other entities organized under their laws (including branches abroad) with or on behalf of financial institutions in the DPRK, or of those that act on behalf or at the direction of DPRK financial institutions, including their branches, representatives, agents and subsidiaries abroad;

7. *Directs* the Committee established pursuant to resolution 1718 (2006) to issue an Implementation Assistance Notice regarding situations where a vessel has refused to allow an inspection after such an inspection has been authorized by the vessel's Flag State or if any DPRK-flagged vessel has refused to be inspected pursuant to paragraph 12 of resolution 1874 (2009);

8. *Recalls* paragraph 14 of resolution 1874 (2009), *recalls* further that States may seize and dispose of items consistent with the provisions of resolutions 1718 (2006), 1874 (2009) and this resolution, and further *clarifies* that methods for States to dispose include, but are not limited to, destruction, rendering inoperable, storage or transferring to another State other than the originating or destination States for disposal;

9. *Clarifies* that the measures imposed in resolutions 1718 (2006) and 1874 (2009) prohibit the transfer of any items if a State relevant to a transaction has information that provides reasonable grounds to believe that a designated individual or entity is the originator, intended recipient or facilitator of the item's transfer;

10. *Calls upon* Member States which have not yet done so to report on the measures they have taken to implement the provisions of resolutions 1718 (2006) and 1874 (2009), *encourages* other Member States to submit, if any, additional information on implementing the provisions of resolutions 1718 (2006) and 1874 (2009);

11. *Encourages* international agencies to take necessary steps to ensure that all their activities with respect to the DPRK are consistent with the provisions of resolutions 1718 (2006) and 1874 (2009), and further *encourages* relevant agencies to engage with the Committee regarding their activities with respect to the DPRK that may relate to provisions of these resolutions;

12. *Deplores* the violations of the measures imposed in resolution 1718 (2006) and 1874 (2009), including the use of bulk cash to evade sanctions, *underscores* its concern over the supply, sale or transfer to or from the DPRK or through States' territories of any item that could contribute to activities prohibited by resolutions 1718 (2006) or 1874 (2009) and the importance of appropriate action by States in this regard, *calls on* States to exercise vigilance and restraint regarding the entry into or transit through their territories of individuals working on behalf or at the direction of a designated individual or entity, *directs* the Committee to review reported violations and take action as appropriate, including through designating entities and individuals that have assisted the evasion of sanctions or in violating the provisions of resolutions 1718 (2006) and 1874 (2009);

13. *Emphasizes* the importance of all States, including the DPRK, taking the necessary measures to ensure that no claim shall lie at the instance of the DPRK, or of any person or entity in the DPRK, or of persons or entities designated pursuant to resolutions 1718 (2006) and 1874 (2009), or any person claiming through or for the benefit of any such person or entity, in connection with any contract or other transaction where its performance was prevented by reason of the measures imposed by resolutions 1718 (2006) and 1874 (2009);

14. *Reaffirms* its desire for a peaceful, diplomatic and political solution to the situation, welcomes efforts by Council members as well as other States to facilitate a peaceful and comprehensive solution through dialogue, and *underlines* the need to refrain from any action that might aggravate tensions;

15. *Reaffirms* its support to the Six Party Talks, *calls* for their resumption, *urges* all the participants to intensify their efforts on the full and expeditious implementation of the 19 September 2005 Joint Statement issued by China, the DPRK, Japan, the Republic of Korea, the Russian Federation and the United States, with a view to achieving the verifiable denuclearization of the Korean Peninsula in a peaceful manner and to maintaining peace and stability on the Korean Peninsula and in northeast Asia;

16. *Calls upon* all Member States to implement fully their obligations pursuant to resolutions 1718 (2006) and 1874 (2009);

17. *Re-emphasizes* that all Member States should comply with the provisions of paragraphs 8 (a) (iii) and 8 (d) of resolution 1718 (2006) without prejudice to the activities of the diplomatic missions in the DPRK pursuant to the Vienna Convention on Diplomatic Relations;

18. *Underlines* that measures imposed by resolutions 1718 (2006) and 1874 (2009) are not intended to have adverse humanitarian consequences for the civilian population of the DPRK;

19. *Affirms* that it shall keep the DPRK's actions under continuous review and is prepared to strengthen, modify, suspend or lift the measures as may be needed in light of the DPRK's compliance, and, in this regard, *expresses its determination* to take significant action in the event of a further DPRK launch or nuclear test;

20. *Decides* to remain actively seized of the matter.

Annex I

Travel Ban/Asset Freeze

1. PAEK CHANG-HO

   a. *Description*: senior official and head of the satellite control center of Korean Committee for Space Technology.

   b. *AKA*: Pak Chang-Ho; Paek Ch'ang-Ho

   c. *Identifiers*: Passport: 381420754; Passport Date of Issue: 7 December 2011; Passport Date of Expiration: 7 December 2016; D.O.B. 18 June 1964; P.O.B. Kaesong, DPRK

2. CHANG MYONG-CHIN

   a. *Description*: General Manager of the Sohae Satellite Launching Station and head of launch center at which the 13 April and 12 December 2012 launches took place.

   b. *AKA*: Jang Myong-Jin

   c. *Identifiers*: D.O.B. 1966; Alt. D.O.B. 1965

3. RA KY'ONG-SU

   a. *Description*: Ra Ky'ong-Su is a Tanchon Commercial Bank (TCB) official. In this capacity he has facilitated transactions for TCB. Tanchon was designated by the Committee in April 2009 as the main DPRK financial entity responsible for sales of conventional arms, ballistic missiles, and goods related to the assembly and manufacture of such weapons.

4. KIM KWANG-IL

   a. *Description*: Kim Kwang-il is a Tanchon Commercial Bank (TCB) official. In this capacity, he has facilitated transactions for TCB and the Korea Mining Development Trading Corporation (KOMID). Tanchon was designated by the Committee in April 2009 as the main DPRK financial entity responsible for sales of conventional arms, ballistic missiles, and goods related to the assembly and manufacture of such weapons. KOMID was designated by the Committee in April 2009 and is the DPRK's primary arms dealer and main exporter of goods and equipment related to ballistic missiles and conventional weapons.

Annex II

Asset Freeze

1. KOREAN COMMITTEE FOR SPACE TECHNOLOGY

   a. *Description*: The Korean Committee for Space Technology (KCST) orchestrated the DPRK's launches on 13 April 2012 and 12 December 2012 via the satellite control center and Sohae launch area.

   b. *AKA*: DPRK Committee for Space Technology; Department of Space Technology of the DPRK; Committee for Space Technology; KCST

   c. *Location*: Pyongyang, DPRK

2. BANK OF EAST LAND

   a. *Description*: DPRK financial institution Bank of East Land facilitates weapons-related transactions for, and other support to, arms manufacturer and exporter Green Pine Associated Corporation (Green Pine). Bank of East Land has actively worked with Green Pine to transfer funds in a manner that circumvents sanctions. In 2007 and 2008, Bank of East Land facilitated transactions involving Green Pine and Iranian financial institutions, including Bank Melli and Bank Sepah. The Security Council designated Bank Sepah in resolution 1747 (2007) for providing support to Iran's ballistic missile program. Green Pine was designated by the Committee in April 2012.

   b. *AKA*: Dongbang BANK; TONGBANG U'NHAENG; TONGBANG BANK

   c. *Location*: P.O. Box 32, BEL Building, Jonseung-Dung, Moranbong District, Pyongyang, DPRK

3. KOREA KUMRYONG TRADING CORPORATION

   a. *Description*: Used as an alias by the Korea Mining Development Trading Corporation (KOMID) to carry out procurement activities. KOMID was designated by the Committee in April 2009 and is the DPRK's primary arms dealer and main exporter of goods and equipment related to ballistic missiles and conventional weapons.

4. TOSONG TECHNOLOGY TRADING CORPORATION

   a. *Description*: The Korea Mining Development Corporation (KOMID) is the parent company of Tosong Technology Trading Corporation. KOMID was designated by the Committee in April 2009 and is the DPRK's primary arms dealer and main exporter of goods and equipment related to ballistic missiles and conventional weapons.

   b. *Location*: Pyongyang, DPRK

5. KOREA RYONHA MACHINERY JOINT VENTURE CORPORATION

   a. *Description*: Korea Ryonbong General Corporation is the parent company of Korea Ryonha Machinery Joint Venture Corporation. Korea Ryonbong General Corporation was designated by the Committee in April 2009 and is a defence conglomerate specializing in acquisition for

DPRK defence industries and support to that country's military-related sales.

b. *AKA*: CHOSUN YUNHA MACHINERY JOINT OPERATION COMPANY; KOREA RYENHA MACHINERY J/V CORPORATION; RYONHA MACHINERY JOINT VENTURE CORPORATION

c. *Location*: Central District, Pyongyang, DPRK; Mangungdae-gu, Pyongyang, DPRK; Mangyongdae District, Pyongyang, DPRK

6. LEADER (HONG KONG) INTERNATIONAL

a. *Description*: Facilitates shipments on behalf of the Korea Mining Development Trading Corporation (KOMID). KOMID was designated by the Committee in April 2009 and is the DPRK's primary arms dealer and main exporter of goods and equipment related to ballistic missiles and conventional weapons.

b. *AKA*: Leader International Trading Limited

c. *Location*: Room 1610 Nan Fung Tower, 173 Des Voeux Road, Hong Kong

Schedule-IV

United Nations S/RES/2094 (2013)

Security Council

Distr.: General
7 March 2013

Resolution 2094 (2013)

Adopted by the Security Council at its 6932nd meeting, on 7 March 2013

The Security Council,

Recalling its previous relevant resolutions, including resolution 825 (1993), resolution 1540 (2004), resolution 1695 (2006), resolution 1718 (2006), resolution 1874 (2009), resolution 1887 (2009) and resolution 2087 (2013), as well as the statements of its President of 6 October 2006 (S/PRST/2006/41), 13 April 2009 (S/PRST/2009/7) and 16 April 2012 (S/PRST/2012/13),

Reaffirming that proliferation of nuclear, chemical and biological weapons, as well as their means of delivery, constitutes a threat to international peace and security,

Underlining once again the importance that the DPRK respond to other security and humanitarian concerns of the international community,

Expressing the gravest concern at the nuclear test conducted by the Democratic People's Republic of Korea ("the DPRK") on 12 February 2013 (local time) in violation of resolutions 1718 (2006), 1874 (2009) and resolution 2087 (2013), and at the challenge such a test constitutes to the Treaty on Non-Proliferation of Nuclear Weapons ("the NPT") and to international efforts aimed at strengthening the global regime of non-proliferation of nuclear weapons, and the danger it poses to peace and stability in the region and beyond,

Concerned that the DPRK is abusing the privileges and immunities accorded under the Vienna Convention on Diplomatic and Consular Relations,

Welcoming the Financial Action Task Force's (FATF) new Recommendation 7 on targeted financial sanctions related to proliferation, and *urging* Member States to apply FATF's Interpretative Note to Recommendation 7 and related guidance papers for effective implementation of targeted financial sanctions related to proliferation,

Expressing its gravest concern that the DPRK's ongoing nuclear and ballistic missile-related activities have further generated increased tension in the region and beyond, and *determining* that there continues to exist a clear threat to international peace and security,

Acting under Chapter VII of the Charter of the United Nations, and taking measures under its Article 41,

Please recycle

1. *Condemns* in the strongest terms the nuclear test conducted by the DPRK on 12 February 2013 (local time) in violation and flagrant disregard of the Council's relevant resolutions;

2. *Decides* that the DPRK shall not conduct any further launches that use ballistic missile technology, nuclear tests or any other provocation;

3. *Demands* that the DPRK immediately retract its announcement of withdrawal from the NPT;

4. *Demands further* that the DPRK return at an early date to the NPT and International Atomic Energy Agency (IAEA) safeguards, bearing in mind the rights and obligations of States parties to the NPT, and underlines the need for all States parties to the NPT to continue to comply with their Treaty obligations;

5. *Condemns* all the DPRK's ongoing nuclear activities, including its uranium enrichment, *notes* that all such activities are in violation of resolutions 1718 (2006), 1874 (2009) and 2087 (2013), *reaffirms* its decision that the DPRK shall abandon all nuclear weapons and existing nuclear programmes, in a complete, verifiable and irreversible manner and immediately cease all related activities and shall act strictly in accordance with the obligations applicable to parties under the NPT and the terms and conditions of the IAEA Safeguards Agreement (IAEA INFCIRC/403);

6. *Reaffirms* its decision that the DPRK shall abandon all other existing weapons of mass destruction and ballistic missile programmes in a complete, verifiable and irreversible manner;

7. *Reaffirms* that the measures imposed in paragraph 8 (c) of resolution 1718 (2006) apply to items prohibited by paragraphs 8 (a) (i), 8 (a) (ii) of resolution 1718 (2006) and paragraphs 9 and 10 of resolution 1874 (2009), *decides* that the measures imposed in paragraph 8 (c) of resolution 1718 (2006) also apply to paragraphs 20 and 22 of this resolution, and *notes* that these measures apply also to brokering or other intermediary services, including when arranging for the provision, maintenance or use of prohibited items in other States or the supply, sale or transfer to or exports from other States;

8. *Decides further* that measures specified in paragraph 8 (d) of resolution 1718 (2006) shall apply also to the individuals and entities listed in annexes I and II of this resolution and to any individuals or entities acting on their behalf or at their direction, and to entities owned or controlled by them, including through illicit means, and *decides further* that the measures specified in paragraph 8 (d) of resolution 1718 (2006) shall apply to any individuals or entities acting on the behalf or at the direction of the individuals and entities that have already been designated, to entities owned or controlled by them, including through illicit means;

9. *Decides* that the measures specified in paragraph 8 (e) of resolution 1718 (2006) shall also apply to the individuals listed in annex I of this resolution and to individuals acting on their behalf or at their direction;

10. *Decides* that the measures specified in paragraph 8 (e) of resolution 1718 (2006) and the exemptions set forth in paragraph 10 of resolution 1718 (2006) shall also apply to any individual whom a State determines is working on behalf or at the direction of a designated individual or entity or individuals assisting the evasion of sanctions or violating the provisions of resolutions 1718 (2006), 1874 (2009), 2087 (2013), and this

and further *decides* that, if such an individual is a DPRK national, then States shall expel the individual from their territories for the purpose of repatriation to the DPRK consistent with applicable national and international law, unless the presence of an individual is required for fulfilment of a judicial process or exclusively for medical, safety or other humanitarian purposes, provided that nothing in this paragraph shall impede the transit of representatives of the Government of the DPRK to the United Nations Headquarters to conduct United Nations business;

11. *Decides* that Member States shall, in addition to implementing their obligations pursuant to paragraphs 8 (d) and (e) of resolution 1718 (2006), prevent the provision of financial services or the transfer to, through, or from their territory, or to or by their nationals or entities organized under their laws (including branches abroad), or persons or financial institutions in their territory, of any financial or other assets or resources, including bulk cash, that could contribute to the DPRK's nuclear or ballistic missile programmes, or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution, or to the evasion of measures imposed by resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution, including by freezing any financial or other assets or resources on their territories or that hereafter come within their territories, or that are subject to their jurisdiction or that hereafter become subject to their jurisdiction, that are associated with such programmes or activities and applying enhanced monitoring to prevent all such transactions in accordance with their national authorities and legislation;

12. *Calls upon* States to take appropriate measures to prohibit in their territories the opening of new branches, subsidiaries, or representative offices of DPRK banks, and also *calls upon* States to prohibit DPRK banks from establishing new joint ventures and from taking an ownership interest in or establishing or maintaining correspondent relationships with banks in their jurisdiction to prevent the provision of financial services if they have information that provides reasonable grounds to believe that these activities could contribute to the DPRK's nuclear or ballistic missile programmes, or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), and this resolution, or to the evasion of measures imposed by resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution;

13. *Calls upon* States to take appropriate measures to prohibit financial institutions within their territories or under their jurisdiction from opening representative offices or subsidiaries or banking accounts in the DPRK if they have information that provides reasonable grounds to believe that such financial services could contribute to the DPRK's nuclear or ballistic missile programmes, and other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), and this resolution;

14. *Expresses* concern that transfers to the DPRK of bulk cash may be used to evade the measures imposed in resolutions 1718 (2006), 1874 (2009), 2087 (2013), and this resolution, and *clarifies* that all States shall apply the measures set forth in paragraph 11 of this resolution to the transfers of cash, including through cash couriers, transiting to and from the DPRK so as to ensure such transfers of bulk cash do not contribute to the DPRK's nuclear or ballistic missile programmes, or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution, or to the evasion of measures imposed by resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution;

15. *Decides* that all Member States shall not provide public financial support for trade with the DPRK (including the granting of export credits, guarantees or insurance to their nationals or entities involved in such trade) where such financial support could contribute to the DPRK's nuclear or ballistic missile programmes, or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution, or to the evasion of measures imposed by resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution;

16. *Decides* that all States shall inspect all cargo within or transiting through their territory that has originated in the DPRK, or that is destined for the DPRK, or has been brokered or facilitated by the DPRK or its nationals, or by individuals or entities acting on their behalf, if the State concerned has credible information that provides reasonable grounds to believe the cargo contains items the supply, sale, transfer, or export of which is prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution, for the purpose of ensuring strict implementation of those provisions;

17. *Decides* that, if any vessel has refused to allow an inspection after such an inspection has been authorized by the vessel's flag State, or if any DPRK-flagged vessel has refused to be inspected pursuant to paragraph 12 of resolution 1874 (2009), all States shall deny such a vessel entry to their ports, unless entry is required for the purpose of an inspection, in the case of emergency or in the case of return to its port of origination, and *decides* further that any State that has been refused by a vessel to allow an inspection shall promptly report the incident to the Committee;

18. *Calls upon* States to deny permission to any aircraft to take off from, land in or overfly their territory, if they have information that provides reasonable grounds to believe that the aircraft contains items the supply, sale, transfer or export of which is prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution, except in the case of an emergency landing;

19. *Requests* all States to communicate to the Committee any information available on transfers of DPRK aircraft or vessels to other companies that may have been undertaken in order to evade the sanctions or in violating the provisions of resolution 1718 (2006), 1874 (2009), 2087 (2013), or this resolution, including renaming or re-registering of aircraft, vessels or ships, and *requests* the Committee to make that information widely available;

20. *Decides* that the measures imposed in paragraphs 8 (a) and 8 (b) of resolution 1718 (2006) shall also apply to the items, materials, equipment, goods and technology listed in annex III of this resolution;

21. *Directs* the Committee to review and update the items contained in the lists specified in paragraph 5 (b) of resolution 2087 (2013) no later than twelve months from the adoption of this resolution and on an annual basis thereafter, and *decides* that, if the Committee has not acted to update this information by then, the Security Council will complete action to update within an additional thirty days;

Calls upon and allows all States to prevent the direct or indirect supply, sale or transfer to or from the DPRK or its nationals, through their territories or by their nationals, or using their flag vessels or aircraft, and whether or not originating in their territories of any item if the State determines that such item could contribute to the DPRK's nuclear or ballistic missile programmes, activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution, or to the evasion of measures imposed by

resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution, and *directs* the Committee to issue an Implementation Assistance Notice regarding the proper implementation of this provision;

23. *Reaffirms* the measures imposed in paragraph 8 (a) (iii) of resolution 1718 (2006) regarding luxury goods, and *clarifies* that the term "luxury goods" includes, but is not limited to, the items specified in annex IV of this resolution;

24. *Calls upon* States to exercise enhanced vigilance over DPRK diplomatic personnel so as to prevent such individuals from contributing to the DPRK's nuclear or ballistic missile programmes, or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), and this resolution, or to the evasion of measures imposed by resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution;

25. *Calls upon* all States to report to the Security Council within ninety days of the adoption of this resolution, and thereafter upon request by the Committee, on concrete measures they have taken in order to implement effectively the provisions of this resolution, and *requests* the Panel of Experts established pursuant to resolution 1874 (2009), in cooperation with other UN sanctions monitoring groups, to continue its efforts to assist States in preparing and submitting such reports in a timely manner;

26. *Calls upon* all States to supply information at their disposal regarding non-compliance with the measures imposed in resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution;

27. *Directs* the Committee to respond effectively to violations of the measures decided in resolutions 1718 (2006), 1874 (2009), 2087 (2013), and this resolution, *directs* the Committee to designate additional individuals and entities to be subject to the measures imposed in resolutions 1718 (2006), 1874 (2009), 2087 (2013), and this resolution, and *decides* that the Committee may designate any individuals for measures under paragraphs 8 (d) and 8 (e) of resolution 1718 (2006) and entities for measures under paragraph 8 (d) of resolution 1718 (2006) that have contributed to the DPRK's nuclear or ballistic missile programmes, or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution, or to the evasion of measures imposed by resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution;

28. *Decides* that the mandate of the Committee, as set out in paragraph 12 of resolution 1718 (2006), shall apply with respect to the measures imposed in resolution 1874 (2009) and this resolution;

29. *Recalls* the creation, pursuant to paragraph 26 of resolution 1874 (2009), of a Panel of Experts, under the direction of the Committee, to carry out the tasks provided for by that paragraph, *decides* to extend until 7 April 2014 the Panel's mandate, as renewed by resolution 2050 (2012), *decides further* that this mandate shall apply with respect to the measures imposed in this resolution, *expresses its intent* to review the mandate and take appropriate action regarding further extension no later than twelve months from the adoption of this resolution, *requests* the Secretary-General to create a group of up to eight experts and to take the necessary administrative measures to this effect, and *requests* the Committee, in consultation with the Panel, to adjust the Panel's schedule of reporting;

30. *Emphasizes* the importance of all States, including the DPRK, taking the necessary measures to ensure that no claim shall lie at the instance of the DPRK, or of any person or entity in the DPRK, or of persons or entities designated for measures set forth in resolutions 1718 (2006), 1874 (2009), 2087 (2013), or this resolution, or any person claiming through or for the benefit of any such person or entity, in connection with any contract or other transaction where its performance was prevented by reason of the measures imposed by this resolution or previous resolutions;

31. *Underlines* that measures imposed by resolutions 1718 (2006), 1874 (2009), 2087 (2013) and this resolution are not intended to have adverse humanitarian consequences for the civilian population of the DPRK;

32. *Emphasizes* that all Member States should comply with the provisions of paragraphs 8 (a) (iii) and 8 (d) of resolution 1718 (2006) without prejudice to the activities of diplomatic missions in the DPRK pursuant to the Vienna Convention on Diplomatic Relations;

33. *Expresses* its commitment to a peaceful, diplomatic and political solution to the situation and welcomes efforts by Council members as well as other States to facilitate a peaceful and comprehensive solution through dialogue and to refrain from any actions that might aggravate tensions;

34. *Reaffirms* its support to the Six-Party Talks, *calls for* their resumption, *urges* all the participants to intensify their efforts on the full and expeditious implementation of the 19 September 2005 Joint Statement issued by China, the DPRK, Japan, the Republic of Korea, the Russian Federation and the United States, with a view to achieving the verifiable denuclearization of the Korean Peninsula in a peaceful manner and to maintaining peace and stability on the Korean Peninsula and in north-east Asia;

35. *Reiterates* the importance of maintaining peace and stability on the Korean Peninsula and in north-east Asia at large;

36. *Affirms* that it shall keep the DPRK's actions under continuous review and is prepared to strengthen, modify, suspend or lift the measures as may be needed in light of the DPRK's compliance, and, in this regard, *expresses its determination* to take further significant measures in the event of a further DPRK launch or nuclear test;

37. *Decides* to remain seized of the matter.

Annex I

Travel ban/asset freeze

1. YO'N CHO'NG NAM

   (a) Description: Chief Representative for the Korea Mining Development Trading Corporation (KOMID). The KOMID was designated by the Committee in April 2009 and is the DPRK's primary arms dealer and main exporter of goods and equipment related to ballistic missiles and conventional weapons.

2. KO CH'O'L-CHAE

   (a) Description: Deputy Chief Representative for the Korea Mining Development Trading Corporation (KOMID). The KOMID was designated by the Committee in April 2009 and is the DPRK's primary arms dealer and main exporter of goods and equipment related to ballistic missiles and conventional weapons.

3. MUN CHO'NG-CH'O'L

   (a) Description: Mun Cho'ng-Ch'o'l is a TCB official. In this capacity he has facilitated transactions for TCB. Tanchon was designated by the Committee in April 2009 and is the main DPRK financial entity for sales of conventional arms, ballistic missiles, and goods related to the assembly and manufacture of such weapons.

Annex II

Asset freeze

1. SECOND ACADEMY OF NATURAL SCIENCES

   (a) Description: The Second Academy of Natural Sciences is a national-level organization responsible for research and development of the DPRK's advanced weapons systems, including missiles and probably nuclear weapons. The Second Academy of Natural Sciences uses a number of subordinate organizations to obtain technology, equipment, and information from overseas, including Tangun Trading Corporation, for use in the DPRK's missile and probably nuclear weapons programmes. Tangun Trading Corporation was designated by the Committee in July 2009 and is primarily responsible for the procurement of commodities and technologies to support DPRK's defence research and development programmes, including, but not limited to, weapons of mass destruction and delivery system programmes and procurement, including materials that are controlled or prohibited under relevant multilateral control regimes.

   (b) AKA: 2ND ACADEMY OF NATURAL SCIENCES; CHE 2 CHAYON KWAHAKWON; ACADEMY OF NATURAL SCIENCES; CHAYON KWAHAK-WON; NATIONAL DEFENSE ACADEMY; KUKPANG KWAHAK-WON; SECOND ACADEMY OF NATURAL SCIENCES RESEARCH INSTITUTE; SANSRI

   (c) Location: Pyongyang, DPRK

2. KOREA COMPLEX EQUIPMENT IMPORT CORPORATION

   (a) Description: Korea Ryonbong General Corporation is the parent company of Korea Complex Equipment Import Corporation. Korea Ryonbong General Corporation was designated by the Committee in April 2009 and is a defence conglomerate specializing in acquisition for DPRK defence industries and support to that country's military-related sales.

   (b) Location: Rakwon-dong, Pothonggang District, Pyongyang, DPRK

Annex III

Items, materials, equipment, goods and technology

Nuclear items

1. Perfluorinated Lubricants

   • They can be used for lubricating vacuum pump and compressor bearings. They have a low vapour pressure, are resistant to uranium hexafluoride (UF6), the gaseous uranium compound used in the gas centrifuge process, and are used for pumping fluorine.

2. UF6 Corrosion Resistant Bellow-sealed Valves

   • They can be used in uranium enrichment facilities (such as gas centrifuge and gaseous diffusion plants), in facilities that produce uranium hexafluoride (UF6), the gaseous uranium compound used in the gas centrifuge process, in fuel fabrication facilities and in facilities handling tritium.

Missile items

1. Special corrosion resistant steels — limited to steels resistant to Inhibited Red Fuming Nitric Acid (IRFNA) or nitric acid, such as nitrogen stabilized duplex stainless steel (N-DSS).
2. Ultra high-temperature ceramic composite materials in solid form (i.e. blocks, cylinders, tubes or ingots) in any of the following form factors:
   (a) Cylinders having a diameter of 120 mm or greater and a length of 50 mm or greater;
   (b) Tubes having an inner diameter of 65 mm or greater and a wall thickness of 25 mm or greater and a length of 50 mm or greater; or
   (c) Blocks having a size of 120 mm x 120 mm x 50 mm or greater.
3. Pyrotechnically Actuated Valves.
4. Measurement and control equipment usable for wind tunnels (balance, thermal stream measurement, flow control).
5. Sodium Perchlorate.

Chemical weapons list

1. Vacuum pumps with a manufacturer's specified maximum flow-rate greater than 1 m3/h (under standard temperature and pressure conditions), casings (pump bodies), preformed casing-liners, impellers, rotors, and jet pump nozzles designed for such pumps, in which all surfaces that come into direct contact with the chemicals being processed are made from controlled materials.

Annex IV

Luxury goods

1. Jewelry:
   (a) Jewelry with pearls;
   (b) Gems;
   (c) Precious and semi-precious stones (including diamonds, sapphires, rubies, and emeralds);
   (d) Jewelry of precious metal or of metal clad with precious metal.
2. Transportation items, as follows:
   (a) Yachts;
   (b) Luxury automobiles (and motor vehicles): automobiles and other motor vehicles to transport people (other than public transport), including station wagons;
   (c) Racing cars.

United Nations S/RES/2270 (2016)

Security Council

Distr.: General
2 March 2016

Resolution 2270 (2016)

Adopted by the Security Council at its 7638th meeting, on 2 March 2016

The Security Council,

Recalling its previous relevant resolutions, including resolution 825 (1993), resolution 1540 (2004), resolution 1695 (2006), resolution 1718 (2006), resolution 1874 (2009), resolution 1887 (2009), resolution 2087 (2013) and resolution 2094 (2013), as well as the statements of its President of 6 October 2006 (S/PRST/2006/41), 13 April 2009 (S/PRST/2009/7) and 16 April 2012 (S/PRST/2012/13),

Reaffirming that proliferation of nuclear, chemical and biological weapons, as well as their means of delivery, constitutes a threat to international peace and security,

Expressing gravest concern at the nuclear test conducted by the Democratic People's Republic of Korea ("the DPRK") on 6 January 2016 in violation of resolutions 1718 (2006), 1874 (2009), 2087 (2013) and 2094 (2013), and at the challenge such a test constitutes to the Treaty on Non-Proliferation of Nuclear Weapons ("the NPT") and to international efforts aimed at strengthening the global regime of non-proliferation of nuclear weapons, and the danger it poses to peace and stability in the region and beyond,

Underlining once again the importance that the DPRK respond to other security and humanitarian concerns of the international community,

Underlining also that measures imposed by this resolution are not intended to have adverse humanitarian consequences for the civilian population DPRK,

Regretting the DPRK's diversion of financial, technical and industrial resources toward developing its nuclear weapons and ballistic missile program, and condemning its declared intent to develop nuclear weapons,

Expressing deep concern at the grave hardship that the DPRK people are subjected to,

Expressing great concern that the DPRK's arms sales have generated revenues that are diverted to the pursuit of nuclear weapons and ballistic missiles while DPRK citizens have great unmet needs,

Expressing serious concern that the DPRK has continued to violate relevant Security Council resolutions through repeated launches of ballistic missiles in 2014 and 2015, as well as the submarine-launched ballistic missile ejection test in 2015 and *noting* that all such ballistic missile activities contribute to the DPRK's development of nuclear weapons delivery systems and increase tension in the region and beyond,

Expressing continued concern that the DPRK is abusing the privileges and immunities accorded under the Vienna Conventions on Diplomatic and Consular Relations,

Expressing its gravest concern that the DPRK's ongoing nuclear-, and ballistic missile-related activities have further generated increased tension in the region and beyond, and *determining* that there continues to exist a clear threat to international peace and security,

Acting under Chapter VII of the Charter of the United Nations, and taking measures under its Article 41,

1. *Condemns* in the strongest terms the nuclear test conducted by the DPRK on 6 January 2016 in violation and flagrant disregard of the Council's relevant resolutions, and further *condemns* the DPRK's launch of 7 February 2016, which used ballistic missile technology and was in serious violation of resolutions 1718 (2006), 1874 (2009), 2087 (2013), and 2094 (2013);

2. *Reaffirms* its decisions that the DPRK shall not conduct any further launches that use ballistic missile technology, nuclear tests, or any other provocation, and shall suspend all activities related to its ballistic missile program and in this context re-establish its pre-existing commitments to a moratorium on missile launches, and *demands* that the DPRK immediately comply fully with these obligations;

3. *Reaffirms* its decisions that the DPRK shall abandon all nuclear weapons and existing nuclear programs in a complete, verifiable and irreversible manner, and immediately cease all related activities;

4. *Reaffirms* its decision that the DPRK shall abandon all other existing weapons of mass destruction and ballistic missile programs in a complete, verifiable and irreversible manner;

5. *Reaffirms* that, pursuant to paragraph 8 (c) of resolution 1718 (2006), all Member States shall prevent any transfers to the DPRK by their nationals or from their territories, or from the DPRK by its nationals or from its territory, of technical training, advice, services or assistance related to the provision, manufacture, maintenance or use of nuclear-related, ballistic missile-related or other weapons of mass destruction-related items, materials, equipment, goods and technology, and *underscores* that this provision prohibits the DPRK from engaging in any form of technical cooperation with other Member States on launches using ballistic missile technology, even if characterized as a satellite launch or space launch vehicle;

6. *Decides* that the measures in paragraph 8 (a) of resolution 1718 (2006) shall also apply to all arms and related materiel, including small arms and light weapons and their related materiel, as well as to financial transactions, technical training, advice, services or assistance related to the provision, manufacture, maintenance or use of such arms and related materiel;

7. *Affirms* that the obligations imposed in paragraphs 8 (a), 8 (b) and 8 (c) of resolution 1718 (2006), as extended by paragraphs 9 and 10 of resolution 1874 (2009), apply with respect to the shipment of items to or from the DPRK for repair, servicing, refurbishing, testing, reverse-engineering, and marketing, regardless of whether ownership or control is transferred, and *underscores* that the measures specified in paragraph 8 (e) of resolution 1718 (2006) shall also apply to any individual traveling for the purposes of carrying out the activities described in this paragraph;

8. *Decides* that the measures imposed in paragraphs 8 (a) and 8 (b) of resolution 1718 (2006) shall also apply to any item, except food or medicine, if the State determines that such item could directly contribute to the development of the DPRK's operational capabilities of its armed forces, or to exports that support or enhance the operational capabilities of armed forces of another Member State outside the DPRK, and *decides* also that this provision shall cease to apply to the supply, sale or transfer of an item, or its procurement, if:

(a) the State determines that such activity is exclusively for humanitarian purposes or exclusively for livelihood purposes which will not be used by DPRK individuals or entities to generate revenue, and also not related to any activity prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution, provided that the State notifies the Committee in advance of such determination and also informs the Committee of measures taken to prevent the diversion of the item for such other purposes, or

(b) the Committee has determined on a case-by-case basis that a particular supply, sale or transfer would not be contrary to the objectives of resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution;

9. *Recalls* that paragraph 9 of resolution 1874 (2009) requires States to prohibit the procurement from the DPRK of technical training, advice, services or assistance related to the provision, manufacture, maintenance or use of arms and related materiel, and *clarifies* that this paragraph prohibits States from engaging in the hosting of trainers, advisors, or other officials for the purpose of military-, paramilitary- or police-related training;

10. *Decides* that the measures specified in paragraph 8 (d) of resolution 1718 (2006) shall apply also to the individuals and entities listed in Annex I and II of this resolution and to any individuals or entities acting on their behalf or at their direction, and to entities owned or controlled by them, including through illicit means;

11. *Decides* that the measures specified in paragraph 8 (e) of resolution 1718 (2006) shall apply also to the individuals listed in Annex I of this resolution and to individuals acting on their behalf or at their direction;

12. *Affirms* that "economic resources," as referred to in paragraph 8 (d) of resolution 1718 (2006), includes assets of every kind, whether tangible or intangible, movable or immovable, actual or potential, which potentially may be used to obtain funds, goods, or services, such as vessels (including maritime vessels);

13. *Decides* that if a Member State determines that a DPRK diplomat, governmental representative, or other DPRK national acting in a governmental

capacity, is working on behalf or at the direction of a designated individual or entity, or of an individual or entities assisting in the evasion of sanctions or violating the provisions of resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution, then the Member State shall expel the individual from its territory for the purpose of repatriation to the DPRK consistent with applicable national and international law, provided that nothing in this paragraph shall impede the transit of representatives of the Government of the DPRK to the United Nations Headquarters or other UN facilities to conduct United Nations business, and *decides* that the provisions of this paragraph shall not apply with respect to a particular individual if: a) the presence of the individual is required for fulfillment of a judicial process, b) the presence of the individual is required exclusively for medical, safety or other humanitarian purposes, or c) the Committee has determined on a case-by-case basis that the expulsion of the individual would be contrary to the objectives of resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) and this resolution;

14. *Decides* that, if a Member State determines that an individual who is not a national of that State is working on behalf of or at the direction of a designated individual or entity or assisting the evasion of sanctions or violating the provisions of resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution, then Member States shall expel the individual from their territories for the purpose of repatriation to the individual's state of nationality, consistent with applicable national and international law, unless the presence of the individual is required for fulfillment of a judicial process or exclusively for medical, safety or other humanitarian purposes, or the Committee has determined on a case-by-case basis that the expulsion of the individual would be contrary to the objectives of resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution, provided that nothing in this paragraph shall impede the transit of representatives of the Government of the DPRK to the United Nations Headquarters or other UN facilities to conduct United Nations business;

15. *Underscores* that, as a consequence of implementing the obligations imposed in paragraph 8 (d) of resolution 1718 (2006) and paragraphs 8 and 11 of resolution 2094 (2013), all Member States shall close the representative offices of designated entities and prohibit such entities, as well as individuals or entities acting for or on their behalf, directly or indirectly, from participating in joint ventures or any other business arrangements, and *underscores* that if a representative of such an office is a DPRK national, then States are required to expel the individual from their territories for the purpose of repatriation to the DPRK consistent with applicable national and international law, pursuant to and consistent with paragraph 10 of resolution 2094 (2013);

16. *Notes* that the DPRK frequently uses front companies, shell companies, joint ventures and complex, opaque ownership structures for the purpose of violating measures imposed in relevant Security Council resolutions, and, in this regard, *directs* the Committee, with the support of the Panel, to identify individuals and entities engaging in such practices and, if appropriate, designate them to be subject to the measures imposed in resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) and this resolution;

17. *Decides* that all Member States shall prevent specialized teaching or training of DPRK nationals within their territories or by their nationals of disciplines which could contribute to the DPRK's proliferation sensitive nuclear

activities or the development of nuclear weapon delivery systems, including teaching or training in advanced physics, advanced computer simulation and related computer sciences, geospatial navigation, nuclear engineering, aerospace engineering, aeronautical engineering and related disciplines;

18. *Decides* that all States shall inspect the cargo within or transiting through their territory, including in their airports, seaports and free trade zones, that has originated in the DPRK, or that is destined for the DPRK, or has been brokered or facilitated by the DPRK or its nationals, or by individuals or entities acting on their behalf or at their direction, or entities owned or controlled by them, or by designated individuals or entities, or that is being transported on DPRK flagged aircraft or maritime vessels, for the purposes of ensuring that no items are transferred in violation of resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) and this resolution, and calls upon States to implement such inspections in a manner that minimizes the impact on the transfer of cargo that the State determines is for humanitarian purposes;

19. *Decides* that Member States shall prohibit their nationals and those in their territories from leasing or chartering their flagged vessels or aircraft or providing crew services to the DPRK, and *decides* that this prohibition shall also apply with respect to any designated individuals or entities, any other DPRK entities, any other individuals or entities whom the State determines to have assisted in the evasion of sanctions or in violating the provisions of resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution, any individuals or entities acting on behalf or at the direction of any of the aforementioned, and any entities owned or controlled by any of the aforementioned, *calls upon* Member States to de register any vessel that is owned, operated or crewed by the DPRK, further *calls upon* Member States not to register any such vessel that is de-registered by another Member State pursuant to this paragraph, and *decides* that this provision shall not apply with respect to such leasing, chartering or provision of crew services notified to the Committee in advance on a case-by-case basis accompanied by: a) information demonstrating that such activities are exclusively for livelihood purposes which will not be used by DPRK individuals or entities to generate revenue, and b) information on measures taken to prevent such activities from contributing to violations of the aforementioned resolutions;

20. *Decides* that all States shall prohibit their nationals, persons subject to their jurisdiction and entities incorporated in their territory or subject to their jurisdiction from registering vessels in the DPRK, obtaining authorization for a vessel to use the DPRK flag, and from owning, leasing, operating, providing any vessel classification, certification or associated service, or insuring any vessel flagged by the DPRK, and *decides* that this measure shall not apply to activities notified in advance by the Committee on a case-by-case basis, following provision to the Committee of detailed information on the activities, including the names of individuals and entities involved in them, information demonstrating that such activities are exclusively for livelihood purposes which will not be used by DPRK individuals or entities to generate revenue and on measures taken to prevent such activities from contributing to violations of resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution;

21. *Decides* that all States shall deny permission to any aircraft to take off from, land in or overfly, unless under the condition of landing for inspection, their

territory, if they have information that provides reasonable grounds to believe that the aircraft contains items the supply, sale, transfer or export of which is prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution, except in the case of an emergency landing, and *calls upon* all States, when considering whether to grant overflight permission to flights to assess known risk factors;

22. *Decides* that all Member States shall prohibit the entry into their ports of any vessel if the Member State has information that provides reasonable grounds to believe the vessel is owned or controlled, directly or indirectly, by a designated individual or entity, or contains cargo the supply, sale, transfer or export of which is prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution, unless entry is required in the case of emergency or in the case of return to its port of origination, or for inspection, or unless the Committee determines in advance that such entry is required for humanitarian purposes or any other purposes consistent with the objectives of this resolution;

23. *Recalls* that the Committee has designated the DPRK firm Ocean Maritime Management (OMM), *notes* that the vessels specified in Annex III of this resolution are economic resources controlled or operated by OMM and therefore subject to the asset freeze imposed in paragraph 8 (d) of resolution 1718 (2006), and *underscores* that Member States are required to implement the relevant provisions of that resolution;

24. *Decides* that the DPRK shall abandon all chemical and biological weapons and weapons-related programs, and shall act strictly in accordance with its obligations as a State Party to the Convention on the Prohibition of the Development, Production, or Stockpiling of Bacteriological (Biological) and Toxin Weapons and Their Destruction, and *calls upon* the DPRK to accede to the Convention of the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and Their Destruction, and then to immediately comply with its provisions;

25. *Decides* to adjust the measures imposed by paragraph 8 of resolution 1718 (2006) and this resolution through the designation of additional goods, *directs* the Committee to undertake its tasks to this effect and to report to the Security Council within fifteen days of adoption of this resolution, and further *decides* that, if the Committee has not acted, then the Security Council will complete action to adjust the measures within seven days of receiving that report;

26. *Directs* the Committee to review and update the items contained in S/2006/853/CORR.1 no later than sixty days from the adoption of this resolution and on an annual basis thereafter;

27. *Decides* that the measures imposed in paragraphs 8 (a) and 8 (b) of resolution 1718 (2006) shall also apply to any item if the State determines that such item could contribute to the DPRK's nuclear or ballistic missile programs or other weapons of mass destruction programs, activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), and this resolution, or to the evasion of measures imposed by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), and this resolution;

28. *Reaffirms* paragraphs 14 through 16 of resolution 1874 (2009), and paragraph 8 of resolution 2087 (2013), and *decides* that these paragraphs shall apply

also with respect to any items the supply, sale or transfer of which is prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution identified in inspections conducted pursuant to paragraph 18 of this resolution;

29. *Decides* that the DPRK shall not supply, sell or transfer, directly or indirectly, from its territory or by its nationals or using its flag vessels or aircraft, coal, iron, and iron ore, and that all States shall prohibit the procurement of such material from the DPRK by their nationals, or using their flag vessels or aircraft, and whether or not originating in the territory of the DPRK, and *decides* that this provision shall not apply with respect to:

(a) Coal that the procuring State confirms on the basis of credible information has originated outside the DPRK and was transported through the DPRK solely for export from the Port of Rajin (Rason), provided that the State notifies the Committee in advance and such transactions are unrelated to generating revenue for the DPRK's nuclear or ballistic missile programs or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution; and,

(b) Transactions that are determined to be exclusively for livelihood purposes and unrelated to generating revenue for the DPRK's nuclear or ballistic missile programs or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution;

30. *Decides* that the DPRK shall not supply, sell or transfer, directly or indirectly, from its territory or by its nationals or using its flag vessels or aircraft, gold, titanium ore, vanadium ore, and rare earth minerals, and that all States shall prohibit the procurement of such material from the DPRK by their nationals, or using their flag vessels or aircraft, and whether or not originating in the territory of the DPRK;

31. *Decides* that all States shall prevent the sale or supply, by their nationals or from their territories or using their flag vessels or aircraft, of aviation fuel, including aviation gasoline, naptha-type jet fuel, kerosene-type jet fuel, and kerosene-type rocket fuel, whether or not originating in their territory, to the territory of the DPRK, or unless the Committee has approved in advance on an exceptional case-by-case basis the transfer to the DPRK of such products for verified essential humanitarian needs, subject to specified arrangements for effective monitoring of delivery and use, and *decides* also that this provision shall not apply with respect to the sale or supply of aviation fuel to civilian passenger aircraft outside the DPRK exclusively for consumption during its flight to the DPRK and its return flight;

32. *Decides* that the asset freeze imposed by paragraph 8 (d) of resolution 1718 (2006) shall apply to all the funds, other financial assets and economic resources outside of the DPRK that are owned or controlled, directly or indirectly, by entities of the Government of the DPRK or the Worker's Party of Korea, or by individuals or entities acting on their behalf or at their direction, or by entities owned or controlled by them, that the State determines are associated with the DPRK's nuclear or ballistic missile programs or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution, *decides* further that all States except the DPRK shall ensure that any funds, financial assets or economic resources are prevented from being made available by their

nationals or by any individuals or entities within their territories, to or for the benefit of such individuals or entities, or individuals or entities acting on their behalf or at their direction, or entities owned or controlled by them, and *decides* that these measures shall not apply with respect to funds, other financial assets and economic resources that are required to carry out activities of the DPRK's missions to the United Nations and its specialized agencies and related organizations or other diplomatic and consular missions of the DPRK, and to any funds, other financial assets and economic resources that the Committee determines in advance on a case-by-case basis are required for the delivery of humanitarian assistance, denuclearization or any other purpose consistent with the objectives of this resolution;

33. *Decides* that States shall prohibit in their territories the opening and operation of new branches, subsidiaries, and representative offices of DPRK banks, *decides* further that States shall prohibit financial institutions within their territories or subject to their jurisdiction from establishing new joint ventures and from taking an ownership interest in or establishing or maintaining correspondent relationships with DPRK banks, unless such transactions have been approved by the Committee in advance, and *decides* that States shall take the necessary measures to close such existing branches, subsidiaries and representative offices, and also to terminate such joint ventures, ownership interests and correspondent banking relationships with DPRK banks within ninety days from the adoption of this resolution;

34. *Decides* that States shall prohibit financial institutions within their territories or subject to their jurisdiction from opening new representative offices or subsidiaries, branches or banking accounts in the DPRK;

35. *Decides* that States shall take the necessary measures to close existing representative offices, subsidiaries or banking accounts in the DPRK within ninety days, if the State concerned has credible information that provides reasonable grounds to believe that such financial services could contribute to the DPRK's nuclear or ballistic missile programs, or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution, and *decides* further that this provision shall not apply if the Committee determines on a case-by-case basis that such offices, subsidiaries or accounts are required for the delivery of humanitarian assistance or the activities of diplomatic missions in the DPRK pursuant to the Vienna Convention on Diplomatic Relations or the activities of the United Nations or its specialized agencies or related organizations, or for any other purposes consistent with resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution;

36. *Decides* that all States shall prohibit public and private financial support from within their territories or by persons or entities subject to their jurisdiction for trade with the DPRK (including the granting of export credits, guarantees or insurance to their nationals or entities involved in such trade) where such financial support could contribute to the DPRK's nuclear or ballistic missile programs or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution, including paragraph 8;

37. *Expresses* concern that transfers to the DPRK of gold may be used to evade the measures imposed in resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) and this resolution, and *clarifies* that all States shall apply the measures set forth in paragraph 11 of resolution 2094 (2013) to the transfers of gold,

including through gold couriers, transiting to and from the DPRK so as to ensure such transfers of gold do not contribute to the DPRK's nuclear or ballistic missile programs, or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution, or to the evasion of measures imposed by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution;

38. *Recalls* that the Financial Action Task Force (FATF) has called upon countries to apply enhanced due diligence and effective countermeasure to protect their jurisdictions from the DPRK's illicit financial activity, and *calls upon* Member States to apply the FATF Recommendation 7, its Interpretive Note, and related guidance to effectively implement targeted financial sanctions related to proliferation;

39. *Reaffirms* the measures imposed in paragraph 8 (a) (iii) of resolution 1718 (2006) regarding luxury goods, and *clarifies* that the term "luxury goods" includes, but is not limited to, the items specified in Annex V of this resolution;

40. *Calls upon* all States to report to the Security Council within ninety days of the adoption of this resolution, and thereafter upon request by the Committee, on concrete measures they have taken in order to implement effectively the provisions of this resolution, *requests* the Panel of Experts established pursuant to resolution 1874 (2009), in cooperation with other UN sanctions monitoring groups, to continue its efforts to assist States in preparing and submitting such reports in a timely manner, and *directs* the Committee to prioritize outreach to those Member States who have never submitted implementation reports as requested by the Security Council;

41. *Calls upon* all States to supply information at their disposal regarding non-compliance with the measures imposed in resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution;

42. *Encourages* all States to examine the circumstances of previously reported sanctions violations, particularly the items seized or activities prevented pursuant to the relevant resolutions, so as to assist in ensuring full and appropriate implementation of these resolutions, especially paragraph 27 of this resolution, and *notes* in this regard the reporting of the Panel of Experts and the information regarding sanctions violations that the Committee has released publicly;

43. *Directs* the Committee to respond effectively to violations of the measures decided in resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), and this resolution, and, in this regard, *directs* the Committee to designate additional individuals and entities to be subject to the measures imposed in resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), and this resolution;

44. *Directs* the Committee to continue its efforts to assist Member States in implementing the measures imposed on the DPRK, and, in this regard, *requests* the Committee to draft and circulate a comprehensive compilation of all the measures imposed in resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), and this resolution so as to facilitate Member State implementation;

45. *Directs* the Committee to update the information contained on the Committee's list of individuals and entities, including new aliases and front

companies, and *directs* the Committee to complete this task within 45 days of the adoption of this resolution and every twelve months thereafter;

46. *Decides* that the mandate of the Committee, as set out in paragraph 12 of resolution 1718 (2006), shall apply with respect to the measures imposed in resolution 1874 (2009), 2094 (2013) and this resolution;

47. *Emphasizes* the importance of all States, including the DPRK, taking the necessary measures to ensure that no claim shall lie at the instance of the DPRK, or of any person or entity in the DPRK, or of persons or entities designated for measures set forth in resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution, or any person claiming through or for the benefit of any such person or entity, in connection with any contract or other transaction where its performance was prevented by reason of the measures imposed by this resolution or previous resolutions;

48. *Underlines* that measures imposed by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) and this resolution are not intended to have adverse humanitarian consequences for the civilian population of the DPRK or to affect negatively those activities, including economic activities and cooperation, that are not prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution, and the work of international organizations and non-governmental organization carrying out assistance and relief activities in the DPRK for the benefit of the civilian population of the DPRK;

49. *Reiterates* the importance of maintaining peace and stability on the Korean Peninsula and in north-east Asia at large, and *expresses* its commitment to a peaceful, diplomatic and political solution to the situation and welcomes efforts by Council members as well as other States to facilitate a peaceful and comprehensive solution through dialogue and to refrain from any actions that might aggravate tensions;

50. *Reaffirms* its support to the Six Party Talks, *calls* for their resumption, and *reiterates* its support for the commitments set forth in the Joint Statement of 19 September 2005 issued by China, the DPRK, Japan, the Republic of Korea, the Russian Federation, and the United States, including that the goal of the Six-Party Talks is the verifiable denuclearization of the Korean Peninsula in a peaceful manner, that the United States and the DPRK undertook to respect each other's sovereignty and exist peacefully together, and that the Six Parties undertook to promote economic cooperation, and all other relevant commitments;

51. *Affirms* that it shall keep the DPRK's actions under continuous review and is prepared to strengthen, modify, suspend or lift the measures as may be needed in light of the DPRK's compliance, and, in this regard, *expresses its determination* to take further significant measures in the event of a further DPRK nuclear test or launch;

52. *Decides* to remain seized of the matter.

Annex I

Travel Ban/Asset Freeze (Individuals)

1. CHOE CHUN-SIK
   a. *Description*: Choe Chun-sik was the director of the Second Academy of Natural Sciences (SANS) and was the head of the DPRK's long-range missile program.
   b. *AKA*: Choe Chun Sik; Ch'oe Ch'un Sik
   c. *Identifiers*: DOB: 12 October 1954; Nationality: DPRK

2. CHOE SONG IL
   a. *Description*: Tanchon Commercial Bank Representative in Vietnam
   b. *AKA*: NA
   c. *Identifiers*: Passport: 472320665; Passport Date of Expiration: 26 Sep 2017; Passport: 563120356; Nationality: DPRK

3. HYON KWANG IL
   a. *Description*: Hyon Kwang Il is the Department Director for Scientific Development at the National Aerospace Development Administration.
   b. *AKA*: Hyon Gwang Il
   c. *Identifiers*: DOB: 27 May 1961; Nationality: DPRK

4. JANG BOM SU
   a. *Description*: Tanchon Commercial Bank Representative in Syria
   b. *AKA*: Jang Pom Su
   c. *Identifiers*: DOB: 15 April 1957; Nationality: DPRK

5. JANG YONG SON
   a. *Description*: Korea Mining Development Trading Corporation (KOMID) Representative in Iran
   b. *AKA*: NA
   c. *Identifiers*: DOB: 20 February 1957; Nationality: DPRK

6. JON MYONG GUK
   a. *Description*: Tanchon Commercial Bank Representative in Syria
   b. *AKA*: Cho'n Myo'ng-kuk
   c. *Identifiers*: Passport:4721202031; Passport Date of Expiration: 21 Feb 2017; Nationality: DPRK; DOB: 18 Oct 1976

7. KANG MUN KIL

   a. *Description*: Kang Mun Kil has conducted nuclear procurement activities as a representative of Namchongang, also known as Namhung.

   b. *AKA*: Jiang Wen-ji

   c. *Identifiers*: Passport: PS 472330208; Passport Date of Expiration: 4 July 2017; Nationality: DPRK

8. KANG RYONG

   a. *Description*: Korea Mining Development Trading Corporation (KOMID) Representative in Syria

   b. *AKA*: NA

   c. *Identifiers*: DOB: 21 August 1969; Nationality: DPRK

9. KIM JUNG JONG

   a. *Description*: Tanchon Commercial Bank Representative in Vietnam

   b. *AKA*: Kim Chung Chong

   c. *Identifiers*: Passport: 199421147 Passport Date of Expiration: 29 Dec 2014; Passport: 381110042, Passport Date of Expiration: 25 Jan 2016; Passport: 563210184, Passport Date of Expiration: 18 Jun 2018; DOB: 07 Nov 1966, Nationality: DPRK

10. KIM KYU

   a. *Description*: Korea Mining Development Trading Corporation (KOMID) External Affairs Officer

   b. *AKA*: NA

   c. *Identifiers*: DOB: 30 July 1968, Nationality: DPRK

11. KIM TONG MY'ONG

   a. *Description*: Kim Tong My'ong is the President of Tanchon Commercial Bank and has held various positions within Tanchon Commercial bank since at least 2002. He has also played a role in managing Amroggang's affairs.

   b. *AKA*: Kim Chin-So'k, Kim Tong-Myong, Kim Jin-Sok; Kim, Hyok-Chol

   c. *Identifiers*: DOB: 1964; Nationality: DPRK

12. KIM YONG CHOL

   a. *Description*: KOMID Representative in Iran

   b. *AKA*: NA

   c. *Identifiers*: DOB. 18 February 1962; Nationality: DPRK

13. KO TAE HUN

a. *Description*: Tanchon Commercial Bank Representative

b. *AKA*: Kim Myong Gi

c. *Identifiers*: Passport: 563120630; Passport Date of Expiration: 20 March 2018, D.O.B. 25 May 1972; Nationality: DPRK

14. RI MAN GON

a. *Description*: Ri Man Gon is the Minister of the Munitions Industry Department.

b. *AKA*: n/a

c. *Identifiers*: DOB: 29 October 1945; Passport number: PO381230469; Passport Date of Expiration: 6 April 2016; Nationality: DPRK

15. RYU JIN

a. *Description*: KOMID Representative in Syria

b. *AKA*: NA

c. *Identifiers*: DOB: 07 August 1965; Passport Number: 563410081; Nationality: DPRK

16. YU CHOL U

a. *Description*: Yu Chol U is the Director of the National Aerospace Development Administration.

b. *AKA*: n/a

c. *Identifiers*: Nationality: DPRK

List Update for Alias: Ra, Kyong-Su (KPi.008) — *New AKA*: Chang, Myong Ho

Annex II

Asset Freeze (Entities)

1. ACADEMY OF NATIONAL DEFENSE SCIENCE

   a. *Description*: The Academy of National Defense Science is involved in the DPRK's efforts to advance the development of its ballistic missile and nuclear weapons programs.

   b. *AKA*: n/a

   c. *Location*: Pyongyang, DPRK

2. CHONGCHONGANG SHIPPING COMPANY

   a. *Description*: The Chongchongang Shipping Company, through its vessel, the Chong Chon Gang, attempted to directly import the illicit shipment of conventional weapons and arms to the DPRK in July 2013.

   b. *AKA*: Chong Chon Gang Shipping Co. Ltd.

   c. *Location*: Address: 817 Haeun, Donghung-dong, Central District, Pyongyang, DPRK; Alternate Address: 817, Haeum, Tonghun-dong, Chung-gu, Pyongyang, DPRK; IMO Number: 5342883

3. DAEDONG CREDIT BANK (DCB)

   a. *Description*: Daedong Credit Bank has provided financial services to the Korea Mining Development Trading Corporation (KOMID) and Tanchon Commercial Bank. Since at least 2007, DCB has facilitated hundreds of financial transactions worth millions of dollars on behalf of KOMID and Tanchon Commercial Bank. In some cases, DCB has knowingly facilitated transactions by using deceptive financial practices.

   b. *AKA*: DCB; AKA: Taedong Credit Bank

   c. *Location*: Address: Suite 401, Potonggang Hotel, Ansan-Dong, Pyongchon District, Pyongyang, DPRK; Alternate Address: Ansan-dong, Botonggang Hotel, Pongchon, Pyongyang, DPRK; SWIFT: DCBK KKPY

4. HESONG TRADING COMPANY

   a. *Description*: The Korea Mining Development Trading Corporation (KOMID) is the parent company of Hesong Trading Corporation.

   b. *Location*: Pyongyang, DPRK

5. KOREA KWANGSON BANKING CORPORATION (KKBC)

   a. *Description*: KKBC provides financial services in support to Tanchon Commercial Bank and Korea Hyoksin Trading Corporation, a subordinate of the Korea Ryonbong General Corporation. Tanchon Commercial Bank has used KKBC to facilitate funds transfers likely amounting to millions of dollars, including transfers involving Korea Mining Development Corporation related funds.

b. *AKA*: KKBC

c. *Address*: Jungson-dong, Sungri Street, Central District, Pyongyang, DPRK

6. KOREA KWANGSONG TRADING CORPORATION

a. *Description*: The Korea Ryongbong General Corporation is the parent company of Korea Kwangsong Trading Corporation.

b. *Address*: Rakwon-dong, Pothonggang District, Pyongyang, DPRK

7. MINISTRY OF ATOMIC ENERGY INDUSTRY

a. *Description*: The Ministry of Atomic Energy Industry was created in 2013 for the purpose of modernizing the DPRK's atomic energy industry to increase the production of nuclear materials, improve their quality, and further develop an independent DPRK nuclear industry. As such, the MAEI is known to be a critical player in the DPRK's development of nuclear weapons and is in charge of day-to-day operation of the country's nuclear weapons program, and under it are other nuclear-related organizations. Under this ministry are a number of nuclear-related organizations and research centers, as well as two committees: an Isotope Application Committee and a Nuclear Energy Committee. The MAEI also directs a nuclear research center at Yongbyun, the site of the DPRK's known plutonium facilities. Furthermore, in the 2015 Panel of Experts (POE) report, the POE stated that Ri Je-son, a former director of the GBAE who was designated by the Committee established pursuant to resolution 1718 (2006) in 2009 for engagement in or support for nuclear related programs, was appointed as head of the MAEI on April 9, 2014.

b. *AKA*: MAEI

c. *Address*: Haeun-2-dong, Pyongchon District, Pyongyang, DPRK

8. MUNITIONS INDUSTRY DEPARTMENT

a. *Description*: The Munitions Industry Department is involved in key aspects of the DPRK's missile program. MID is responsible for overseeing the development of the DPRK's ballistic missiles, including the Taepo Dong-2. The MID oversees the DPRK's weapons production and R&D programs, including the DPRK's ballistic missile program. The Second Economic Committee and the Second Academy of Natural Sciences — also designated in August 2010 — are subordinate to the MID. The MID in recent years has worked to develop the KN08 road-mobile ICBM.

b. *AKA*: Military Supplies Industry Department

c. *Location*: Pyongyang, DPRK

9. NATIONAL AEROSPACE DEVELOPMENT ADMINISTRATION

a. *Description*: NADA is involved in the DPRK's development of space science and technology, including satellite launches and carrier rockets.

b. *AKA*: NADA

c. *Location*: DPRK

10. OFFICE 39

a. *Description*: DPRK government entity.

b. *AKA*: Office #39; AKA: Office No. 39; AKA: Bureau 39; AKA: Central Committee Bureau 39; AKA: Third Floor; AKA: Division 39

c. *Location*: DPRK

11. RECONNAISSANCE GENERAL BUREAU

a. *Description*: The Reconnaissance General Bureau is the DPRK's premiere intelligence organization, created in early 2009 by the merger of existing intelligence organizations from the Korean Workers' Party, the Operations Department and Office 35, and the Reconnaissance Bureau of the Korean People's Army. The Reconnaissance General Bureau trades in conventional arms and controls the DPRK conventional arms firm Green Pine Associated Corporation.

b. *AKA*: Chongch'al Ch'ongguk; KPA Unit 586; RGB

c. *Location*: Address: Hyongjesan-Guyok, Pyongyang, DPRK; Alternate Address: Nungrado, Pyongyang, DPRK.

12. SECOND ECONOMIC COMMITTEE

a. *Description*: The Second Economic Committee is involved in key aspects of the DPRK's missile program. The Second Economic Committee is responsible for overseeing the production of the DPRK's ballistic missiles, and directs the activities of KOMID.

b. *AKA*: N/A

c. *Location*: Kangdong, DPRK

List Update for Alias: NAMCHONGANG TRADING CORPORATION (KPe.004) — New AKA: Namhung Trading Corporation

Annex III

OMM Vessels

	Ship Name	*IMO Number*
1.	CHOL RYONG (RYONG GUN BONG)	8606173
2.	CHONG BONG(GREENLIGHT)(BLUE NOUVELLE)	8909575
3.	CHONG RIM 2	8916293
4.	DAWNLIGHT	9110236
5.	EVER BRIGHT 88 (J STAR)	8914934
6.	GOLD STAR 3 (BENEVOLENCE 2)	8405402
7.	HOE RYONG	9041552
8.	HU CHANG (O UN CHONG NYON)	8330815
9.	HUI CHON (HWANG GUM SAN 2)	8405270
10.	JH 86	8602531
11.	JI HYE SAN (HYOK SIN 2)	8018900
12.	JIN Tal	9163154·
13.	JIN TENG	9163166
14.	KANG GYE (PI RYU GANG)	8829593
15.	MI RIM	8713471
16.	MI RIM 2	9361407
17.	O RANG (PO THONG GANG)	8829555
18.	ORION STAR (RICHOCEAN)	9333589
19.	RA NAM 2	8625545
20.	RANAM 3	9314650
21.	RYO MYONG	8987333
22.	RYONG RIM (JON JIN 2)	8018912
23.	SE PHO (RAK WON 2)	8819017
24.	SONGJIN (JANG JA SAN CHONG NYON HO)	8133530
25.	SOUTH HILL 2	8412467
26.	SOUTH HILL 5	9138680

	Ship Name	*IMO Number*
27.	TAN CHON (RYONG GANG 2)	7640378
28.	THAE PYONG SAN (PETREL 1)	9009085
29.	TONG HUNG SAN (CHONG CHON GANG)	7937317
30.	GRAND KARO	8511823
31.	TONG HUNG 1	8661575

Annex IV:

Luxury Goods

(a) Luxury watches: wrist, pocket, and other with a case of precious metal or of metal clad with precious metal

(b) Transportation items, as follows:

(1) aquatic recreational vehicles (such as personal watercraft)

(2) snowmobiles (valued greater than $2,000)

(c) Items of lead crystal

(d) Recreational sports equipment

United Nations S/RES/2321 (2016)

Security Council

Distr.: General
30 November 2016

Resolution 2321 (2016)

Adopted by the Security Council at its 7821st meeting, on 30 November 2016

The Security Council,

Recalling its previous relevant resolutions, including resolution 825 (1993), resolution 1540 (2004), resolution 1695 (2006), resolution 1718 (2006), resolution 1874 (2009), resolution 1887 (2009), resolution 2087 (2013), resolution 2094 (2013), and resolution 2270 (2016), as well as the statements of its President of 6 October 2006 (S/PRST/2006/41), 13 April 2009 (S/PRST/2009/7) and 16 April 2012 (S/PRST/2012/13),

Reaffirming that proliferation of nuclear, chemical and biological weapons, as well as their means of delivery, constitutes a threat to international peace and security,

Expressing its gravest concern at the nuclear test by the Democratic People's Republic of Korea ("the DPRK") on September 9, 2016 in violation of resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) and 2270 (2016), and at the challenge such a test constitutes to the Treaty on Non-Proliferation of Nuclear Weapons ("the NPT") and to international efforts aimed at strengthening the global regime of non-proliferation of nuclear weapons, and the danger it poses to peace and stability in the region and beyond,

Underlining once again the importance that the DPRK respond to other security and humanitarian concerns of the international community,

Underlining also that measures imposed by this resolution are not intended to have adverse humanitarian consequences for the civilian population of the DPRK,

Expressing serious concern that the DPRK has continued to violate relevant Security Council resolutions through repeated launches and attempted launches of ballistic missiles, and *noting* that all such ballistic missile activities contribute to the

DPRK's development of nuclear weapons delivery systems and increase tension in the region and beyond,

Expressing continued concern that the DPRK is abusing the privileges and immunities accorded under the Vienna Conventions on Diplomatic and Consular Relations,

Expressing great concern that the DPRK's prohibited arms sales have generated revenues that are diverted to the pursuit of nuclear weapons and ballistic missiles while DPRK citizens have unmet needs,

Expressing its gravest concern that the DPRK's ongoing nuclear- and ballistic missile-related activities have further generated increased tension in the region and beyond, and *determining* that there continues to exist a clear threat to international peace and security,

Acting under Chapter VII of the Charter of the United Nations, and taking measures under its Article 41,

1. *Condemns* in the strongest terms the nuclear test conducted by the DPRK on 9 September 2016 in violation and flagrant disregard of the Security Council's resolutions;

2. *Reaffirms* its decisions that the DPRK shall not conduct any further launches that use ballistic missile technology, nuclear tests, or any other provocation; shall suspend all activities related to its ballistic missile programme and in this context re-establish its pre-existing commitments to a moratorium on missile launches; shall abandon all nuclear weapons and existing nuclear programmes in a complete, verifiable and irreversible manner, and immediately cease all related activities; and shall abandon all other existing weapons of mass destruction and ballistic missile programmes in a complete, verifiable and irreversible manner;

3. *Decides* that the measures specified in paragraph 8 (d) of resolution 1718 (2006) shall apply also to the individuals and entities listed in annex I and II of this resolution and to any individuals or entities acting on their behalf or at their direction, and to entities owned or controlled by them, including through illicit means, and *decides* further that the measures specified in paragraph 8 (e) of resolution 1718 (2006) shall also apply to the individuals listed in annex I of this resolution and to individuals acting on their behalf or at their direction;

4. *Decides* that the measures imposed in paragraph 8 (a), 8 (b) and 8 (c) of resolution 1718 (2006) shall also apply to the items, materials, equipment, goods and technology listed in annex III of this resolution;

5. *Reaffirms* the measures imposed in paragraph 8 (a) (iii) of resolution 1718 (2006) regarding luxury goods, and *clarifies* that the term "luxury goods" includes also, but is not limited to, the items specified in annex IV of this resolution;

6. *Reaffirms* paragraphs 14 through 16 of resolution 1874 (2009), and paragraph 8 of resolution 2087 (2013), and *decides* that these paragraphs shall apply also with respect to any items the supply, sale or transfer of which is prohibited by this resolution;

7. *Decides* that the measures imposed in paragraphs 8 (a), 8 (b), and 8 (c) of resolution 1718 (2006) shall also apply to the items listed in a new conventional arms dual-use list to be adopted by the Committee, *directs* the Committee to adopt this list within 15 days and to report to the Security Council to this effect, and further *decides* that, if the Committee has not acted, then the Security Council will complete action to adopt the list within seven days of receiving that report, and *directs* the Committee to update this list every 12 months;

8. *Decides* that paragraph 19 of resolution 2270 (2016) shall apply with respect to all leasing, chartering or provision of crew services to the DPRK without exception, unless the Committee approves on a case-by-case basis in advance;

9. *Decides* that paragraph 20 of resolution 2270 (2016) shall apply to registering vessels in the DPRK, obtaining authorization for a vessel to use the DPRK flag, and owning, leasing, operating, providing any vessel classification, certification or associated service, or insuring any vessel flagged by the DPRK, without exception, unless the Committee approves on a case-by-case basis in advance;

10. *Clarifies* that, for the purposes of implementing paragraph 17 of resolution 2270 (2016), specialized teaching and training which could contribute to the DPRK's proliferation sensitive nuclear activities or the development of nuclear weapons delivery systems includes, but is not limited to advanced materials science, advanced chemical engineering, advanced mechanical engineering, advanced electrical engineering and advanced industrial engineering;

11. *Decides* that all Member States shall suspend scientific and technical cooperation involving persons or groups officially sponsored by or representing the DPRK except for medical exchanges unless:

(a) In the case of scientific or technical cooperation in the fields of nuclear science and technology, aerospace and aeronautical engineering and technology, or advanced manufacturing production techniques and methods, the Committee has determined on a case-by-case basis that a particular activity will not contribute to the DPRK's proliferation sensitive nuclear activities or ballistic missile-related programmes; or

(b) In the case of all other scientific or technical cooperation, the State engaging in scientific or technical cooperation determines that the particular activity will not contribute to the DPRK's proliferation sensitive nuclear activities or ballistic missile-related programmes and notifies the Committee in advance of such determination;

12. *Decides* that the Committee, if it has information that provides reasonable grounds to believe the vessels are or have been related to nuclear- or ballistic missile-related programmes or activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016) or this resolution, may require any or all of the following measures with respect to vessels it designates pursuant to this paragraph: (a) the Flag State of a designated vessel shall de-flag the vessel; (b) the Flag State of a designated vessel shall direct the vessel to a port identified by the Committee, in coordination with the port State; (c) all Member States shall prohibit a designated vessel from entering their ports, unless in case of emergency, in case of return to the vessel's port of origination, or in case of

direction by the Committee; (d) a vessel designated by the Committee shall be subject to the asset freeze imposed in paragraph 8 (d) of resolution 1718 (2006);

13. *Expresses concern* that the personal luggage and checked baggage of individuals entering into or departing from the DPRK may be used to transport items the supply, sale or transfer of which is prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016) or this resolution, and *clarifies* that such luggage and baggage constitute "cargo" for the purposes of implementing paragraph 18 of resolution 2270 (2016);

14. *Calls upon* all Member States to reduce the number of staff at DPRK diplomatic missions and consular posts;

15. *Decides* that all Member States shall take steps to restrict the entry into or transit through their territory of members of the Government of the DPRK, officials of that Government, and members of the DPRK armed forces, if the State determines that such members or officials are associated with the DPRK's nuclear or ballistic missile programmes or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016), or this resolution;

16. *Decides* that all States shall take steps to limit the number of bank accounts to one per DPRK diplomatic mission and consular post, and one per accredited DPRK diplomat and consular officer, at banks in their territory;

17. *Recalls* that, under the Vienna Convention on Diplomatic Relations of 1961, a diplomatic agent shall not in the receiving State practice for personal profit any professional or commercial activity, and *emphasizes* accordingly that DPRK diplomatic agents are prohibited in the receiving State from such practice of professional or commercial activity;

18. *Decides* that all Member States shall prohibit the DPRK from using real property that it owns or leases in their territory for any purpose other than diplomatic or consular activities;

19. *Recalls* that a Member of the United Nations against which preventive or enforcement action has been taken by the Security Council may be suspended from the exercise of the rights and privileges of membership by the General Assembly upon the recommendation of the Security Council, and that the exercise of these rights and privileges may be restored by the Security Council;

20. *Recalls* that paragraph 18 of resolution 2270 (2016) requires all States to inspect the cargo within or transiting through their territory, including their airports, that has originated in the DPRK, or that is destined for the DPRK, or has been brokered or facilitated by the DPRK or its nationals, or by individuals or entities acting on their behalf or at their direction, or entities owned or controlled by them, or by designated individuals or entities, or that is being transported on DPRK-flagged aircraft, emphasizes that this measure requires States to inspect DPRK-flagged aircraft when they land in or take off from their territory, recalls also that paragraph 31 of resolution 2270 (2016) requires all States to prevent the sale or supply, by their nationals or from their territories or using their flag vessels or aircraft, of aviation fuel, to the territory of the DPRK, and *calls upon* all States to exercise vigilance to ensure that no more fuel is provided to DPRK-flagged civil

passenger aircraft than is necessary for the relevant flight, including a standard margin for safety of flight;

21. *Expresses* concern that prohibited items may be transported to and from the DPRK by rail and by road, and *underscores* that the obligation in paragraph 18 of resolution 2270 (2016) to inspect the cargo within or transiting through their territory includes the cargo being transported by rail and by road;

22. *Decides* that all Member States shall prohibit their nationals, persons subject to their jurisdiction and entities incorporated in their territory or subject to their jurisdiction from providing insurance or re-insurance services to vessels owned, controlled, or operated, including through illicit means, by the DPRK unless the Committee determines on a case-by-case basis that the vessel is engaged in activities exclusively for livelihood purposes which will not be used by DPRK individuals or entities to generate revenue or exclusively for humanitarian purposes;

23. *Decides* that all Member States shall prohibit their nationals from procuring vessel and aircraft crewing services from the DPRK;

24. *Decides* that all Member States shall de-register any vessel that is owned, controlled, or operated by the DPRK, and further *decides* that Member States shall not register any such vessel that has been de-registered by another Member State pursuant to this paragraph;

25. *Notes* that, for the purpose of implementing resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016) and this resolution, the term "transit" includes but is not limited to the travel of individuals through a State's international airport terminals en route to a destination in another State, regardless of whether such individuals pass through customs or passport control at that airport;

26. *Decides* that paragraph 29 of resolution 2270 (2016) shall be replaced by the following:

> "*Decides* that the DPRK shall not supply, sell or transfer, directly or indirectly, from its territory or by its nationals or using its flag vessels or aircraft, coal, iron, and iron ore, and that all States shall prohibit the procurement of such material from the DPRK by their nationals, or using their flag vessels or aircraft, and whether or not originating in the territory of the DPRK, and *decides* that this provision shall not apply with respect to:
>
> (a) Coal that the procuring State confirms on the basis of credible information has originated outside the DPRK and was transported through the DPRK solely for export from the Port of Rajin (Rason), provided that the State notifies the Committee in advance and such transactions are unrelated to generating revenue for the DPRK's nuclear or ballistic missile programmes or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) or this resolution;
>
> (b) Total exports to all Member States of coal originating in the DPRK that in the aggregate do not exceed 53,495,894 US dollars or 1,000,866 metric tons, whichever is lower, between the date of adoption of this resolution and 31 December 2016, and total exports to all Member States of coal originating in the DPRK that in the aggregate do not exceed 400,870,018 US dollars or 7,500,000 metric tons per year, whichever is lower, beginning 1 January 2017,

provided that the procurements (i) involve no individuals or entities that are associated with the DPRK's nuclear or ballistic missile programmes or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016) or this resolution, including designated individuals or entities, or individuals or entities acting on their behalf or at their direction, or entities owned or controlled by them, directly or indirectly, or individuals or entities assisting in the evasion of sanctions, and (ii) are exclusively for livelihood purposes of DPRK nationals *and* unrelated to generating revenue for the DPRK's nuclear or ballistic missile programmes or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016) or this resolution, and *decides* that each Member State that procures coal from the DPRK shall notify the Committee of the aggregate amount of the volume of such procurement for each month no later than 30 days after the conclusion of that month on the form in annex V to this resolution, *directs* the Committee to make publicly available on its website the volume of procurement of coal from the DPRK reported by Member States and value calculated by the Committee Secretary, as well as the amount reported for each month and with the number of States that reported for each month, *directs* the Committee to update this information on a real-time basis as it receives notifications, *calls upon* all States that import coal from the DPRK to periodically review this website to ensure that they do not exceed the mandatory aggregate annual limit, *directs* the Committee Secretary to notify all Member States when an aggregate value or volume of coal procurements from the DPRK of 75 per cent of the aggregate yearly amount has been reached, also *directs* the Committee Secretary to notify all Member States when an aggregate value or volume of coal procurements from the DPRK of 90 per cent of the aggregate yearly amount has been reached, further *directs* the Committee Secretary to notify all Member States when an aggregate value or volume of coal procurements from the DPRK of 95 per cent of the aggregate yearly amount has been reached and to inform them that they must immediately cease procuring coal from the DPRK for the year, and *requests* the Secretary-General to make the necessary arrangements to this effect and provide additional resources in this regard; and

(c) Transactions in iron and iron ore that are determined to be exclusively for livelihood purposes and unrelated to generating revenue for the DPRK's nuclear or ballistic missile programmes or other activities prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016) or this resolution."

27. *Directs* the Panel of Experts, following the end of each month, to determine and transmit to the Committee, in no more than 30 days, an estimate of the average (mean) price in US dollars of coal exported from the DPRK that month based on credible and factually accurate trade data, and *directs* the Committee Secretary to use this average price as the basis to calculate the value of the procurement of coal from the DPRK each month based on the volume reported by States for the purposes of notifying all member states and making publicly available DRPK export levels on the Committee website on a real-time basis as required in paragraph 26 of this resolution;

28. *Decides* that the DPRK shall not supply, sell or transfer, directly or indirectly, from its territory or by its nationals or using its flag vessels or aircraft, copper, nickel, silver and zinc, and that all Member States shall prohibit the procurement of such material from the DPRK by their nationals, or using their flag vessels or aircraft, and whether or not originating in the territory of the DPRK;

29. *Decides* that the DPRK shall not supply, sell or transfer, directly or indirectly, from its territory or by its nationals or using its flag vessels or aircraft, statues, and that all States shall prohibit the procurement of such items from the DPRK by their nationals, or using their flag vessels or aircraft, whether or not originating in the territory of the DPRK, unless the Committee approves on a case-by-case basis in advance;

30. *Decides* that all Member States shall prevent the direct or indirect supply, sale or transfer to the DPRK, through their territories or by their nationals, or using their flag vessels or aircraft, and whether or not originating in their territories, of new helicopters and vessels, except as approved in advance by the Committee on a case-by-case basis;

31. *Decides* that Member States shall take the necessary measures to close existing representative offices, subsidiaries or banking accounts in the DPRK within 90 days, unless the Committee determines on a case-by-case basis that such offices, subsidiaries or accounts are required for the delivery of humanitarian assistance or the activities of diplomatic missions in the DPRK or the activities of the United Nations or its specialized agencies or related organizations or any other purpose consistent with the objectives of this resolution;

32. *Decides* that all Member States shall prohibit public and private financial support from within their territories or by persons or entities subject to their jurisdiction for trade with the DPRK (including the granting of export credits, guarantees or insurance to their nationals or entities involved in such trade), except as approved in advance by the Committee on a case-by-case basis;

33. *Decides* that, if a Member State determines that an individual is working on behalf of or at the direction of a DPRK bank or financial institution, then Member States shall expel the individual from their territories for the purpose of repatriation to the individual's state of nationality, consistent with applicable national and international law, unless the presence of the individual is required for fulfillment of a judicial process or exclusively for medical, safety or other humanitarian purposes, or the Committee has determined on a case-by-case basis that the expulsion of the individual would be contrary to the objectives of resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016), or this resolution;

34. *Expresses* concern that DPRK nationals are sent to work in other States for the purpose of earning hard currency that the DPRK uses for its nuclear and ballistic missile programmes, and *calls upon* States to exercise vigilance over this practice;

35. *Reiterates* its concern that bulk cash may be used to evade measures imposed by the Security Council, and *calls upon* Member States to be alert to this risk;

36. *Calls upon* all Member States to report to the Security Council within 90 days of the adoption of this resolution, and thereafter upon request by the Committee, on concrete measures they have taken in order to implement effectively the provisions of this resolution, *requests* the Panel of Experts established pursuant to resolution 1874 (2009), in cooperation with other UN sanctions monitoring groups, to continue its efforts to assist Member States in preparing and submitting such reports in a timely manner;

37. *Reaffirms* that Security Council resolution 1540 (2004) obligates all States to take and enforce effective measures to establish domestic controls to prevent the proliferation of nuclear, chemical, or biological weapons and their means of delivery, including by establishing appropriate controls over related materials, and *notes* that these obligations are complementary to the obligations in resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) and 2270 (2016) to prevent the direct or indirect supply, sale or transfer to the DPRK of items, materials, equipment, goods and technology which could contribute to DPRK's nuclear-related, ballistic missile-related or other weapons of mass destruction-related programmes;

38. *Calls upon* all Member States to redouble efforts to implement in full the measures in resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013) and 2270 (2016), and to cooperate with each other in doing so, particularly with respect to inspecting, detecting and seizing items the transfer of which is prohibited by these resolutions;

39. *Decides* that the mandate of the Committee, as set out in paragraph 12 of resolution 1718 (2006), shall apply with respect to the measures imposed in this resolution and *further decides* that the mandate of the Panel of Experts, as specified in paragraph 26 of resolution 1874 (2009) and modified in paragraph 1 of resolution 2276 (2016), shall also apply with respect to the measures imposed in this resolution;

40. *Decides* to authorize all Member States to, and that all Member States shall, seize and dispose (such as through destruction, rendering inoperable or unusable, storage, or transferring to a State other than the originating or destination States for disposal) of items the supply, sale, transfer, or export of which is prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016) or this resolution that are identified in inspections, in a manner that is not inconsistent with their obligations under applicable Security Council resolutions, including resolution 1540 (2004), as well as any obligations of parties to the NPT, the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction of 29 April 1997, and the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction of 10 April 1972;

41. *Emphasizes* the importance of all States, including the DPRK, taking the necessary measures to ensure that no claim shall lie at the instance of the DPRK, or of any person or entity in the DPRK, or of persons or entities designated for measures set forth in resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016) or this resolution, or any person claiming through or for the benefit of any such person or entity, in connection with any contract or other

transaction where its performance was prevented by reason of the measures imposed by this resolution or previous resolutions;

42. *Requests* the Secretary-General to provide additional administrative and analytical support resources needed to increase the capacity of the Panel of Experts established pursuant to resolution 1874 (2009) and strengthen its ability to analyse the DPRK's sanctions violation and evasion activities, to include additional funding allocated to the procurement of aerial imagery and analysis services, access to relevant trade and international security databases and other information sources, as well as support the resulting increased activities of the Committee by the Secretariat;

43. *Requests* the Panel of Experts to include findings and recommendations in its midterm reports, beginning with the midterm report due to be submitted to the Committee by no later than 5 August 2017;

44. *Directs* the Committee, with the assistance of its Panel of Experts, to hold special meetings on important thematic and regional topics and Member States' capacity challenges, to identify, prioritize, and mobilize resources to areas that would benefit from technical and capacity-building assistance to enable more effective implementation by Member States;

45. *Reiterates* its deep concern at the grave hardship that the people in the DPRK are subjected to, *condemns* the DPRK for pursuing nuclear weapons and ballistic missiles instead of the welfare of its people while people in the DPRK have great unmet needs, and *emphasizes* the necessity of the DPRK respecting and ensuring the welfare and inherent dignity of people in the DPRK;

46. *Reaffirms* that the measures imposed by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016) and this resolution are not intended to have adverse humanitarian consequences for the civilian population of the DPRK or to affect negatively those activities, including economic activities and cooperation, that are not prohibited by resolutions 1718 (2006), 1874 (2009), 2087 (2013), 2094 (2013), 2270 (2016) and this resolution, and the work of international and non-governmental organizations carrying out assistance and relief activities in the DPRK for the benefit of the civilian population of the DPRK, and *decides* that the Committee may, on a case-by-case basis, exempt any activity from the measures imposed by these resolutions if the Committee determines that such an exemption is necessary to facilitate the work of such organizations in the DPRK or for any other purpose consistent with the objectives of these resolutions;

47. *Reaffirms* its support to the Six Party Talks, *calls* for their resumption, and *reiterates* its support for the commitments set forth in the Joint Statement of 19 September 2005 issued by China, the DPRK, Japan, the Republic of Korea, the Russian Federation, and the United States, including that the goal of the Six-Party Talks is the verifiable denuclearization of the Korean Peninsula in a peaceful manner, that the United States and the DPRK undertook to respect each other's sovereignty and exist peacefully together, and that the Six Parties undertook to promote economic cooperation, and all other relevant commitments;

48. *Reiterates* the importance of maintaining peace and stability on the Korean Peninsula and in north-east Asia at large, and *expresses* its commitment to a peaceful, diplomatic and political solution to the situation and welcomes efforts by

Council members as well as other States to facilitate a peaceful and comprehensive solution through dialogue and stresses the importance of working to reduce tensions in the Korean Peninsula and beyond;

49. *Affirms* that it shall keep the DPRK's actions under continuous review and is prepared to strengthen, modify, suspend or lift the measures as may be needed in light of the DPRK's compliance, and, in this regard, *expresses its determination* to take further significant measures in the event of a further DPRK nuclear test or launch;

50. *Decides* to remain seized of the matter.

Annex I

Travel Ban/Asset Freeze (Individuals)

1. PAK CHUN IL
   a. *Description*: Pak Chun Il has served as the DPRK Ambassador to Egypt and provides support to KOMID.
   b. *AKA*: n/a
   c. *Identifiers*: DOB: 28 July 1954; Nationality: DPRK; Passport: 563410091

2. KIM SONG CHOL
   a. *Description*: Kim Song Chol is a KOMID official that has conducted business in Sudan on behalf of KOMID's interests.
   b. *AKA*: Kim Hak Song
   c. *Identifiers*: DOB: 26 March 1968, alt. DOB: 15 October 1970; Nationality: DPRK; Passport: 381420565, alt. Passport: 654120219

3. SON JONG HYOK
   a. *Description*: Son Jong Hyok is a KOMID official that has conducted business in Sudan on behalf of KOMID's interests.
   b. *AKA*: Son Min
   c. *Identifiers*: DOB: 20 May 1980; Nationality: DPRK

4. KIM SE GON
   a. *Description*: Kim Se Gon works on behalf of the Ministry of Atomic Energy Industry.
   b. *AKA*: n/a
   c. *Identifiers*: DOB: 13 November 1969; Passport: PD472310104; Nationality: DPRK

5. RI WON HO
   a. *Description*: Ri Won Ho is a DPRK Ministry of State Security Official stationed in Syria supporting KOMID.
   b. *AKA*: n/a
   c. *Identifiers*: DOB: 17 July 1964; Passport: 381310014, Nationality: DPRK

6. JO YONG CHOL
   a. *Description*: Jo Yong Chol is a DPRK Ministry of State Security Official stationed in Syria supporting KOMID.
   b. *AKA*: Cho Yong Chol

c. *Identifiers*: DOB: 30 September 1973, Nationality: DPRK

7. KIM CHOL SAM

a. *Description*: Kim Chol Sam is a representative for Daedong Credit Bank (DCB) who has been involved in managing transactions on behalf of DCB Finance Limited. As an overseas-based representative of DCB, it is suspected that Kim Chol Sam has facilitated transactions worth hundreds of thousands of dollars and likely managed millions of dollars in DPRK related accounts with potential links to nuclear/missile programmes.

b. *AKA*: n/a

c. *Identifiers*: DOB: 11 March 1971; Nationality: DPRK

8. KIM SOK CHOL

a. *Description*: Kim Sok Chol acted as the DPRK Ambassador to Myanmar and he operates as a KOMID facilitator. He was paid by KOMID for his assistance and arranges meetings on behalf of KOMID, including a meeting between KOMID and Myanmar's defense related persons to discuss financial matters.

b. *AKA*: n/a

c. *Identifiers*: DOB: 8 May 1955; Passport 472310082; Nationality: DPRK

9. CHANG CHANG HA

a. *Description*: Chang Chang Ha is the President of the Second Academy of Natural Sciences (SANS).

b. *AKA*: Jang Chang Ha

c. *Identifiers*: DOB: 10 January 1964; Nationality: DPRK

10. CHO CHUN RYONG

a. *Description*: Cho Chun Ryong is the Chairman of the Second Economic Committee (SEC).

b. *AKA*: Jo Chun Ryong

c. *Identifiers*: DOB: 4 April 1960; Nationality: DPRK

11. SON MUN SAN

a. *Description*: Son Mun San is the Director-General of the External Affairs Bureau of the General Bureau of Atomic Energy (GBAE).

b. *AKA*: n/a

c. *Identifiers*: DOB: 23 January 1951; Nationality: DPRK

Annex II

Asset Freeze (Entities)

1. KOREA UNITED DEVELOPMENT BANK

   a. *Description*: Korea United Development Bank operates in the financial services industry of the DPRK economy.

   b. *Location*: Pyongyang, North Korea; SWIFT/BIC: KUDBKPPY

2. ILSIM INTERNATIONAL BANK

   a. *Description*: Ilsim International Bank is affiliated with the DPRK military and has a close relationship with Korea Kwangson Banking Corporation (KKBC). Ilsim International Bank has attempted to evade United Nations sanctions.

   b. *AKA*: n/a

   c. *Location*: Pyongyang, DPRK; SWIFT: ILSIKPPY

3. KOREA DAESONG BANK

   a. *Description*: Daesong Bank is owned and controlled by Office 39 of the Korea Workers' Party.

   b. *AKA*: Choson Taesong Unhaeng; AKA: Taesong Bank

   c. *Location*: Segori-dong, Gyongheung St. Potonggang District, Pyongyang, DPRK; SWIFT/BIC: KDBKKPPY

4. SINGWANG ECONOMICS AND TRADING GENERAL CORPORATION

   a. *Description*: Singwang Economics and Trading General Corporation is a DPRK firm for trading in coal. DPRK generates a significant share of the money for its nuclear and ballistic missile programmes by mining natural resources and selling those resources abroad.

   b. *AKA*: n/a

   c. *Location*: DPRK

5. KOREA FOREIGN TECHNICAL TRADE CENTER

   a. *Description*: Korea Foreign Technical Trade Center is a DPRK firm trading in coal. DPRK generates a significant share of the funds needed to finance its nuclear and ballistic missile programmes by mining natural resources and selling those resources abroad.

   b. *AKA*: n/a

   c. *Location*: DPRK

6. KOREA PUGANG TRADING CORPORATION

a. *Description*: Korea Pugang Trading Corporation is owned by the Korea Ryonbong General Corporation, DPRK's defense conglomerate specializing in acquisition for DPRK defense industries and support to Pyongyang's military related sales.

b. *AKA*: n/a

c. *Location*: Rakwon-dong, Pothonggang District, Pyongyang, DPRK

7. KOREA INTERNATIONAL CHEMICAL JOINT VENTURE COMPANY

a. *Description*: Korea International Chemical Joint Venture Company is a subsidiary of Korea Ryonbong General Corporation — DPRK's defense conglomerate specializing in acquisition for DPRK defense industries and support to Pyongyang's military related sales — and has engaged in proliferation-related transactions.

b. *AKA*: Choson International Chemicals Joint Operation Company; AKA: Chosun International Chemicals Joint Operation Company; AKA: International Chemical Joint Venture Company

c. *Location*: Hamhung, South Hamgyong Province, DPRK; Location: Man gyongdae-kuyok, Pyongyang, DPRK; Location: Mangyungdae-gu, Pyongyang, DPRK

8. DCB FINANCE LIMITED

a. *Description*: DCB Finance Limited is a front company for Daedong Credit Bank (DCB), a listed entity.

b. *AKA*: n/a

c. *Locations*: Akara Building, 24 de Castro Street, Wickhams Cay I, Road Town, Tortola, British Virgin Islands; Dalian, China

9. KOREA TAESONG TRADING COMPANY

a. *Description*: Korea Taesong Trading Company has acted on behalf of KOMID in dealings with Syria.

b. *AKA*: n/a

c. *Location*: Pyongyang, DPRK

10. KOREA DAESONG GENERAL TRADING CORPORATION

a. *Description*: Korea Daesong General Trading Corporation is affiliated with Office 39 through minerals (gold) exports, metals, machinery, agricultural products, ginseng, jewelry, and light industry products.

b. *AKA*: Daesong Trading; Daesong Trading Company; Korea Daesong Trading Company; Korea Daesong Trading Corporation

c. *Location*: Pulgan Gori Dong 1, Potonggang District, Pyongyang City, DPRK

Annex III

Items, Materials, Equipment, Goods and Technology

Nuclear- and/or Missile-usable Items

1. Isocyanates (TDI (Toluene di-isocyanate), MDI (Methylene bis (phenyl isocyanate)), IPDI (Isophorone diiosocyanate), HNMDI or HDI (Hexamethylene diisocyanate), and DDI (dimeryl diisocyanate) and production equipment.
2. Ammonium nitrate, chemically pure or in phase stabilized version (PSAN).
3. Non-destructive test chambers with a 1m or more critical internal dimension.
4. Turbo-pumps for liquid or hybrid rocket engines.
5. Polymeric Substances (Hydroxyl Terminated Poly-Ether (HTPE), Hydroxyl Terminated Caprolactone Ether (HTCE), Polypropylene glycol (PPG), Polydiethyleneglycol adipate (PGA) and Polyethylene Glycol (PEG)).
6. Inertial equipment for any application, particularly for civilian aircraft, satellite, geophysical survey applications and their associated test equipment.
7. Countermeasure Subsystems and Penetration Aids (e.g. jammers, chaff, decoys) designed to saturate, confuse, or evade missile defences.
8. Manganese metal Brazing Foils.
9. Hydroforming machines.
10. Thermal treatment furnaces — Temperature >850 degrees C and one dimension >1m.
11. Electrical Discharge Machines (EDMs).
12. Friction stir welding machines.
13. Modelling and design software related to the modelling of aerodynamic and thermodynamic analysis of rocket or unmanned aerial vehicle systems.
14. High-speed imaging cameras except those used in medical imaging systems.
15. Truck chassis with 6 or more axles.

Chemical/Biological Weapons-usable Items

1. Floor-mounted fume hoods (walk-in style) with a minimum nominal width of 2.5 meters.
2. Batch centrifuges with a rotor capacity of 4 L or greater, usable with biological materials.
3. Fermenters with an internal volume of 10-20 L (.01-.02 cubic meters), usable with biological materials.

Annex IV

Luxury Goods

(1) Rugs and tapestries (valued greater than $500)

(2) Tableware of porcelain or bone china (valued greater than $100)

Annex V

Standard Form for Notification of Import of Coal
From the Democratic People's Republic of Korea (DPRK)
pursuant to paragraph 26 (b) of resolution 2321 (2016)

This form notifies the UN Security Council 1718 Committee of the procurement of coal from the Democratic People's Republic of Korea (DPRK) in keeping with the relevant provisions of resolution 2321 (2016).

Procuring State:

Month:

Year:

Coal imported from DPRK, in metric tons:

Coal imported from DPRK, in US dollars (optional):

Additional information (optional):

Signature/seal:

Date:

[File No. AE-I/102/11(A)/2016]

Sharma

Pankaj Sharma, Joint Secretary