



ENTERPRISES OF NORTH KOREA DEFENSE-INDUSTRIAL COMPLEX

DIRECTORY

Research Analyst Defence (Waterlooville) Limited

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This directory collects and summarizes information on North Korean defence enterprises, scientific organizations and those industrial groups that will be of strategic importance during a time of conflict.

During the 1990s, North Korea had some 134 arms factories; many of them completely or partially concealed underground. These facilities produced:

- (a) Ground service arms
- (b) Ammunition
- (c) Armoured vehicles
- (d) Naval craft
- (e) Aircraft (spares and subassemblies)
- (f) Missiles
- (g) Electronics
- (h) Chemical-related materials

In addition, some 115 non-military factories have a dedicated wartime production requirement.

By the late 1980s as many as eight industrial facilities capable of producing chemical agents had been identified they were located at:

- (a) Anju
- (b) Aoji
- (c) Ch'ngjin
- (d) Hamhung
- (e) Manp'o
- (f) Sinhung
- (g) Siniju
- (h) Sunch'n

There were three research institutes these are located at:

- (a) Kanggye
- (b) Siniju
- (c) Hamhung

North Korea is credited with the capability to produce nerve agents, blood agents, blistering agents, and choking agents. Some estimates place North Korea's chemical stockpiles at around 250 tons.

Heavy industry exists across the country, but most plants are rundown and inefficient after years of underinvestment.

Manufacturing output is geared to the demands of the massive armed forces.

Few factories produce consumer goods and those North Koreans who can afford them rely on imported second hand items from China and Japan.

Each organisation is recognised by its own file page.

Updates to information are on a continual basis as more detailed and new information comes to hand.

Furthermore included in these updates are those non-North Korean organisations associated with North Korean factories who produce export weapon systems on license and whose technical cooperation is vital to the North Korean factory for the design, development and production of those weapon systems.

The directory only includes information that in recent years has been distributed at foreign and domestic arms exhibitions or has been published in the open press.

Korean Transliteration, Geographic Units, and Proper Names

The Korean language presents a number of problems for transliteration, and there is no universally accepted system. The most common schemes now in use are the McCune-Reischauer system, the South Korean Ministry of Education system, and the North Korean system. The Center for Nonproliferation Studies uses the McCune-Reischauer system in the North Korea Country Profile as in its other work. However, exceptions have been made for public figures and proper names of firms, publications, and organizations. The original Korean names of places, organizations, and facilities, etc., have been included in parentheses throughout the profile; however, this text is illegible for browsers without the proper fonts or encoding. Tables for the South Korean Ministry of Education system can be found below.

The McCune-Reischauer Transliteration System

Consonants

	INITIAL	ㅇ	ㄱ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ
FINAL		*1	K	N	T	R	M	P
ㄱ	K	G	KK	NGN	KT	NGN	NGM	KP
ㄴ	N	N	N' G	NN	ND	LL	NM	NB
ㄹ	L	R	LG	LL	LT	LL	LM	LB
ㅁ	M	M	MG	MN	MD	MN	MM	MB
ㅂ	P	B	PK	MN	PT	MN	MM	PP
ㅇ	NG	NG	NGG	NGN	NGD	NGN	NGM	NGB

	INITIAL	ㄱ	ㄷ	ㄷ	ㅋ	ㅌ	ㅍ	ㅎ
FINAL		S2	CH	CH'	K'	T'	P'	H
ㄱ	K	KS	KCH	KCH'	KK'	KT'	KP'	KH
ㄴ	N	NS	NJ	NCH'	NK'	NT'	NP'	NH
ㄹ	L	LS	LCH	LCH'	LK'	LT'	LP'	RH
ㅁ	M	MS	MJ	MCH'	MK'	MT'	MP'	MH
ㅂ	P	PS	PCH	PCH'	PK'	PT'	PP'	PH
ㅇ	NG	NGS	NGJ	NGCH'	NGK'	NGT'	NGP'	NGH

1. Consonant between two vowels is transcribed with its initial value except that ㄱ is G, ㄷ is D, ㅂ is B, ㄷ is J, and ㅍ is P (with no apostrophe).
2. Transliterated as SHWI.
3. Is transliterated as SHI.
4. Is transliterated as SSI.

Double consonants in the initial position

ㄲ	ㄸ	ㅃ	ㅆ	ㅈ
KK	DD	BB	SS	JJ

Vowels

ㅏ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅜ	ㅠ	ㅡ	ㅣ
a	ya	o	yö	o	yo	u	yu	ü	i

ㅘ	ㅙ	ㅚ	ㅛ	ㅜ	ㅠ	ㅡ	ㅞ	ㅟ	ㅠ	ㅡ
wa	wö	ae	e	oe	Wi	üi	wae	we	yae	ye

Geographic Names and Units in North Korea

Geographic place names include the administrative unit, except for cities, provinces and mountains. The administrative unit follows the place name, and a hyphen separates the place name and administrative unit. See the following table for an explanation of Korean geographic/administrative units. Note that the place names "No-dong" and "Taepo-dong" include hyphens, but the missile names "Nodong" and "Taepodong" do not.

Geographic Units

Korean	English	Definition	Examples
노동자 구	nodongjagu	Special administrative districts for mining, forestry or other enterprises. The term literally means "labour district."	Okp'yŏng-dnodongjagu
동	dong	Smallest administrative unit of a town, village or city	No-dong, Taepo-dong, Kwahak-dong
리	ri	Village	Musudan-ri, Kumchang-ri, Yŏngjo-ri
구	ku	District within a town, village or city	Tongdaemun-ku
읍	ŭp	Town	Chunggang-ŭp
군	kun	County	Hwadae-kun
구역	kuyŏk	District	Taesŏng-kuyŏk
지구	chigu	District	Kŭmho-chigu
시	shi	City	Pyongyang, Kanggye
도	do	Province	South Hamgyŏng Province
도	do	Island	Mayang Island
산	san	Mountain	Mt. Kŭmgang
봉	Pong	Peak	Kungmang Peak (國望峰)

Names of the cities of Seoul and Pyongyang are exceptions because of traditional usage:

Seoul (Sŏul)

Pyongyang (P'yŏngyang)

Proper Names, Names of People and Public Figures

Korean names begin with the surname and are followed by the given name. The given name does not have a hyphen between the first and second syllables. "Lee" is used for the common name "李" or "이 (리)," and "Park" is used for the common name "朴" or "박." Alternative spellings that have become standard for public figures are used:

Chung Ju Young (Chung Chu Yŏng)

Kim Dae Jung (Kim Tae Chung)

Kim Il Sung (Kim Il Sŏng)

Kim Jong Il (Kim Chǒng Il)
Kim Young Sam (Kim Yǒng Sam)
Park Chung Hee (Park Chǒng Hŭi)
Rhee Syngman (Lee Sǔng Man)
Roh Moo Hyun (No Mu Hyǒn)
Roh Tae Woo (No T'ae U)

Proper Names for Missiles

Nodong
Taepodong-1
Taepodong-2
Hwasǒng-5
Hwasǒng-6
Paektusan-1

Proper Names for Publications

The North Korea Country Profile utilizes the same spellings adopted by major publications, even though the spellings may be different from those found in some other sources. The following is a list of common news publications found in the North Korea country profile:

Chosun Ilbo (Chosǒn Ilbo)
Chugan Chosun (Chugan Chosǒn)
Donga Ilbo (Tong'a Ilbo)
Hankook Ilbo (Han'guk Ilbo)
Hankyoreh 21 (Han'gyǒre 21)
Hankyoreh Shinmun (Han'gyǒre Shinmun)
Joongang Ilbo (Chung'ang Ilbo)
Kook Bang Ilbo (Kukpang Ilbo)
Kukmin Ilbo (Kungmin Ilbo)
Kwahak Donga (Kwahak Tong'a)
Kyunghyang Shinmun (Kyǒnghyang Shinmun)
Minju Joson (Minju Chosǒn)
Munhwa Ilbo
Rodong Shinmun (Rodong Shinmun)
Segye Ilbo
Seoul Shinmun (Sǒul Shinmun)
Shindonga (Shindong'a)
Taehan Maeil
Wolgan Chosun (Wǒlgan Chosǒn)

South Korean Ministry of Education Romanization System

Below are tables for the South Korean Ministry of Education transliteration system.

Consonants

	INITIAL	ㅇ	ㄱ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ
FINAL			ㄱ	ㄴ	ㄷ	ㄹ	ㅁ	ㅂ
ㄱ	k	g	kg	ngn	kd	ngn	ngm	kb
ㄴ	n	n	ng	nn	nd	ll (nn)	nm	nb
ㄹ	l	r	lg	ll	ld	ll	lm	lb
ㅁ	m	m	mg	mn	md	mn	mm	mb
ㅂ	p	b	pg	mn	pd	mn	mm	pb
ㅇ	ng	ng	ngg	ngn	ngd	ngn	ngm	ngb

	Initial	ㅅ	ㅆ	ㅈ	ㅊ	ㅌ	ㅍ	ㅎ
Final		s	j	ch	k	t	p	h
ㄱ	k	ks	kj	kch	kk	kt	kp	kh(k)
ㄴ	n	ns	nj	nch	nk	nt	np	nh
ㄹ	l	ls	lj	lch	lk	lt	lp	lh
ㅁ	m	ms	mj	mch	mk	mt	mp	mh
ㅂ	p	ps	pj	pch	pk	pt	pp	ph (p)
ㅇ	ng	ngs	ngj	ngch	ngk	ngt	ngp	ngh

"Final" refers to the final position character in a Korean syllable.

"Initial" refers to the first position character in a Korean syllable. When the final position character of one syllable is followed by the first position character of the next, the phonetic value of either or both characters changes in a limited number of cases as demonstrated here.

Plosives (stops)

ㄱ	ㄱ	ㅋ	ㄷ	ㄸ	ㄹ	ㅂ	ㅃ	ㅍ
g,k	kk	k	d,t	tt	t	b,p	pp	p

Affricates

ㅆ	ㅆ	ㅈ
j	jj	ch

Fricatives

ㅅ	ㅆ	ㅎ
s	ss	h

Vowels

ㅏ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅜ	ㅠ	ㅡ	ㅣ	ㅝ	ㅞ	ㅟ	ㅠ	ㅢ
a	eo	o	u	eu	i	ae	e	oe	wi	ya				

ㅟ	ㅠ	ㅠ	ㅢ	ㅤ	ㅥ	ㅦ	ㅧ	ㅨ	ㅩ	ㅪ	ㅫ	ㅬ	ㅭ	ㅮ
yeo	yo	yu	yae	ye	wa	wae	wo	we	ui					



Foreword

The current edition of the directory *Enterprises of North Korean Defence Industry Complex* is one of a few attempts undertaken in the West at the present time to summarize information on industrial enterprises and scientific organizations engaged in defence research and the production of arms and military equipment.

At the same time, this is the first of such attempts to collect and summarize information on North Korean enterprises belonging to the structure of the defence agencies.

Proceeding from the importance of this goal, the collective of the Research Analyst Defence (Waterlooville) Limited considers timely the publication of a directory on enterprises of North Korean defence complex.

The present edition does not pretend to exhaustive completeness. It includes only that information which has been disseminated in recent years at arms and military equipment exhibitions or has been published in the open press. However, we hope that the directory will be a timely guide for those who are interested in promoting or acquiring defence-industry-complex products.

The directory is intended for those persons to whom contacts with the North Korean defence industry complex are essential for one reason or another. This includes marketing specialists, representatives of the defence industry and foreign trade organizations, leaders of OPK enterprises, military and civilian analysts, journalists, and also everyone else who is interested in the North Korean defence complex.

Research Analyst Defence (Waterlooville) Limited will be grateful for all constructive criticism, comments, additions, and suggestions to be considered in subsequent editions of the publication.

ACRONYMS LIST

List “A”

AAA: Anti-Aircraft Artillery
AAM: Air-to-Air Missile
AAMRI: China Air-to-Air Missile Research Institute
AASPT: Academy of Aerospace Solid propulsion Technology
ABM: Anti-Ballistic Missile
AC: Alternating current
ADS: Automatic dependent surveillance
AEW: Airborne Early Warning
AFV: Armoured Fighting Vehicle
AI: Artificial Intelligence
AIP: Air-Independent Propulsion
ALCM: Air-Launched Cruise Missile
AO: Joint-Stock Company
AOOT: Open-Type Joint-Stock Company
AOZT: Closed-Type Joint-Stock Company
APC: Armoured Personnel Carrier
APU: Auxiliary Power Unit
ASAT: Anti-Satellite
ASCM: Air-to-Surface Cruise Missile (Anti-Ship Cruise Missile)
ASIC: Application Specific Integrated Circuits
ASM: Air-to-Surface Missile
ASM: Anti-Ship Missile
ASW: Anti-Submarine Warfare
AT: Anti-Tank
ATACMS: Army Tactical Missile System
ATC: Air Traffic Control
ATGM: Anti-Tank Guided Missile
ATIC: China Aerospace Time Instrument Corporation
ATM: Air Traffic Management
ATM: Asynchronous Transfer Mode
AVIC: Aviation Industries of China
AVIC I: China Aviation Industries Corporation I (1)
AVIC II: China Aviation Industries Corporation II (2)
AWACS: Airborne Warning and Control System

List “B”

BMD: Ballistic Missile Defence
BVR: Beyond Visual Range

List “C”

C4I: Command, Control, Communications and Intelligence
C4ISR: Command, Control, Computers, Communications, and Intelligence, Surveillance, and Reconnaissance

CAAC: *Civil Aviation Administration of China*
CAD: *Computer Aided Design*
CAE: *Chinese Aeronautical Establishment*
CAEIT: *China Academy of Electronics and Information Technology*
CAEP: *China Academy of Engineering Physics*
CAIC: *China Aerospace Industry Corporation*
CALT: *China Academy of Launch Vehicle Technology*
CAM: *Computer Aided Manufacturing*
CANDU: *Canada Deuterium Uranium (reactor)*
CAPUMIT: *China Association for the Peaceful Use of Military Industry Technology*
CAS: *Chinese Academy of Sciences (Academia Sinica)*
CASC: *China Aerospace Science and Technology Corporation*
CASET: *China Academy of Space Electronics Technology*
CASIC: *China Aerospace Science and Industry Corporation*
CAST: *China Academy of Space Technology*
CATIC: *China National Aero technology Import and Export Corporation*
CCD: *Charged Coupled Device*
CCP: *Chinese Communist Party*
CDMA: *Code Division Multiple Access*
CEP: *Circular Error of Probability*
CGWIC: *China Great Wall Industry Corporation*
CHAIC: *Changhe Aircraft Industries Corporation*
CHETA: *China Haiying Electromechanical Technology Academy*
CIAE: *China Institute of Atomic Energy*
CIC: *China's Shipping Industry Company*
CIMS: *Computer Integrated Manufacturing System*
CITIC: *China International Trust and Investment Corporation*
CMC: *Central Military Commission*
CMOS: *Complementary Metal-Oxide Semiconductors*
CNGC: *China North Industries Group Corporation (aka NORINCO)*
CNNC: *China National Nuclear Corporation*
CNSA: *China National Space Administration*
CNS/ATM: *Communication, Navigation, and Surveillance/Air Traffic Management*
COCOM: *Co-ordinating Committee for Multilateral Export Controls*
COMINT: *Communications Intelligence*
COSCO: *Shipyards Group (Chinese Shipyards Owned by Chinese Shipping Conglomerates)*
COSTIND: *State Commission on Science Technology and Industry for National Defence*
CPMIEC: *China Precision Machinery Import and Export Corporation*
CPKM: *Commercial Perigee Kick Motor*
CSIC: *China Shipbuilding Industry Corporation (Zhongguo Chuanbo Zhonggong Jituan Gongsi)*
CSIS: *China Shipbuilding Industry Services*
CSOIC: *China Shipbuilding and Offshore International Company*
CSQC: *Chinese Society for Quality Control*
CSS: *China Surface-to-Surface*
CSSC: *China State Shipbuilding Corporation*
CSTC: *China Shipbuilding Trading Corporation*
CTBT: *Comprehensive Test Ban Treaty*
CWC: *Chemical Weapons Convention*
CZ: *Changzhen (Long March Launch Vehicle)*

List “D”

DC: Direct Current
DEW: Directed Energy Weapon
DF: Dong Feng (East Wind – Ballistic Missile)
DFH: Dongfanghong (the East is Red)
DH: Dong Hai (East Sea)
DSMAC: Digital Scene Matching and Correlation
DU: Depleted Uranium
DWT: Dead Weight Tonnage

List “E”

ECCM: Electronic Counter-Counter-Measures
ECM: Electronic Counter-Measures
ELINT: Electronic Intelligence
EMI: Electromagnetic Interference
EMP: Electromagnetic Pulse
EPKM: Earth Perigee Kick Motors
ERA: Explosive Reactive Armour
ERFB-BB: Extended Full Bore Base Bleed
ESM: Electronic Support Measures
ESR: Electro-Slag Manufacturing Techniques
EVA: Extra-vehicular Activities (Space)
EW: Electronic Warfare

List “F”

FADECS: Full Authority Digital Engine Control System
FAE: Fuel Air Explosive
FB: Unknown
FBC: Unknown
FBL: Fly-by-Light
FBW: Fly-by Wire
FGUP: Federal State Unitary Enterprise
FLIR: Forward Looking Infrared (Sensors)
FMS: Flexible Manufacturing System
FOBS: Fractional Orbit Bombardment System
FSGIC: Fujian Shipbuilding Industry Group Corporation
FT: Fei Tung

List “G”

GaAs: Gallium Arsenide
GAD: General Armaments Department
GED: General Equipment Armaments Department (PLA)
GEO: Geosynchronous, or Geostationary Earth, Orbit
GGWIC: China Great Wall Industry Corporation
GIS: Geographic Information System

GLD: General Logistics Department (PLA)
GLONASS: Global Positioning System (Russian)
GP: State Enterprise
GPCR: Great Proletarian Cultural Revolution
GPMG: General Purpose Machine Gun
GPS: Global Positioning System (US)
GSD: General Staff Department (PLA)
GSG: Guangzhou Shipbuilding Group) Guangdong Province)
GTO: Geosynchronous Transfer Orbit
GUP: State Unitary Enterprise

List “H”

HAIG: Hongdu Aviation Industrial Group
HDTV: High Definition Television (Digital)
HE: High Explosive
HEAT: High Explosive Anti-Tank
HGP: Human Genome Project
HJ: Hong Jian (Red Arrow)
HLW: High Level Waste (Radioactive)
HPC: High Performance Computer
HPM: High Powered Microwave
HQ: Hong I (Red Flag or Red Banner)
HUD: Head Up Display
HY: Hai Ying (Sea Eagle)

List “I”

IAEA: International Atomic Energy Agency
IC: Integrated Circuit
ICBM: Intercontinental Ballistic Missile
IEAS: Institute of Electronics of Academia Sinica
IFF: Identify Friend or Foe
IFV: Infantry Fighting Vehicle
ILS: Instrument Landing System
IMINT: Imagery Intelligence
IN: Inertial
INS: Inertial Navigational System
IR: Infrared
IRBM: Intermediate Range Ballistic Missile
IRSA: Institute of Remote Sensing Applications
ISO: International Standards Organisation
IT :Information Technology
IW: Information Warfare

List “J”

JH: Unknown
JJ: Unknown

JL: Jug Lang (Giant Wave)

JL: Ju Lang (Giant Wave)

List “K”

kt: Kilo Ton

kw: Kilowatt

KB: Design Bureau

KS: Kai Shan

List “L”

LACM: Land Attack Cruise Missile

LAV: Lightly Armoured Vehicle

LEO: Low Earth Orbit

LIEOE: Buoying Institute of Electro-Optical Equipment

LILW: Low and Intermediate Level Waste (Radioactive)

LM: Long March (Chang Zen)

LMG: Light Machine Gun

LNG: Liquid Natural Gas

LPG: Liquid Propane Gas

LRBM: Long Range Ballistic Missile

LST: Landing Ship Tank

LWIR: Long Wave Infrared

LY: Laying (Falcon)

List “M”

M: Mach

MAD: Mutual Assured Destruction

MAD: Magnetic Anomaly Device

MANPAD: Man Portable Air Defence

MANPADs: Man Portable Air Defence System

MARIC: Marine Design and Research Institute of China

MARV: Manoeuvring Re-Entry Vehicle

MAS: Ministry of Aerospace Industry

MBI: Machine Building Industry

MBT: Main Battle Tank

MEMS: Micro Electro-Mechanical Systems

MIRV: Multiple Independently Targeted Re-Entry Vehicle

MLS: Microwave Landing Systems

MLRS: Multiple Launch Rocket System

MMB: Ministry of Machine Building

MMW: Millimetre Wave

MoC: Ministry of Communications

MOFTEC: Ministry of Foreign Trade and Economic Co-operation

MOST: Ministry of Science and Technology

MRBM: Medium Range Ballistic Missile

MRO: Military Representative Office

MRV: Multiple Re-Entry Vehicles

mt: Megaton

MTCR: Missile Technology Control Regime

mw: Megawatt

List “N”

NBCW: Nuclear, Biological and Chemical Warfare

NC: Numerically Controlled

NDIO: State Council National Defence Industry Office

NDSTC: National Defence Science and Technology Commission

NII: Scientific-Research Institute

NORINCO: Northern Chinese Industries Corporation

NPO: Science and Production Association

NPT: Nuclear Non Proliferation Treaty

NRSCC: National Remote Sensing Centre of China

NSG: Nuclear Suppliers Group

List “O”

OAO: Open Joint-Stock Company

OKB: Experimental Design Bureau

OPK: Defence-Industrial Complex

OTH: Over the Horizon

List “P”

PC: Personal Computer

PCB: Printed Circuit Board

PENAIIDS: Penetration Aids (Ballistic Missile)

PERT/CPM: Project Evaluation and Review Technique/Critical Path Method

PGM: Precision Guided Munitions

PL: Pi Li (Thunderbolt)

PLA(N): People’s Liberation Army (Navy)

PLA: People’s Liberation Army

PLAAF: People’s Liberation Army Air Force

PO: Production Association

PRC: People’s Republic of China

PSYOP: Psychological Operations

PWR: Pressurised Water Reactor

List “Q”

QW: Qian Wei (Vanguard)

List “R”

R&D: Research and Development

RADAG: Radar digital area guidance system

RASU: Russian Agency for Control System

RAV: Russian Conventional Arms Agency
RCS: Radar Cross-Section
RF: Radio Frequency
RFI: Radio Frequency Interference
RKT: Space-rocket equipment/technology
RMA: Revolution in Military Affairs
Rmb: Renminbi (unit of currency in China)
RPG: rocket Propelled Grenade
RPV: Remotely Piloted Vehicles
RSGS: Remote Sensing Ground Station
RV: Re-Entry Vehicles

List “S”

S&T: Science and Technology
SAIC: Sichuan Aerospace Industry Corporation
SAIG: Shenyang Aircraft Industry Group
SAM: Surface-to-Air Missile
SAR: Semi-Active Radar
SAR: Synthetic Aperture Radar
SAST: Shanghai Academy of Space Flight Technology
SAW: Surface Acoustic Wave
SBI: Ship Building Industry
SD: Shanghai (Ship) Design
SDARI: Shanghai Ship Design and Research Institute
SDH: Synchronous Digital Hierachy
SEZ: Special Economic Zone
SIGINT: Singnals Intelligence
SJSG: Shanghai Jiangnan Shipbuilding Group
SLAR: Self-Loading Assault Rifle
SLBM: Submarine Launched Ballistic Missile
SLOWPOKE: Safe Low Power Critical Experiment Miniature Reactor
SLV: Space Launch Vehicle (Satellite)
SOE: State Owned Enterprises
SP: Joint Venture
SP: Self-Propelled
SPAAG: Self-Propelled Anti-Aircraft Gun
SPATG: Self-Propelled Anti-Tank Gun
SPG: Self-Propelled Gun
SRBM: Short Range Ballistic Missile
SSBN: Nuclear-Powered Ballistic Missile Submarine
SSG: Shanghai Shipbuilding Group
SSK: Diesel Electric Powered Submarine
SS-N: Surface-to-Surface Navy
SSN: Nuclear-Powered Attack Submarine
SSTO: Single-Stage-to-Orbit (Space Launcher)
STECO: Central Military Commission Science and Technology Equipment Commission
STOL: Short Take-Off and Landing
SWG: Shanghai Waiqaoqiao Group
SZHS: Shanghai Zhonghua Hudong Shipbuilding Group

List “T”

TEL: Transporters, Erector and Launcher
TERCOM: Terrain Contour Matching (Guidance System)
TERCOM: Terrain Comparison; Matches radar pictures of terrain with a computer database of terrain images to guide a missile to its target
TFR: Terrain Following Radar
TJ: Tianjin air launched missile series
TL: Unknown
TMD: Theatre Missile Defence
TNP: Consumer Goods
TOW: Optically Aimed Wired Guided Anti-Tank Missile
TQC: Total Quality Control
TsNII: Central Scientific Research Institute
TSTO: Two Stage to Orbit (Space Launcher)
TT&C: Tracking, Telemetry and Control
TV: TeleVision
TY: Tian Yan (Heavenly Swallow)

List “U”

UAV: Unmanned Aerial Vehicle
UHF: Ultra High Frequency

List “V”

VED: Foreign-Economic Affairs
VES: Foreign Economic Relations
VFAC: Variable Frequency Alternating Current
VHF: Very High Frequency
VLS: Vertical Launch System
VLSI: Very Large Scale Integrated (Circuits)
VSAT: Very Small Aperture Satellite Terminals
V/STOL: Vertical/Short Take Off and Landing

List “W”

W: Watt
WIG: Wing In Ground
WMD: Weapon of Mass Destruction
WTO: World Trade Organisation
WVR: Within Visual Range
WWII: World War Two

List “X”

XAIG: Xi'an Aircraft Industrial Group
XISRT: Xi'an Institute of Space Radio Technology

List “Y”

YJ: Ying Ji (Eagle Strike)

List “Z”

ZAO: Closed Joint-Stock Company

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[ACRONYMS LIST

AO: Joint-Stock Company
AOOT: Open-Type Joint-Stock Company
AOZT: Closed-Type Joint-Stock Company
FGUP: Federal State Unitary Enterprise
GP: State Enterprise
GUP: State Unitary Enterprise
KB: Design Bureau
NII: Scientific-Research Institute
NPO: Science and Production Association
OAO: Open Joint-Stock Company
OKB: Experimental Design Bureau
OPK: Defense-Industrial Complex
PO: Production Association
RASU: Russian Agency for Control System
RAV: Russian Conventional Arms Agency
RKT: space-rocket equipment/technology
SP: Joint Venture
TNP: Consumer Goods
TsNII: Central Scientific Research Institute
VED: Foreign-Economic Affairs
VES: Foreign Economic Relations
ZAO: Closed Joint-Stock Company]

Section 1

118 Factory

Pyongyang
North Korea

[Last updated 2 May 2007]

The 118 Factory in Pyongyang, Pyongyang-si, which was previously involved in an effort to produce reverse-engineered versions of the Luna-2 and Luna-M, would appear to be a likely candidate for work on the KN-02.

125 Factory

P'yongyang
(25 km North of P'yongyang)
North Korea

[Last updated 11 August 2006]

During 1981 – 82 the DPRK began to assemble the industrial infrastructure required to support an indigenous ballistic missiles programme.

This programme involved construction or conversion of:

- (a) The 125 Factory (P'yongyang)
- (b) A military Research and Development Facility at Sanum-don
- (c) The Musudan-ri Launch Facility
- (d) A variety of other related facilities

Section 2

2.8 Vinylon Factory

North Korea

[Last updated 15 December 2006]

The petrochemical industry was initiated in the late 1970s and now possesses an annual oil refinery capacity of only 3.5 million tons.

Only 4 kinds of petrochemical products like acrylics are manufactured at the moment:

- (a) 2.8 Vinylon Factory produces 60,000 tons
- (b) Soonchun Vinylon Factory produces 50,000 tons

297 Factory

Pyongwon
North Korea

[Last updated 11 August 2006]

A plant reported to be part of the Chemical Warfare Industry of North Korea.

North Korea has at least eight industrial facilities that can produce chemical agents, however, the production rate and types of munitions are uncertain.

Presumably one or more of the agents:

- (a) Sarin
- (b) Tabun
- (c) Phosgene
- (d) Adamsite
- (e) Prussic acid
- (f) Mustard gas family

The bases of the North Korean chemical weapons are produced at the Namhung Youth Chemical Complex and/or Factory Number 297 in Pyongwon, probably a blood agent.

2nd Machine Industry Bureau

Also known as:
Second Machine Industry Bureau

North Korea

[Last updated 14 December 2006]

All TEL developments, along with other launch vehicle-related work, were apparently undertaken with the support of the Sungni General Automotive Factory and Second Machine Industry Bureau.

Section 3

Section 4

Fourth Machine Industry Bureau

North Korea

[Last updated 11 August 2006]

The reverse-engineered version of the R-17E was assigned the name Hwasong-5. The primary organisations involved in this project – as well as all missile development within the DPRK were:

- (a) Guided Missile Division of the Academy of Defence Sciences
- (b) Fourth Machine Industry Bureau

Both of these organisations were subordinate to the Second Economic Committee.

Section 5

516 Construction Company

Gaeseong
North Korea

Last updated 13 November 2008]

Namkwang Engineering & Construction, a South Korean company which has recently been stepping up efforts for inter-Korean economic projects, plans to form a joint venture with a North Korean firm for construction works in the North and other countries.

Namkwang E&C CEO Lee Dong-chul told reporters Tuesday that his company, along with 516 Construction Company in the North, will seek to win construction orders in foreign countries including Angola as well as North Korean cities such as Gaeseong and Pyongyang.

Section 6

Section 7

Section 8

8th February Synthetic Fiber Integrated Plant

Also known as:

Eight February Fibre Integrated Plant

North Korea

[Last updated 15 December 2006]

The Eight Plant is a large-scale complex that produces chemical fibres and has an annual capacity of 50,000 tons.

Section 9

Section Alfa

Academy of Defence Sciences

North Korea

[Last updated 11 August 2006]

Associated with:

- (a) Musudan-ni launch facility
- (b) Missile Training Guidance Bureau

11 Aug. 06

The reverse-engineered version of the R-17E was assigned the name Hwasong-5. The primary organisations involved in this project – as well as all missile development within the DPRK were:

- (c) Guided Missile Division of the Academy of Defence Sciences
- (d) Fourth Machine Industry Bureau

Both of these organisations were subordinate to the Second Economic Committee.

Academy of National Defence

North Korea

[Last updated 27 March 2007]

Unconfirmed statements from defectors tell of research under the auspices of the DPRKs Academy of National Defence on just about every lethal causative biological weapons agent known to man:

- (a) Anthrax
- (b) Botulism
- (c) Plague
- (d) Yellow fever
- (e) Typhoid
- (f) Cholera
- (g) Korean haemorrhagic fever
- (h) Virus
- (i) Tuberculosis
- (j) Typhus Smallpox

Stockpiles of anthrax, cholera and plague are reported to exist.

Air Korya

Sunan District Pyongyang
Democratic People's
Republic of Korea

[Last updated 6 March 2006]

Telephone: 00850-2-32-143

www.korea-dpr.com/airkoryo.htm

North Korea's Pyongyang-based national airline offers scheduled services to Beijing, Shenyang and Vladivostok, and charter flights to destinations such as Moscow and Tokyo.

The company, established in 1954, is fully government-owned and operates a fleet of about 20 Soviet-built jet and turboprop aircraft.

The fleet includes:

- (a) An-24B
- (b) An-24RV
- (c) Il-18D
- (d) Il-18V
- (e) Il-62M
- (f) Il-76MD
- (g) Tu-134B
- (h) Tu-154B

An River Army Barracks

North Korea

[Last updated 10 August 2006]

North Korea has tested a cruise missile (AG-1) from the Army barracks. This test was picked up by US intelligence satellites and Cobra Ball aircraft.

An-gol Army Barracks

South of Ch'ongjin
East Coast
North Korea

[Last updated 7 June 2007]

On 23 May 07, a test was conducted of the AG-1 at the Army Barracks.

The test was conducted from a self-propelled transporter-erector-launcher (TEL) and is believed to have been an indication that the missile was operational.

Anju Chemical Plant

Also known as:

Namhung Youth Chemical Complex

Anju
North Korea

[Last updated 11 August 2006]

A plant reported to be part of the Chemical Warfare Industry of North Korea.

North Korea has at least eight industrial facilities that can produce chemical agents, however, the production rate and types of munitions are uncertain.

Presumably one or more of the agents:

- (g) Sarin
- (h) Tabun
- (i) Phosgene
- (j) Adamsite
- (k) Prussic acid
- (l) Mustard gas family

The bases of the North Korean chemical weapons are produced at the Namhung Youth Chemical Complex and/or Factory Number 297 in Pyongyang, probably a blood agent.

Anju District Coal Mine

Anju
North Korea

[Last updated 19 June 2006]

The Anju District coal-mining complex is the leading coal producer. A large-scale open-pit mine was being developed in the Anju District in 1990

Anju Jaeji Paper Factory

North Korea

[Last updated 18 December 2006]

The paper manufacturing industry comprises over 10 factories like:

- (a) Anju Jaeji Paper Factory
- (b) Gilju Pulp
- (c) Howryung Paper Factory

The factories were established in the 1950s and 60s. But due to shortage of timber, reed and corn, straw is used to make low grade paper.

Aoji Chemical Plant

Aoji
North Korea

[Last updated 11 August 2006]

A plant reported to be part of the Chemical Warfare Industry of North Korea.

April 25th Vinalon Factory

North Korea

[Last updated 14 December 2006]

Vinalon continues to be produced (2006) at the:

- (a) April 25 Vinalon Factory
- (b) February 8th Vinalon Factory
- (c) Sunch'on Vinalon Complex

All of these organisations are suspected of producing mustard, as well as blood agents (e.g., cyanogen chloride), choking agents (phosgene), and riot-control agents (CN).

August Third people's Consumer Good Production Movement

North Korea

[Last updated 18 December 2006]

Since the early 1960s, local industry has been the major supplier of consumer goods and foodstuffs.

With the introduction of the ATPCGPM in effect since 1984, the government's policy of developing small- and medium-scale local industrial plants simultaneously with large-scale, centrally controlled light industrial plants continues into the 1990s.

Section Bravo

Banco Delta Asia SARL

Macau
China

[Last updated 29 August 2006]

Last year (2005), the US Treasury department took action against a bank, Banco Delta Asia SARL, in Macau, a special administrative district of China, for what it said were lax money-laundering controls, alleging the bank helped North Korea distribute counterfeit currency and engage in other illicit activities.

The department also has moved against other companies, claiming they were helping North Korea spread weapons of mass destruction.

29 May 2009

The watershed in US attempts to shut down the financing of North Korea's WMD proliferation took place in September 2005.

The US Treasury announced a proposed rule against Macau-based Banco Delta Asia (BDA).

Issued under Section 311 of the US Patriot Act, the proposal cited BDA as of primary money laundering concern for its facilitation of North Korea's illicit activities over a period of more than 20 years.

Baekdu

North Korea

[Last updated 13 November 2008]

Recently, North Korean construction companies, such as:

- a. Daedong River
- b. Neungra
- c. Baekdu
- d. Goonpyo

These Companies have established their offices in many parts of Russia.

Bukchang Aluminium Factory

North Korea

[Last updated 15 December 2006]

North Korea set up smelters in the east and west to produce lead (production capacity: 90,000 tons), zinc (300,000 tons) and copper (90,000 tons).

Bukchang began operations in March 1985 under the technical support of the Soviet Union, has an annual production capacity of 20,000 tons.

Bukjung Machine Factory

North Korea

[Last updated 18 December 2006]

The following organisations produce construction machines like excavators, bulldozers (300 hp) and cranes (100 tons):

- (a) Nakwon Machine Factory
- (b) Bukjung Machine Factory
- (c) Pyongyang Construction Machine Factory

Section Charlie

Chamjin Ammunition/Missile Factory

Chamjin-ri
Namp'o-si
Southwest of P'yongyang
North Korea

[Last updated 5 July 2006]

Associated with the Taepodong-2

Chagang Missile Bases

Chagang Province
North Korea

[Last updated 14 December 2006]

A defector from 1994 stated that the Missile bases in Chagang Province are targeted at the PRC.

Changgwang Credit Corporation

North Korea

[Last updated 11 August 2006]

One of a series of North Korean Industries that has US sanctions placed against it.

Changgwang Sinyong Corporation

North Korea

[Last updated 13 November 2008]

One of a series of North Korean Industries that has US sanctions placed against it.

The sanctions on the North Korean entity, Changgwang Sinyong Corporation, were imposed pursuant to the Arms Export Control Act and the Export Administration Act on the basis of knowing involvement in the transfer of Category I (under the Missile Technology Control Regime) missiles or components.

Changgwang Sinyong Corp was also involved in the Khan Research Laboratories (KRL) nuclear debacle from Pakistan.

13 November 2008

North Korea's main export item remains ballistic-missile technology.

There are especially two North Korean companies that have attracted the attention of Western diplomats:

- a. Changgwang Sinyong Corporation
- b. Lyongaksan General Trading Company

In the 1990s, the U.S. government for exporting ballistic-missile technology to Pakistan sanctioned Changgwang.

In July this year, Washington once again sanctioned Changgwang, this time for providing Iran with the same technology.

According to Western diplomats, Lyongaksan, which like Changgwang is controlled by the North Korean military, sends people under commercial cover to countries such as Syria and Libya, where they in reality sell weapons systems.

Chaho Naval Shipyard

Chaho
North Korea

[Last updated 19 November 2008]

040.12.30.15N
128.38.42.21E

A moderate sized Naval Shipyard that is home for the surface fleet and submarines.

Chemical Industry Research Institute

North Korea

[Last updated 15 August 2006]

Very little is known of this Institute.

Chiha-ri Staff Headquarters Area

Chiha-ri Area
(Approximately 85 km southeast of P'yongyang and 50 km north of the DMZ)
North Korea

[Last updated 14 December 2006]

The Hwasong missile regiments are under the direct control of the General Staff Department.

The regiment is believed to be headquartered in the Chiha-ri area; individual missile battalions are deployed nearby in separate bases.

The regiment's technical support battalion is also reported to be at Chiha-ri.

Ch'ngjin Chemical Plant

Ch'ngjin
North Korea

[Last updated 18 December 2006]

A plant reported to be part of the Chemical Warfare Industry of North Korea.

18 Dec. 06

The government has called for accelerating the expansion projects at both the Siniju and Ch'ngjin chemical fibre complexes, Vinylon textile (100,000 tons) made from Anthracite coal + limestone, and viscous textile made from timber and reed occupy an 88% share of total production capacity.

Ch'ngnyn Integrated Chemical Works

Anju District
North P'yongyang
North Korea

[Last updated 15 December 2006]

Ch'ngnyn is a French-built petrochemical complex designed to produce:

- (a) Ethylene
- (b) Polyethylene
- (c) Acrylonitrile
- (d) Urea.

The nearby refinery at Unggi supplies the necessary crude petroleum.

Ch'ngjin Machine Tool Plant

North Korea

[Last updated 15 December 2006]

Extract from report: The quality of machinery generally is considered below international standards, some of the largest machinery plants are:

- (a) Yongsng Machinery Works
- (b) Rakwn Machinery Works
- (c) Taeon Heavy Machinery Works
- (d) Hich'n Machine Tool General Works
- (e) Ch'ngjin Machine Tool Plant

Chengchengang Thermo-Electric Plant

Chengchengang
North Korea

[Last updated 15 August 2006]

One of the largest Thermo-Electric Plants in North Korea, the others are:

- (a) Pukchang
- (b) Pyongyang
- (c) Unggi (Oung gi)
- (d) Chog Zin
- (e) Sunchon
- (f) Chengchengang
- (g) East Pyongyang

Chog Zin

Chog Zin
North Korea

[Last updated 15 August 2006]

One of the largest Thermo-Electric Plants in North Korea, the others are:

- (a) Pukchang
- (b) Pyongyang
- (c) Unggi (Oung gi)
- (d) Chog Zin
- (e) Sunchon
- (f) Chengchengang
- (g) East Pyongyang

Chongjin Chemical Enterprise

Chongjin
North Korea

[Last updated 15 August 2006]

According to defector reports, this Chemical Enterprise has been shut down on several occasions because of lack of fuel (coal) to keep it open.

Choson Bongwha Company

Choson
North Korea

[Last updated 14 November 2008]

Choson Bongwha Company specializes in commission-based textile production.

Chosun Computer Centre

North Korea

[Last updated 18 December 2006]

Though North Korea has tried to develop its own computer manufacturing technology since the 1960s, only the most rudimentary computers are produced due to shortage of technical manpower and to the primitive semiconductor-related electronic industry.

Since the 1980s, research institutes like Science Research Institute have imported key components like CPUs and Ics and succeeded in assembling 8-bit grade computers.

Currently the Pyongyang Computer Assembly Factory possesses an annual production capacity of more than 30,000 units of computers.

The Pyongyang Programme Centre and Chosun Computer Centre develop or utilise more than 30 kinds of software such as:

- (a) Korean Front End Processor for Windows 95
- (b) Chosun word processing programme Tangun
- (c) Korean Word processor Changdock

Chosun International Development Trust Company

Chosun
North Korea

[Last updated 14 November 2008]

North Korea's Chosun International Development Trust Company, founded less than four years ago, is quickly emerging as the centre for all of North Korea's overseas business transactions.

This was made public in an article published in the September 18 edition of the Chosun Sinbo, the newspaper of the Jochongryeon, an organization representing the North Korean diaspora in Japan.

The main imports of the trust are:

- a. Soybean oil and other foodstuffs
- b. Fertilizer
- c. Farm-use products such as vinyl sheeting, which are high on the list of consumer demands within North Korea

The trust has set up an exchange market in the Botong River area of Pyongyang, and is responsible for providing production materials to the North's businesses and farming towns.

The trust seeks capital, particularly Chinese capital in Beijing and Jilin, and invests this foreign capital in the building and operating of a leaf tobacco processing plant, a hygienic products production plant, food processing facilities, automobile repair facilities, and other joint venture and cooperative venture projects.

Ch'onma-san

North Korea

[Last updated 14 August 2006]

A potential site for Uranium enrichment, other sites include:

- (a) Taechon
- (b) Pyongyang
- (c) Ch'onma-san

Choson Sinbo

Japan

[Last updated 29 August 2006]

A newspaper considered the Communist regimes mouth piece said on Saturday that North Korea would not rule out a nuclear test if what it labelled a hostile U.S. policy continues, amid growing concerns that it was preparing such a move.

"We can't say for sure that North Korea will not conduct a nuclear test as part of strengthening its self defence," said Choson Sinbo, a newspaper published in Japan by a pro-North Korean association linked to the Pyongyang regime, said.

"The full responsibility for this lies with the U.S., which regards any forces that don't agree with or submit to its logic or actions as evil," the paper said, accusing Washington of trying to topple the North's communist regime.

"It is self-evident that we have to take strong countermeasures to protect our country from that threat," the paper added.

Pyongyang says it has nuclear weapons, but hasn't conducted any known test to prove its claims.

Chullima Steel Mill

Also known as:

Chollima Steel Kombinat

North Korea

[Last updated 13 November 2008]

Head Manager: Kim Hyng Nam (Dec 06 -)

Main steel producers like Kimch'aek, Hwanghae steel factory, Chullima steel mill, and Sunjin steel manufacturing plant were all constructed during the colonial era.

They were reconstructed and expanded with technical support from former Soviet Russia and China.

The Kimch'aek Integrated Iron and Steel Works has surpassed the Hwanghae Iron Works to become the largest steel and iron centre.

13 Nov. 08

Kim Hyung Nam, head manager of Chollima Steel Kombinat.

Chunbi District Coal Mine

North Korea

[Last updated 19 June 2006]

Coal deposits amounting to 10 million tons also exist in Chunbi, T'-gol, and Kangdong in Kangdong District

Chungjin Machine Tool Factory

North Korea

[Last updated 18 December 2006]

The machine tool sector has been developed intensely according to the policy of parallel development of the economy and national defence. The following factories:

- (a) Heechun
- (b) Gusung
- (c) Chungjin
- (d) Mankyungdae

Machine tool factories possess an annual production capacity of 3.5 mil. Units.

Since the 1960s ordinary machine tool imitation production has been carried out under the support of former Soviet Union and Eastern Europe. Therefore, most ordinary machine tools are produced domestically.

Chungjin Bus Factory

North Korea

[Last updated 18 December 2006]

Automobile design and production is virtually all imitation.

The following organisations are known:

- (a) Seungri Automobile Factory
- (b) Pyongyang Railless Tram Car Factory
- (c) Chungjin Bus Factory

The organisations possess a total annual production capacity of over 30,000 units of freight cars, passenger cars, busses, etc.

Unable to develop new products, however, they are restricted to imitation of old Soviet and East-European automobiles.

Chungjin Railway Factory

North Korea

[Last updated 18 December 2006]

Various types of railroad cars are produced at:

- (a) Kim Jong Tae Locomotives Factory
- (b) Wonsan Railway Cars Factory
- (c) Chungjin Railway Factory

Chungjin Shipyard

North Korea

[Last updated 18 December 2006]

There are over 10 shipyards in North Korea all are based in:

- (a) Nampo
- (b) Wonsan
- (c) Chungjin

Because they lack proper docking facilities, they presently can build only less than 20,000 DWT-level vessels.

Because designing methods is inadequate, ships are built on the basic model of 14,000 and 20,000 DWT grade cargo vessels and 3,750 DWT fishing vessels.

Few ships are exported.

Chungganjin Launch Site

Huchang Country
Jagang Province
North Korea

[Last updated 10 August 2006]

A site at Chungganjin in Huchang Country, Jagang Province, completed in 1995-can target US troops on Okinawa.

Section Delta

Daedong River Construction Company

North Korea

[Last updated 13 November 2008]

Recently, North Korean construction companies, such as:

- e. Daedong River
- f. Neungra
- g. Baekdu
- h. Goonpyo

These Companies have established their offices in many parts of Russia.

Daedong River Instant Noodle Factory

Pyongyang
North Korea

[Last updated 13 November 2008]

Pyongyang Wheat Flour Factory is located in Samheong-dong of Mankyungdae District, in Pyongyang, and mainly produces wheat flour, cookie, noodle, and yeast.

North Korea built its first noodle factory, Daedong River Instant Noodle Factory, with foreign capital in August 2000 along the Daedong River in Pyongyang

Daepung Investment Group

North Korea

[Last updated 14 November 2008]

Vice President: Bae Kyeong Hwan (Nov 08 -)

North Korea's Daepung Investment Group will set up a \$10 billion fund with China Development Bank to help Chinese firms operating in North Korea, Yonhap News reported, citing the company's vice president.

The fund will be used to help Chinese companies build roads, railways and ports in North Korea; Daepung Vice President Bae Kyeong Hwan was quoted as saying. Bae didn't say how much each country will contribute the fund.

Daepung also plans to set up a bank to attract investment from overseas, the report said.

Danchon Tailings Project

South Hamgyong Province
600 km Northeast of Pyongyang
North Korea

[Last updated 22 September 2008]

A North Korean gold mine that boasts:

- (a) Guesthouse, lodging and welfare facilities for local staff
- (b) A 66KV power substation at 2,500 KVA
- (c) Pumping station and draining station (350m³)
- (d) Results of assaying and metallurgical testing on the tailings
- (e) Results of drilling (basics for calculating ore quantity)

Dia-Star Corporation

North Korea

[Last updated 22 September 2008]

E-mail: korea@korea-dpr.com

www.korea-dpr.com/business

Production of engine generators, gasoline engines, engine pumps

Associated with the production of:

- (a) KP-50H
- (b) KP-50HE
- (c) KP-80L
- (d) KH-18
- (e) KH-18D/G
- (f) KH-21
- (g) KH-21D/G
- (h) Cubic Tester Z1-453
- (i) Noise Tester ZKM2
- (j) Vibration Tester 7102A
- (k) CO-HC Analyser ZFE-1
- (l) Dynamometer 450P21

Also associated with the research and development into small power sources

Doksong Long-Range Missile Base

South Hamgyong Province
Doksong County
North Korea

[Last updated 14 December 2006]

North Korea's Military Construction Bureau is building a long-range surface-to-surface missile base in Doksong County in South Hamgyong Province according to a defector from the country.

Dongkong Foreign Trade Corporation

Dandong
China

[Last updated 13 November 2008]

Dongkong Foreign Trade Corporation in the Chinese city of Dandong, just across the border from North Korea, acquired in September the exclusive right to sell North Korean medicines in the international market—including a brand called Cheongchun No. 1, which is a home-made North Korean version of Viagra.

Dongchang-ni Missile Launch Base

Also known as:

Dongchang-ri

Dongchang-ni
North Korea

[Last updated 2 June 2009]

A new North Korean missile launch site under construction is designed to fire rockets even more advanced than those already capable of reaching the western U.S., South Korea said Tuesday 4 Nov 08.

South Korean Defense Minister Lee Sang-hee told parliament that construction on the new site on North Korea's west coast began eight years ago and is about 80 percent complete.

The site in the village of [Dongchang-ni](#) appears to be designed to launch "a bigger-sized missile or satellite projectile" than rockets deployed from the North's east coast facility.

2 June 2009

The North has moved a long-range missile to a new base in Dongchang-ri along its northwestern coast and a launch could take place in one or two weeks, South Korea's Yonhap news agency quoted an unnamed intelligence official as saying.



The North has another site on the east coast at Musudan-ri, from where it fired a Taepodong-2 rocket over Japan in April. It said the launch was to put a satellite in orbit but other nations saw it as a disguised missile test.

Along with new facilities, Dongchang-ri has a geographical advantage. It's close to Pyongyang as well as (the nuclear facilities at) Yongbyon.

Section Echo

Electronics Engineering Research Institute

North Korea

[Last updated 18 December 2006]

The electronics industry in North Korea is rudimentary at best compared with other nations.

Development efforts began in the 1980s.

Now Pyongyang Integrated Circuit Factory and Electronics Engineering Research Institute produce basic semiconductor elements and small-scale IC chips.

Electric home appliances like TVs and radios incorporate imported components, but goods requiring advanced technology cannot be produced.

Section Foxtrot

Factory 39

Oryong-nodongjagu
Kujang
North Pyongan province
100 km Northeast of Pyongyang
North Korea

[Last updated 5 May 2010]

This facility produces RPG grenades known as No. 7 launch tubes or 7-ho palsagwan, these are derivatives of the RPG-7.

The launch tubes are manufactured at the Tongnimobong Precision Machine Plant in Obong-ri.

Cost of these rounds is \$US 1,000

The complex employs about 7,000 workers and is managed by the Second Economic Committee.

The Factory 39 complex has 18 underground workshops that are accessed through four tunnel entrances.

The workshops are equipped with imported machine tools and other equipment from countries such as the former Soviet Union, China and the Czech Republic.

The complex produces:

- a. Missiles
- b. Missile components
- c. 220 mm artillery shells
- d. 120 mm artillery shells
- e. Gravity bombs for aircraft

The compound includes numerous support facilities and administrative buildings, including facilities for security, research and development, testing and quality control.

The Factory 39 manager is a member of the Supreme Peoples' Assembly, the national unicameral legislature, and holds the equivalent rank of colonel, which is the rank he would assume upon national mobilisation or war.

While the manager is a technician dealing with the administrative issues related to operating the production line, a KWP secretary is in charge of political affairs and issues related to the daily lives of the workers.

While a division of labour exists in the operation of the complex, ultimately the party secretary has more authority.

February 8th Vinalon Factory

North Korea

[Last updated 14 December 2006]

Vinalon continues to be produced (2006) at the:

- (a) April 25 Vinalon Factory
- (b) February 8th Vinalon Factory
- (c) Sunch'on Vinalon Complex

All of these organisations are suspected of producing mustard, as well as blood agents (e.g., cyanogen chloride), choking agents (phosgene), and riot-control agents (CN).

Foreign Trade Bank of Korea

North Korea

[Last updated 20 December 2006]

President of Bank: O Kwang Chol

Beijing, US and North Korean financial experts met Tuesday 19 December 06 over Washington's campaign to isolate the communist country from the international banking system, the key stumbling block in negotiations over Pyongyang's nuclear program.

Representing the U.S. at the financial talks was Daniel Glaser, the Treasury Department's deputy assistant secretary for terrorist financing and financial crimes. O Kwang Chol, president of the North's Foreign Trade Bank of Korea, led the North Korean delegation. The talks were held at the U.S. Embassy, an embassy official said on condition of anonymity because of policy.

Section Golf

Gilju Nuclear Test Site

Hamgyong Province
North East
North Korea

[Last updated 9 September 2006]

North Korea says it has carried out its first test of a nuclear weapon, the state news agency (KCNA) has reported.

It said the underground test, carried out in defiance of international warnings, was a success and had not resulted in any leak of radiation.

The White House said South Korean and US intelligence had detected a seismic event at a suspected test site.

The White House said, if confirmed, the test would be a "provocative act", while China denounced it as "brazen".

In its strongest statement ever against its ally, China expressed its "resolute opposition" to the claimed test and said it "defied the universal opposition of international society".

Japan's Prime Minister Shinzo Abe said the test was "unpardonable".

South Korea said it would "sternly respond".

President Roh Moo-hyun has called an emergency meeting of South Korea's National Security Council and put the armed forces on a heightened state of alert.

Seoul also suspended a scheduled aid shipment to North Korea, the state news agency reported. US White House spokesman Tony Snow said: "We expect the UN Security Council to take immediate actions to respond to this unprovoked act."

'Historic event'

The US Geological Survey said it had detected a 4.2 magnitude quake in North Korea, while a South Korean official said a 3.5 magnitude seismic tremor had been detected in north Hamgyong province, in the northeast.

South Korea's Yonhap news agency is reporting that the test took place in Gilju in Hamgyong province at 1036 (0136 GMT).

A top Russian military officer said it was "100%" certain that an underground nuclear explosion had taken place.

When it announced the test, KCNA described it as an "historic event that brought happiness to our military and people".

"The nuclear test will contribute to maintaining peace and stability in the Korean peninsula and surrounding region," KCNA said.

The region has been on high alert since North Korea announced last week that it would conduct a nuclear test.

Shinzo Abe is in Seoul for a meeting with Mr Roh, a day after talks in Beijing.

Mr Abe said Japan wanted to co-ordinate its response with the South Koreans, and was also in contact with the US and China.

In Tokyo, ministers were called to an urgent meeting, and the government set up a special task force.

Gilju Pulp

North Korea

[Last updated 18 December 2006]

The paper manufacturing industry comprises over 10 factories like:

- a. Anju Jaeji Paper Factory
- b. Gilju Pulp
- c. Howryung Paper Factory

The factories were established in the 1950s and 60s. But due to shortage of timber, reed and corn, straw is used to make low grade paper.

Goonpyo

North Korea

[Last updated 13 November 2008]

Recently, North Korean construction companies, such as:

- a. Daedong River
- b. Neungra
- c. Baekdu
- d. Goonpyo

These Companies have established their offices in many parts of Russia.

Gusung Machine Tool Factory

North Korea

[Last updated 18 December 2006]

The machine tool sector has been developed intensely according to the policy of parallel development of the economy and national defence. The following factories:

- a. Heechun
- b. Gusung
- c. Chungjin
- d. Mankyungdae

Machine tool factories possess an annual production capacity of 3.5 mil. Units.

Since the 1960s ordinary machine tool imitation production has been carried out under the support of former Soviet Union and Eastern Europe. Therefore, most ordinary machine tools are produced domestically.

Section Hotel

Hamgyong-bukto Launch Site

Northeast Province Hamgyong-bukto
North Korea

[Last updated 7 June 2007]

A short-range missile test occurred at 0900h on 25 May 07.

It is not known what type of missile was launched.

Hamhung Chemical Plant

Hamhung
North Korea

[Last updated 11 August 2006]

A plant reported to be part of the Chemical Warfare Industry of North Korea.

Hamhung Military Academy

Also known as:

Hamhung Defence Academy

Military Academy of Hamhung

North Korea

[Last updated 13 December 2006]

During 1965, Premier Kim Il-song, laid the basis of the DPRKs missile infrastructure by establishing the Hamhung Military Academy to support development of modern weapons, including missiles.

The Hamhung Academy was made directly subordinate to the MoD (now Ministry of People's Armed Forces).

In establishing the new organisation Kim stated:

- (a) If war breaks out, the US and Japan will also be involved. In order to prevent their involvement, we have to be able to produce rockets, which fly as far as Japan. Therefore it is the mandate of the Military Academy to nurture those personnel, which are able to develop mid- and long-range missiles.
- (b) The First Department will study Missile Engines.
- (c) Other departments study;
 - a. Missile
 - b. Physics
 - c. Chemical and Biological warfare

In 1968 the academy was moved to Kanggye where its became known as the Kanggye Military Academy.

Hamhung Research Institute

North Korea

[Last updated 11 August 2006]

A Research Institute (RI) reported to be part of the Chemical Warfare Industry of North Korea.

Heechun Machine Tool Factory

North Korea

[Last updated 18 December 2006]

The machine tool sector has been developed intensely according to the policy of parallel development of the economy and national defence. The following factories:

- (e) Heechun
- (f) Gusung
- (g) Chungjin
- (h) Mankyungdae

Machine tool factories possess an annual production capacity of 3.5 mil. Units.

Since the 1960s ordinary machine tool imitation production has been carried out under the support of former Soviet Union and Eastern Europe. Therefore, most ordinary machine tools are produced domestically.

HELM

P'yongyang
North Korea

[Last updated 11 August 2006]

News Service: Kyodo News International, Inc. The Associated Press

The freeze dryer a Korean trader exported to North Korea four years ago (2002) might be used at a Pyongyang clinic for top leader Kim Jong Il, Japanese police sources said Friday.

The trader -- Kim Young Gun, 58, former president of the Tokyo-based Meisho Yoko trading house -- has told Japanese investigators that he had heard that the dryer would be used at the Ponghwa clinic, the sources said.

The Ponghwa clinic is known to be reserved for only a limited number of VIPs -- high-ranking members of the country's governing Workers Party of Korea.

The sources also said the freeze dryer might be used at the Ponghwa clinic, a facility suspected to be the site of North Korea's researches on biological weapons.

Kim Young Gun, a Korean resident of Japan, was arrested Thursday for illegally exporting to North Korea the freeze dryer that could be converted and used for producing biological weapons.

Freeze dryers, which quickly dry solid substances in a vacuum, are mainly used to produce instant coffee granules or instant noodles. Exports of the machines are strictly controlled under the Foreign Exchange and Foreign Trade Control Law as freeze dryers can be used to keep and cultivate bacteria over long periods of time and can be converted to produce weapons of mass destruction.

Meisho Yoko, based in Tokyo's Sugunami Ward, exported the freeze dryer in September 2002 in response to an order placed by a North Korean trading house on behalf of another trader called HELM Pyongyang.

HELM Pyongyang has accepted staff from the Korea Rungra 888 trading house which is under Kim Jong Il's direct control.

On Thursday, a team of investigators from Yamaguchi and Shimane prefectural police departments arrested Kim on suspicion of violating the Foreign Exchange and Foreign Trade Control Law for exporting the dryer via a Taiwan trading house without gaining permission from the minister of economy, trade and industry.

Meisho Yoko is suspected of placing an order for the dryer with the Taiwan trading house, which then bought it through a Tokyo-based scientific instrument maker's sales agent based in Taiwan and passed it on to Meisho Yoko.

Heungnam Fertilizer Factory

North Korea

[Last updated 15 December 2006]

Fertilizer in North Korea is produced by synthesizing ammonia by methods now considered outdated at 14 factories like Heungnam.

Since most factories were built before the 60s, operation rates have been low due to aging machinery, and a shortage of energy and raw materials like injunggwang and anthracite coal.

Fertilizer factories in North Korea mainly produce nitrogen and Phosphorous fertilizer.

They cannot produce potassium fertilizer and compound fertilizer, which has to be imported from Russia and China.

Human waste and animal manure is used widely.

Alternative fertilizers like humus soil collected from coal mine ash and soot collected from factories (burned ash fertilizer) are also widely employed.

Since 1995, microbe fertilizer production technology has been introduced.

Hich'n Machine Tool General Works

North Korea

[Last updated 15 December 2006]

Extract from report: The quality of machinery generally is considered below international standards, some of the largest machinery plants are:

- (a) Yongsng Machinery Works
- (b) Rakwn Machinery Works
- (c) Taeon Heavy Machinery Works
- (d) Hich'n Machine Tool General Works
- (e) Ch'ngjin Machine Tool Plant

Hyoksin Trading Corporation

North Korea

[Last updated 5 August 2009]

Hyoksin Trading is owned or controlled by another North Korean firm, Korea Ryonbong General Corp., which the United States say is involved in the development of weapons of mass destruction. Korea Ryonbong supports Pyongyang's sales of military-related items.

The Obama administration on 30 July 09 imposed financial sanctions on a North Korean firm accused of involvement in the country's missile programs.

The Treasury Department's action covers Korea Hyoksin Trading Corp. It means any bank accounts or other financial assets found in the United States that belong to the company must be frozen. Americans also are prohibited from doing business with the firm.

Howryung Paper Factory

North Korea

[Last updated 18 December 2006]

The paper manufacturing industry comprises over 10 factories like:

- (a) Anju Jaeji Paper Factory
- (b) Gilju Pulp
- (c) Howryung Paper Factory

The factories were established in the 1950s and 60s. But due to shortage of timber, reed and corn, straw is used to make low grade paper.

Hwadae-Gun Test Site

Also known as:

Hwadae-gun Missile Test Facility

North Hamgyong Province
North Korea
(North east of NK)

[Last updated 10 August 2006]

Used by self-propelled No Dong 1 missiles for launch testing

Hwadae Missile Base

North Hamgyong Province
North Korea

[Last updated 14 December 2006]

A defector in 1994 reported that the missile site at Myongch'on and Hwadae in North Hamgyong Province have Okinawa and Guam within their engagement range.

Hwanghae Steel Factory

North Korea

[Last updated 15 December 2006]

Main steel producers like Kimch'aek, Hwanghae steel factory, Chullima steel mill, and Sunjin steel manufacturing plant were all constructed during the colonial era.

They were reconstructed and expanded with technical support from former Soviet Russia and China.

The Kimch'aek Integrated Iron and Steel Works has surpassed the Hwanghae Iron Works to become the largest steel and iron centre.

Section India

Iwon Airfield

North Korea

[Last updated 14 November 2008]

040.21.40.69N

128.43.10.30E

This is a 2,500 m [airstrip](#) with taxiway that runs from East to West.

Section Juliet

Jeungsan Short-Range Missile Test Site

Jeungsan County
40 km West of Pyongyang
North Korea

[Last updated 13 June 2008]

A South Korean government source, said that three short-range missiles were fired on Friday 30th May into the Yellow Sea off Jeungsan County, some 40 kilometres (25 miles) west of Pyongyang.

This is the second test carried out by North Korea in the last two months, part of a training exercise involving Russian-designed Styx ship-to-ship missiles with a range of 46 kilometres, the report said.

"The missile launch, like the test-firing conducted on March 28, is part of normal military training aimed at testing the performance of the missiles and improving operational readiness," the unnamed source was quoted as saying.

13 June 2008

North Korea test-fired three x Styx-type anti-ship missiles off its west coast on May 30.

They were launched into the Yellow Sea from Jeungsan, 40 kilometers west of Pyongyang.

Section Kilo

Kaesong Industrial Complex

Kaesong
North Korea

[Last updated 17 October 2007]

The Kaesong Industrial Complex employs 10,000 North Koreans.

This complex has seen investment from South Korea encouraging a more liberal economic reform but still retaining political control.

17 Oct. 07

South Korea sees Kaesong, which employs more than 13,000 North Koreans in 26 South Korean factories, as a flagship project to reform the North's moribund economy and ease the massive costs of any eventual reunification.

Kangdong District Coal Mine

Kangdong District
North Korea

[Last updated 19 June 2006]

Coal deposits amounting to 10 million tons also exist in Chunbi, T' gol, and Kangdong in Kangdong District

Kanggye Military Academy

Also known as:

National Defence College

Kanggye Defence College

Kanggye Defence Academy

Kanggye Military Academy

Kanggye
North Korea

[Last updated 13 December 2006]

During 1965, Premier Kim Il-song, laid the basis of the DPRKs missile infrastructure by establishing the Hamhung Military Academy to support development of modern weapons, including missiles.

The Hamhung Academy was made directly subordinate to the MoD (now Ministry of People's Armed Forces).

In establishing the new organisation Kim stated:

- (d) If war breaks out, the US and Japan will also be involved. In order to prevent their involvement, we have to be able to produce rockets, which fly as far as Japan. Therefore it is the mandate of the Military Academy to nurture those personnel, which are able to develop mid- and long-range missiles.
- (e) The First Department will study Missile Engines.
- (f) Other departments study;
 - a. Missile
 - b. Physics
 - c. Chemical and Biological warfare

In 1968 the academy was moved to Kanggye where its became known as the Kanggye Military Academy.

Kanggye Research Institute

North Korea

[Last updated 11 August 2006]

A Research Institute (RI) reported to be part of the Chemical Warfare Industry of North Korea.

Kangwon-do KPA Base

Kangwon-do Province
North Korea

[Last updated 14 December 2006]

A Hwasong 5 was launched from an indigenously produced TEL at a forward KPA base in Kangwon-do Province (which encompasses the I and V Corps deployed along the DMZ).

Kilchu Highway Air Strip

Kilchu
North Korea

[Last updated 14 November 2008]

The airstrip is roughly 1,700 m in length, and appears to be based on an old roadway.

There are no taxiways and no supporting infrastructure.

Kimch'aek Integrated Iron and Steel Works

North Korea

[Last updated 15 December 2006]

Main steel producers like Kimch'aek, Hwanghae steel factory, Chullima steel mill, and Sunjin steel manufacturing plant were all constructed during the colonial era.

They were reconstructed and expanded with technical support from former Soviet Russia and China.

The Kimch'aek Integrated Iron and Steel Works has surpassed the Hwanghae Iron Works to become the largest steel and iron centre.

Kim Il-sung University

North Korea

[Last updated 14 August 2006]

Yi Pong-won graduated from this university before serving as Chief Secretary of the Kaesong Party Committee.

Kim Jong Tae Locomotives Factory

North Korea

[Last updated 18 December 2006]

Various types of railroad cars are produced at:

- (d) Kim Jong Tae Locomotives Factory
- (e) Wonsan Railway Cars Factory
- (f) Chungjin Railway Factory

Korea Foreign Commodity Inspection Committee

Central District
Pyongyang
North Korea

[Last updated 14 August 2006]

Telephone: 381-6252

Telegraph Code: KFCIC PYONGYANG

Telex: 5972 TECH KP

This committee inspects and appraises exporting and importing cargos as an official inspection institution for those.

The committee belongs to Foreign Economic Committee of the Cabinet.

The committee operates branch committees in major ports such as:

- (a) Nampo
- (b) Haeju
- (c) Hungnam
- (d) Wonsan
- (e) Chongjin
- (f) Rajin
- (g) Songlim

Korea International Exhibition Corporation

Jungsong-dong
Central District
Pyongyang
North Korea

[Last updated 14 August 2006]

Telephone: 850-2-381-6054

Fax: 850-2-381-4440

Telegraph Code: ZENRAM PYONGYANG

Telex: 5952 ZR KP

Business related to hosting of North Korean Exhibition and exhibiting in a foreign country

Business related to participating in international sample exhibition hosted in a foreign country and exhibiting

Receiving and accepting of the hosting of a foreign exhibition in North Korea and its related business

Overseas PR and advertisement

Korea Pugang Trading Corporation

North Korea

[Last updated 11 August 2006]

One of a series of North Korean Industries that has US sanctions placed against it.

Korean Mining and Industrial Development Corporation

Also known as:

Korea Mining Development Trading Corp

North Korea

[Last updated 29 May 2009]

A North Korean company that has sanctions placed against it in August 2006.

26 Jan. 07

One of 24 Companies sanctioned by the US

25 April 09

A Security Council committee on Friday placed three North Korean companies on a U.N. blacklist for aiding Pyongyang's missile and nuclear programs, eliciting a sharp rebuke from a North Korean envoy.

The three companies put on the list are:

- a. Korea Mining Development Trading Corp.
- b. Korea Ryongbong General Corp.
- c. Tranchon Commercial Bank

The decision said the three companies were linked to the military and active in procuring equipment and financing for North Korea's ballistic missile and other weapons programs.

29 May 2009

On April 24, the UN sanctions committee banned transactions with, and called on member-states to freeze the assets of, three North Korean businesses. Korea Mining Development Trading Corp., Korea Ryonbong General Corp., and Tanchon Commercial Bank were targeted.

Korean People's Army Number 7 Factory

North Korea

[Last updated 5 July 2006]

Associated with the Taepodong-2

Koryo Global Credit Bank

Pyongyang
North Korea

[Last updated 14 August 2006]

This bank opened in Pyongyang in June 2006.

Kumchang-ri

North Korea

[Last updated 14 December 2006]

Satellite images have shown a SECRET nuclear site called Kumchang-ri, near North Korea's border with China.

Kumchon-ri

Kangwon Province
North Korea

[Last updated 14 December 2006]

Additional facilities are under construction near the DMZ at Satgatmol in Hwanghae province and Kumchon-ri in Kangwon province.

Kusong Military Daily Necessities Factory

Kusong
North Pyongan province
115 km North, Northwest of Pyongyang
North Korea

[Last updated 5 May 2010]

Production of missiles marked K-100 man-portable SAMs, these are the same missiles found on an Il-76 in Thailand and referred to as Iglá.

Kuum Ni Airfield

North Korea

[Last updated 11 February 2009]

038.51.57.62N

127.54.27.46E

This airfield boasts a 2,500 m airstrip with long taxiway to the East of the main runway

The airstrip runs from the South West to the North East

To the East of the taxiway is a heavily defended air-defence area with missiles and guns

No aircraft observed at time of last visit

No civilian habitation nearby only military

11 Feb. 09

No signs of any aircraft or helicopters at the site.

Kuktong Airfield

Namsong Dong (nearest town)
North Korea

[Last updated 14 November 2008]

This airfield has a 1,200 m long grass runway going from East to West.

When last observed at least 40 aircraft of varying types were parked alongside support buildings.

Section Lima

Leybold AG

West Germany (now Germany)

[Last updated 14 August 2006]

In 1987, North Korea reportedly received a small annealing furnace from the West German Company Leybold AG.

Although they have many other uses, annealing furnaces can be used in production of centrifuge rotors for uranium enrichment. A five-year-long German intelligence investigation conducted from 1985 to 1990 concluded that Iraq, and possibly Iran and North Korea obtained uranium melting information from Pakistan in the late 1980s.

U.S. intelligence sources also believed that technicians employed by Leybold AG were involved in transferring equipment and information to North Korea. One or two such technicians were in North Korea in 1989 and another Leybold employee reportedly was seen there in 1990.

Subsidiaries of Leybold AG were also involved in exporting centrifuge-related welding equipment to Iraq in the late 1980s.

Lyongaksan Machineries and Equipment Export Corporation

North Korea

[Last updated 11 August 2006]

One of a series of North Korean Industries that has US sanctions placed against it.

Lyongaksan General Trading Corporation

North Korea

[Last updated 13 November 2008]

One of a series of North Korean Industries that has US sanctions placed against it.

13 November 2008

North Korea's main export item remains ballistic-missile technology.

There are especially two North Korean companies that have attracted the attention of Western diplomats:

- a. Changgwang Sinyong Corporation
- b. Lyongaksan General Trading Company

In the 1990s, the U.S. government for exporting ballistic-missile technology to Pakistan sanctioned Changgwang.

In July this year, Washington once again sanctioned Changgwang, this time for providing Iran with the same technology.

According to Western diplomats, Lyongaksan, which like Changgwang is controlled by the North Korean military, sends people under commercial cover to countries such as Syria and Libya, where they in reality sell weapons systems.

Section Mike

Mankyungdae Machine Tool Factory

North Korea

[Last updated 18 December 2006]

The machine tool sector has been developed intensely according to the policy of parallel development of the economy and national defence. The following factories:

- (a) Heechun
- (b) Gusung
- (c) Chungjin
- (d) Mankyungdae

Machine tool factories possess an annual production capacity of 3.5 mil. Units.

Since the 1960s ordinary machine tool imitation production has been carried out under the support of former Soviet Union and Eastern Europe. Therefore, most ordinary machine tools are produced domestically.

Manp'o Chemical Plant

North Korea

[Last updated 11 August 2006]

A plant reported to be part of the Chemical Warfare Industry of North Korea.

Mant'apsan Mountain

Northwest of Kilchu
North Korea

[Last updated 12 October 2006]

South Korean National Intelligence has reported tunnelling and construction activities within this area. A horizontal tunnel approximately 700 m in length is under construction and could possibly be related to a nuclear test programme.

Other suggestions are that it could also be an underground missile base.

Mangyongdae Revolutionary Institute

North Korea

[Last updated 14 August 2006]

Little is known about the Institute except that most political and military leaders appear to have studied there, either before going to further education at Russian Institutes or after returning to North Korea after studying in Russia.

Mayang-do Shipyard

Also known as:

Mayang-do Naval Base

Yuktae-dong
North Korea

[Last updated 19 November 2008]

040.01.38.96N
128.09.56.39E

Producers of the Romeo (Type 033) class submarine

Meisho Yoko Trading House

Suginami Ward
Tokyo
Japan

[Last updated 11 August 2006]

News Service: Kyodo News International, Inc.The Associated Press

The freeze dryer a Korean trader exported to North Korea four years ago (2002) might be used at a Pyongyang clinic for top leader Kim Jong Il, Japanese police sources said Friday.

The trader -- Kim Young Gun, 58, former president of the Tokyo-based Meisho Yoko trading house -- has told Japanese investigators that he had heard that the dryer would be used at the Ponghwa clinic, the sources said.

The Ponghwa clinic is known to be reserved for only a limited number of VIPs -- high-ranking members of the country's governing Workers Party of Korea.

The sources also said the freeze dryer might be used at the Ponghwa clinic, a facility suspected to be the site of North Korea's researches on biological weapons.

Kim Young Gun, a Korean resident of Japan, was arrested Thursday for illegally exporting to North Korea the freeze dryer that could be converted and used for producing biological weapons. Freeze dryers, which quickly dry solid substances in a vacuum, are mainly used to produce instant coffee granules or instant noodles. Exports of the machines are strictly controlled under the Foreign Exchange and Foreign Trade Control Law as freeze dryers can be used to keep and cultivate bacteria over long periods of time and can be converted to produce weapons of mass destruction.

Meisho Yoko, based in Tokyo's Suginami Ward, exported the freeze dryer in September 2002 in response to an order placed by a North Korean trading house on behalf of another trader called HELM Pyongyang.

HELM Pyongyang has accepted staff from the Korea Rungra 888 trading house which is under Kim Jong Il's direct control.

On Thursday, a team of investigators from Yamaguchi and Shimane prefectural police departments arrested Kim on suspicion of violating the Foreign Exchange and Foreign Trade Control Law for exporting the dryer via a Taiwan trading house without gaining permission from the minister of economy, trade and industry.

Meisho Yoko is suspected of placing an order for the dryer with the Taiwan trading house, which then bought it through a Tokyo-based scientific instrument maker's sales agent based in Taiwan and passed it on to Meisho Yoko.

Mining Development Trading Corporation

Also known as:

KOMID

North Korea

[Last updated 4 August 2009]

KOMID is one of three North Korean companies targeted under U.N. sanctions in April in response to the North's rocket launch earlier that month. North Korea insisted it sent a satellite into orbit, while the U.S. and its allies said it was actually a long-range missile test.

KOMID is an arms dealer and main exporter of goods and equipment related to ballistic missiles and conventional weapons, according to the U.S. Treasury Department.

A Chinese investment company Zhongkuang International Investment, has abruptly suspended a joint project with a North Korean firm KOMID after signing a contract in 2006 to develop a bronze mine in the North and commissioned NHI Shenyang Mining Machinery, another Chinese company to build facilities for the mine.

Missile Training Guidance Bureau

North Korea

[Last updated 5 July 2006]

The military organisation tasked with control over all ballistic missile units and operations.

Associated with:

- (a) Musudan-ni launch facility
- (b) Academy of Defence Sciences

Mt. Chun Ma

North Korea

[Last updated 14 August 2006]

One defector, who was debriefed by Chinese officials in 1999 (he later returned to North Korea, where, it is assumed, he was killed), claimed that North Korea was operating secret uranium Processing site under Mt. Chun-Ma. Commercial satellite photographs of Hagap show a tunnel entrances but little else.

Mt. Kanggamchan Launch Site

South Pyongan Province
North Korea

[Last updated 10 August 2006]

A launch site for No Dong and Taepo Dong missiles

The navy has also completed a surface-to-ship missile base at the same location.

Mt. Mantap

North Hamkyong Province
North Korea

[Last updated 12 October 2006]

South Korea's National Intelligence Service reports a new tunnel beneath Mount Mantap in North Hamkyong province, several miles from Pung'gye.

All potential North Korean test sites apparently have railheads, so Kim Jon II who prefers to travel by train, can visit them.

Musudan-ri.

Subordinate to:

Academy of Defence Sciences

Missile Test Range

[Musudan-ri](#)

Hwadae County (Hwadae-gun)

(30 km south east of Kilchu)

North Hamgyong Province (Hamgyong-bukto)

(North Hamkyong Province)

North Korea

40°51'N 129°40'E

40°51.342'N 129°39.948'E, Test Facility

40°51.138'N 129°40.788'E, Launch Complex

40°51.348'N 129°39.552'E, [Missile Assembly/Checkout Building](#)

40°51.78'N 129°39.624'E, Missile Control Building

[Last updated 26 February 2009]

On Sunday 18 June 2006, that North Korea had completed fuelling its Taepodong 2 missile - seen as a critical step in the preparations for a test launch.

South Korean daily Chosun Ilbo recently reported that booster rockets had been loaded onto a launch pad, and 10 fuel tanks moved to the site in the northeast of the country in preparation for a launch.

North Korea last tested a long-range missile in 1998, when it fired a [Taepodong-1](#) missile, with a range of 2,000km, over northern Japan. The missile landed in the Pacific Ocean.

The Taepodong-2 is believed to have a range of up to 6,000km (3,700 miles), suggesting it has the potential to hit Alaska.

4th July 2006

North Korea launched a Taepodong-2 missile that failed after approximately 40 seconds of flight. At the same time the Musudan-ri test site also launched between 4 – 6 shorter-range missiles one of which fell 600 km off the coast of Japan.

The 117th Engineer Regiment of the Ministry of Public Security (now the Ministry of People's Security) began construction of the facility during the early 1980s under the cover designation of

the Hwadae Agriculture Experimental Station (also known as Hwadae Agriculture Experimental Yard).

The area chosen for the facility was and is isolated from the transportation network, having no all-weather paved roads or rail connections. The closest air and port facilities are located near Kilchu and Kimch'aek respectively.

Musudan-ni consists of:

- (a) Command Post (Centre)
- (b) Fuel storage facility
- (c) Assembly maintenance building
- (d) Launch control centre
- (e) Launching pad with flame deflection panel
- (f) Launch maintenance tower
- (g) Engine test stand
- (h) Range tracking and telemetry facilities

Strong similarities to the Chinese launch facility areas suggest that Musudan-ni is based on Chinese designs.

During 1981 – 82 the DPRK began to assemble the industrial infrastructure required to support an indigenous ballistic missiles programme.

This programme involved construction or conversion of:

- (e) The 125 Factory (P'yongyang)
- (f) A military Research and Development Facility at Sanum-don
- (g) The Musudan-ri Launch Facility
- (h) A variety of other related facilities

Associated with the following missiles:

- (a) Taepo Dong 5
- (b) Hwasong 5 (R-17E)

25 August 2006:

Musudan-ri is a rocket launching site in North Korea at 40°51'N 129°40'E.

It lies in southern North Hamgyong province, near the northern tip of the East Korea Bay.

The area was formerly known as Taep'o-dong, from which the Taepodong rockets take their name.

Since 1984 military rockets of the types Hwasong, Nodong and Taepodong-1 were launched from Musudan-ri. In 1998, North Korean media reported the successful launch of the Kwangmyŏngsŏng satellite by a Taepodong rocket from Musudan-ri. North Korea claimed their first satellite was successfully placed into orbit, but no independent sources have confirmed this.

The facilities at Musudan-ri are modest, consisting of a launch pad at 40°51.342'N 129°39.948'E, an engine test stand at 40°51.138'N 129°40.788'E, a [missile assembly/checkout building](#) at 40°51.348'N 129°39.552'E, and a missile control building at 40°51.78'N 129°39.624'E (coordinates obtained from Google Earth in June, 2006).

2 October 2008

North Korea has been upgrading a missile launch site on its east coast in preparation for a test launch of a new long-range missile.

Citing intelligence sources, activities at Musudan-ri on the coast of North Hamkyong province are focused on upgrading the site with new equipment or building new facilities.

Intelligence authorities believe this indicates the North is preparing to test-fire a new long-range ballistic missile, an advanced model of the Taepodong-2 that can theoretically hit the U.S. west coast.

11 Feb. 09

"Vehicles carrying equipment needed for missile launch were moving toward the (east coast) Musudan-ri base," Yonhap news agency quoted a South Korean government source as saying.

The source said that if the North continued at its current pace, it could launch a Taepodong-2 in a month.

26 Feb. 09

North Korea has built an underground fuelling station at its long-range missile test site, making it harder for US spy satellites to predict the date of a launch.

The underground facility at Musudan-ri on its northeast coast was completed sometime between late 2008 and early this year.

Myongch'on Missile Base

North Hamgyong Province
North Korea

[Last updated 14 December 2 006]

A defector in 1994 reported that the missile site at Myongch'on and Hwadae in North Hamgyong Province have Okinawa and Guam within their engagement range.

Section November

Nakwon Machine Factory

North Korea

[Last updated 18 December 2006]

The following organisations produce construction machines like excavators, bulldozers (300 hp) and cranes (100 tons):

- (d) Nakwon Machine Factory
- (e) Bukjung Machine Factory
- (f) Pyongyang Construction Machine Factory

Namhung Youth Chemical Complex

Also known as

Anju Chemical Plant

North Korea

[Last updated 11 August 2006]

A plant reported to be part of the Chemical Warfare Industry of North Korea.

North Korea has at least eight industrial facilities that can produce chemical agents, however, the production rate and types of munitions are uncertain.

Presumably one or more of the agents:

- (m) Sarin
- (n) Tabun
- (o) Phosgene
- (p) Adamsite
- (q) Prussic acid
- (r) Mustard gas family

The bases of the North Korean chemical weapons are produced at the Namhung Youth Chemical Complex and/or Factory Number 297 in Pyongyang, probably a blood agent.

Nanjin Shipyard

North Korea

[Last updated 11 August 2006]

Builders of the following class of warships:

- (a) Soho class (FFG)
- (b) Najin class (FFG)
- (c) Taechong II class (LPC – large patrol craft)

Nampo Shipyard

North Korea

[Last updated 18 December 2006]

Builders of the following class of warships:

- (a) Najin class (FFG)
- (b) Soju class (FAC)

18 December 06

There are over 10 shipyards in North Korea all are based in:

- (d) Nampo
- (e) Wonsan
- (f) Chungjin

Because they lack proper docking facilities, they presently can build only less than 20,000 DWT-level vessels.

Because designing methods is inadequate, ships are built on the basic model of 14,000 and 20,000 DWT grade cargo vessels and 3,750 DWT fishing vessels.

Few ships are exported.

National Economic Cooperative Federation

Pyongyang
North Korea

[Last updated 14 August 2006]

Chairman: Jung Woon-up

Vice chairman-Lee Chang-ho

Chief Secretary-Lee Ei-duk

This organisation was previously known as:
Organization of Foreign Economic Committee, Council of State Affairs of North Korea, but
changed its name in May 1998.

The Federation is composed of:

- (a) Kwangmyongsung General Corp
- (b) Samcholli General Corp
- (c) Gaesun Trading Corp
- (d) Mt. Kumgang International General Tourism Corp
- (e) Koryo Commercial Bank

Neungra

North Korea

[Last updated 13 November 2008]

Recently, North Korean construction companies, such as:

- a. Daedong River
- b. Neungra
- c. Baekdu
- d. Goonpyo

These Companies have established their offices in many parts of Russia.

Nyongwon Hydropower Station

Nyongwon
North Korea

[Last updated 29 May 2009]

The North Korean leader addresses military officials at the newly constructed [Nyongwon Hydropower Station](#) on 19 April 2009.

On April 20, it was reported that Kim Jong Il, on a visit to the new Nyongwon Hydropower Station, called for the building of additional hydroelectric plants, citing their relative economy.

The North Korean media stated that hydroelectric plants were “not only edifices of eternal value but also more beneficial than thermal power stations and atomic power plants.”

Successes are being made in researches into and the work of prospecting more energy resources rich in the country.

A nation-wide effort has been bent to making best use of hydraulic power.

In recent years, dams of the Samsu Power Station and Nyongwon Power Station have been built and large hydro-power stations are under construction in various parts of the country, the prospect of which is also good.

Brisk is the construction of minor power stations are built in Jongphyong and Yonsa Counties and other areas with streams.

Priority is being given to geological prospecting and tunneling for securing more coal fields, so as to decisively ease the strain on power.

Solar hothouses built in institutions, industrial establishments and rural areas are paying off.

Bio-methane has found its way to rural dwelling houses in the Migok Co-op Farm in Sariwon City, North Hwanghae Province and other areas.

Wind-driven generators of various capacities are being manufactured and introduced to houses in rural and mountainous areas and efforts are being exerted to make an effective use of low-calorie coal and fly-ash.

Meanwhile, scientific research has been pushed ahead to widely use natural energies including solar, biological and tidal powers.

Section Oscar

Onjong-ri

South Pyongan Province
North Korea

[Last updated 27 March 2007]

Reported to be an underground Biological Weapons (BW) research and development Onjong-ri is in the South Pyongan Province.

North Korea is reportedly developing a clandestine biological weapon research and development programme that is suspected of having been under way since at least the 1970s.

Unconfirmed statements from defectors tell of research under the auspices of the DPRKs Academy of National Defence on just about every lethal causative biological weapons agent known to man:

- (k) Anthrax
- (l) Botulism
- (m) Plague
- (n) Yellow fever
- (o) Typhoid
- (p) Cholera
- (q) Korean haemorrhagic fever
- (r) Virus
- (s) Tuberculosis
- (t) Typhus Smallpox

Stockpiles of anthrax, cholera and plague are reported to exist.

Orang Airfield

Hoemun
North Korea

[Last updated 14 November 2008]

This airfield has a 2,500 m concrete runway with a taxiway off to one side.

The airfield is orientated North East/South West

Section Papa

Paegam District Coal Mine

Yanggang Province
North Korea

[Last updated 19 June 2006]

High-quality anthracite deposits are located in the Paegam District of Yanggang Province, and have estimated reserves of at least 1 million tons

Panghyon Aircraft Plant

Panghyon
North Korea

[Last updated 15 August 2006]

It was reported by a defector that two MiG-29 Fulcrum aircraft were first assembled here in 1993. It has since been assessed by ROK intelligence that up to 14 copies of the MiG-29 are now assembled each year and that North Korea has the technical capability to develop its own version of this aircraft.

Peace Motors Corporation

North Korea

[Last updated 22 September 2008]

E-mail: korea@korea-dpr.com

www.korea-dpr.com/business

Associated with the following cars:

- (a) Samchonri mpv
- (b)

Peoples Economic College

North Korea

[Last updated 15 August 2006]

Statistical Economics Department of the Peoples Economic College.

Pomhyanggi Cosmetics

Also known as:

Vernal Fragrance

North Korea

[Last updated 22 September 2008]

www.korea.dpr.com

Associated with the following products:

- (a) Kaesong Koryo Insam Moisture Cream
- (b) Kaesong Koryo Insam Hair Tonic
- (c) Kaesong Koryo Insam Beauty Lotion for astringency
- (d) Kaesong Koryo Insam Beauty Lotion for humidification
- (e) Kaesong Koryo Insam Night Cream
- (f) Kaesong Koryo Insam Day Cream

Pongdon-ni Missile Launch Site

Also known as:

Tongch'ang-dong Launch Facility

Dongchong-ni

Kwi-gol

Pongdon
North Korea

[Last updated 18 September 2008]

The new launch facility is built on the site of a small village called [Pongdong-ni](#), which was displaced during construction.

It includes a movable launch pad and 10-story tall tower capable of supporting North Korea's largest ballistic missiles and rockets. It also includes a rocket motor test pad and is similar in size and design to a rocket test facility outside of Tehran, Iran. There are also support buildings.

Launch Area: The launch area consists of a 40 m-tall umbilical tower adjacent to a rail-served moveable launch pad measuring 10 m x 13 m. The rails extend about 140 m from what may be the site of a future vertical assembly building. Available imagery suggests that the facility achieved an emergency launch capability in 2006.

Engine Test Stand: A static engine test stand is located approximately 1 km south of the launch pad on the edge of a canyon facing south. A concrete support pad measures 35 m x 50 m, while the concrete engine test pad measures 15 m x 25 m.

Four concrete piers support the engine test stand. There is an apparent steel support tower measuring 10 m x 10 m.

A semi-buried fuel and oxidiser building measuring 10 m x 15 m support the site. This is connected to the test pad by a buried conduit running 190 m. An aboveground conduit runs 95 m away from the semi-buried fuel building and its purpose is unknown

18 Sep. 08

North Korea tested the engine on a long-range missile at its new missile launch test site several months ago, a U.S. official said Tuesday 16th Sept.

It is the first acknowledged use of North Korea's new larger West coast missile launch facility, first reported last week by The Associated Press.

The official is involved in a U.S. effort to counter the spread of weapons of mass destruction.

The official spoke on condition of anonymity to discuss sensitive intelligence.

The Taepodong-2 missile engine tested is not believed to represent a new, longer-range capability. The missile is estimated to have a range of about 2,500 miles, potentially threatening the western edge of Alaska. The range could be extended with engine improvements and light payloads.

The engine was tested on an engine test stand, a critical facility for measuring vibration from the engines and adjusting guidance systems to account for it. That can help make missiles more accurate.

Ponghwa Clinic

P'yongyang
North Korea

[Last updated 11 August 2006]

News Service: Kyodo News International, Inc. The Associated Press

The freeze dryer a Korean trader exported to North Korea four years ago (2002) might be used at a Pyongyang clinic for top leader Kim Jong Il, Japanese police sources said Friday.

The trader -- Kim Young Gun, 58, former president of the Tokyo-based Meisho Yoko trading house -- has told Japanese investigators that he had heard that the dryer would be used at the Ponghwa clinic, the sources said.

The Ponghwa clinic is known to be reserved for only a limited number of VIPs -- high-ranking members of the country's governing Workers Party of Korea.

The sources also said the freeze dryer might be used at the Ponghwa clinic, a facility suspected to be the site of North Korea's researches on biological weapons.

Kim Young Gun, a Korean resident of Japan, was arrested Thursday for illegally exporting to North Korea the freeze dryer that could be converted and used for producing biological weapons.

Freeze dryers, which quickly dry solid substances in a vacuum, are mainly used to produce instant coffee granules or instant noodles. Exports of the machines are strictly controlled under the Foreign Exchange and Foreign Trade Control Law as freeze dryers can be used to keep and cultivate bacteria over long periods of time and can be converted to produce weapons of mass destruction.

Meisho Yoko, based in Tokyo's Sugunami Ward, exported the freeze dryer in September 2002 in response to an order placed by a North Korean trading house on behalf of another trader called HELM Pyongyang.

HELM Pyongyang has accepted staff from the Korea Rungra 888 trading house which is under Kim Jong Il's direct control.

On Thursday, a team of investigators from Yamaguchi and Shimane prefectural police departments arrested Kim on suspicion of violating the Foreign Exchange and Foreign Trade Control Law for exporting the dryer via a Taiwan trading house without gaining permission from the minister of economy, trade and industry.

Meisho Yoko is suspected of placing an order for the dryer with the Taiwan trading house, which then bought it through a Tokyo-based scientific instrument maker's sales agent based in Taiwan and passed it on to Meisho Yoko.

Pukchang Thermo-Electric Plant

Pukchang
North Korea

[Last updated 15 August 2006]

One of the largest Thermo-Electric Plants in North Korea, the others are:

- (a) Pukchang
- (b) Pyongyang
- (c) Unggi (Oung gi)
- (d) Chog Zin
- (e) Sunchon
- (f) Chengchengang
- (g) East Pyongyang

A 1996 defector (Kang Myong-to) who is the son-in-law of Kang Song-san, said that Pukchang Thermo-Electric Plant only has two of its six turbines in operation. The others are out of action presumably through either lack of fuel to drive them or maintenance.

Pyongyang Computer Assembly Factory

North Korea

[Last updated 18 December 2006]

Though North Korea has tried to develop its own computer manufacturing technology since the 1960s, only the most rudimentary computers are produced due to shortage of technical manpower and to the primitive semiconductor-related electronic industry.

Since the 1980s, research institutes like Science Research Institute have imported key components like CPUs and Ics and succeeded in assembling 8-bit grade computers.

Currently the Pyongyang Computer Assembly Factory possesses an annual production capacity of more than 30,000 units of computers.

The Pyongyang Programme Centre and Chosun Computer Centre develop or utilise more than 30 kinds of software such as:

- (d) Korean Front End Processor for Windows 95
- (e) Chosun word processing programme Tangun
- (f) Korean Word processor Changdock

Pyongyang Construction Machine Factory

North Korea

[Last updated 18 December 2006]

The following organisations produce construction machines like excavators, bulldozers (300 hp) and cranes (100 tons):

- (a) Nakwon Machine Factory
- (b) Bukjung Machine Factory
- (c) Pyongyang Construction Machine Factory

Pyongyang Integrated Circuit Factory

North Korea

[Last updated 18 December 2006]

The electronics industry in North Korea is rudimentary at best compared with other nations.

Development efforts began in the 1980s.

Now Pyongyang Integrated Circuit Factory and Electronics Engineering Research Institute produce basic semiconductor elements and small-scale IC chips.

Electric home appliances like TVs and radios incorporate imported components, but goods requiring advanced technology cannot be produced.

Pyongyang Integrated Textile Mill

North Korea

[Last updated 18 December 2006]

The textile industry, the most important light industrial sector, utilises primarily locally produced synthetics and petrochemical based fibres, as well as cotton and silk.

Pyongyang, the site of the Pyongyang Integrated Textile Mill is the country's textile capital, but Siniju and Sariwon have been gaining in importance.

Pyongyang Programme Centre

North Korea

[Last updated 18 December 2006]

Though North Korea has tried to develop its own computer manufacturing technology since the 1960s, only the most rudimentary computers are produced due to shortage of technical manpower and to the primitive semiconductor-related electronic industry.

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- (i) Korean Word processor Changdock

Pyongyang Thermo-Electric Plant

Pyongyang
North Korea

[Last updated 15 August 2006]

One of the largest Thermo-Electric Plants in North Korea, the others are:

- (a) Pukchang
- (b) Pyongyang
- (c) Unggi (Oung gi)
- (d) Chog Zin
- (e) Sunchon
- (f) Chengchengang
- (g) East Pyongyang

Pyongyang East Thermo-Electric Plant

Pyongyang
North Korea

[Last updated 15 August 2006]

One of the largest Thermo-Electric Plants in North Korea, the others are:

- (a) Pukchang
- (b) Pyongyang
- (c) Unggi (Oung gi)
- (d) Chog Zin
- (e) Sunchon
- (f) Chengchengang
- (g) East Pyongyang

Pyongyang

North Korea

[Last updated 14 August 2006]

A potential site for Uranium enrichment, other sites include:

- (d) Taechon
- (e) Pyongyang
- (f) Ch'onma-san

Pyongyang Railless Tram Car Factory

North Korea

[Last updated 18 December 2006]

Automobile design and production is virtually all imitation.

The following organisations are known:

- (d) Seungri Automobile Factory
- (e) Pyongyang Railless Tram Car Factory
- (f) Chungjin Bus Factory

The organisations possess a total annual production capacity of over 30,000 units of freight cars, passenger cars, busses, etc.

Unable to develop new products, however, they are restricted to imitation of old Soviet and East-European automobiles.

Pyongyang Wheat Flour Factory

Samheong-dong
Mankyungdae District
Pyongyang
North Korea

[Last updated 13 November 2008]

Pyongyang Wheat Flour Factory is located in Samheong-dong of Mankyungdae District, in Pyongyang, and mainly produces wheat flour, cookie, noodle, and yeast.

North Korea built its first noodle factory, Daedong River Instant Noodle Factory, with foreign capital in August 2000 along the Daedong River in Pyongyang

P'unggye-yok Nuclear Test Facility

P'unggye-yok
Near the City of Kilju
North East
North Korea

[Last updated 25 August 2006]

Report: Japan confirms activity around suspected North Korea nuclear testing site
25-Aug-2006 02:14 GMT

News Service: The Associated Press

TOKYO_Japan has boosted surveillance of North Korea after seeing vehicles entering and leaving a suspected nuclear test site, but does not know whether any test explosion of a bomb is imminent, a news report said.

The vehicles have been seen in recent days at what is thought to be a *nuclear testing site in the communist country's northeast*, Kyodo News agency reported Thursday, citing an unidentified government official.

It was unclear whether any nuclear tests by the North were imminent, but Japan is closely monitoring the situation, the official was quoted as saying.

Japan's Foreign Ministry said that Tokyo had boosted surveillance of the area. Defense officials refused to confirm the Kyodo report.

American media reported last week that U.S. officials were monitoring potentially suspicious activity at a suspected underground nuclear site.

On Thursday, South Korea's chief nuclear negotiator Chun Yung-woo warned that time was running out for countries seeking to persuade the North to disarm, but said chances of resuming international disarmament talks were slim.

"It is very dangerous to keep the current situation as it is indefinitely," he told reporters after meeting with his Japanese counterpart Kenichiro Sasae to discuss the possibility of a North Korean nuclear test.

Meanwhile, North Korea's army chief said Thursday his country will "do our utmost to bolster our self-defensive war deterrent, unhindered by anything," and criticized Washington for what he called a "dastardly and malicious hostile policy" toward the North.

The North regularly uses the term "war deterrent" to refer to its nuclear weapons program. "We will keenly watch the moves of the United States and its followers, including Japan, to stifle (North Korea) with sharp vigilance," Kim Yong Chun, chief of the general staff of the North's

Korean People's Army, said at a national meeting in comments carried by the official Korean Central News Agency.

North Korea has claimed it has nuclear weapons, but hasn't performed any known test to confirm it. Many experts believe the North has enough radioactive material to build at least a half a dozen nuclear weapons.

Talks on the North's nuclear program have been deadlocked since November, when negotiators failed to make headway in implementing a September agreement in which the North agreed to drop its nuclear program in exchange for aid and security guarantees.

North Korea has since refused to attend the six-nation talks until Washington stops blacklisting a bank where the communist regime held accounts, a restriction imposed over alleged counterfeiting and money laundering.

29 August 2006 Indian Press Report

The activity included the unloading of large reels of cable outside P'unggye-yok, an underground facility in northeast North Korea.

North Korea, though, believed to have enough nuclear material to build as many as a dozen nuclear bombs, has never tested one. A successful test would remove any doubt that North Korea is a nuclear power.

Earlier this year, symbolically on the 4th of July, the Day of American Independence, North Korea conducted seven ballistic missile tests, which provoked immediate international condemnation.

12 October 2006

South Korean Intelligence Officer suggests that Pung'gye is just one of Seven Primary Sites being monitored for nuclear activity, this site might be only a high-explosive research site associated with nuclear weapons he suggested.

Section Quebec

Section Romeo

Rakwn Machinery Works

Also reported as:

Rakwon Machinery Works

North Korea

[Last updated 15 December 2006]

Extract from report: The quality of machinery generally is considered below international standards, some of the largest machinery plants are:

- a. Yongsng Machinery Works
- b. Rakwn Machinery Works
- c. Taeon Heavy Machinery Works
- d. Hich'n Machine Tool General Works
- e. Ch'ngjin Machine Tool Plant

Rakwon Machine Complex

Sinuiju (on the border with China)
North Korea

[Last updated 1 December 2008]

President Kim praised workers at the Rakwon Machine Complex for meeting its quota for this year "as of the end of October",

Rungra 888 Trading House

North Korea

[Last updated 11 August 2006]

News Service: Kyodo News International, Inc. The Associated Press

The freeze dryer a Korean trader exported to North Korea four years ago (2002) might be used at a Pyongyang clinic for top leader Kim Jong Il, Japanese police sources said Friday.

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The Ponghwa clinic is known to be reserved for only a limited number of VIPs -- high-ranking members of the country's governing Workers Party of Korea.

The sources also said the freeze dryer might be used at the Ponghwa clinic, a facility suspected to be the site of North Korea's researches on biological weapons.

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Meisho Yoko, based in Tokyo's Sugunami Ward, exported the freeze dryer in September 2002 in response to an order placed by a North Korean trading house on behalf of another trader called HELM Pyongyang.

HELM Pyongyang has accepted staff from the Korea Rungra 888 trading house, which is under Kim Jong Il's direct control.

On Thursday, a team of investigators from Yamaguchi and Shimane prefectural police departments arrested Kim on suspicion of violating the Foreign Exchange and Foreign Trade Control Law for exporting the dryer via a Taiwan trading house without gaining permission from the minister of economy, trade and industry.

Meisho Yoko is suspected of placing an order for the dryer with the Taiwan trading house, which then bought it through a Tokyo-based scientific instrument maker's sales agent based in Taiwan and passed it on to Meisho Yoko.

Ryonha Technological Innovations

Also known as:

Ryonha Machinery J/V Corporation

North Korea

[Last updated 22 September 2008]

www.korea-dpr.com

Associated with:

- (a) CNC Turning Centre Model RTC 136
- (b) CNC Turning Centre Model RTC 210
- (c) CNC Turning Centre Model RTC 350
- (d) CNC Turning Centre Model RTC 450
- (e) CNC Turning Centre Model RLTC 426
- (f) Vertical Machining Centre Model RV 30
- (g) Vertical Machining Centre Model RV 40
- (h) Vertical Machining Centre Model RV 50
- (i) Electrical Discharge Machine Model RE 60
- (j) Wire-Cut Electrical Discharge Machine RWC 600

Ryongbong General Corp

Also known as:

Korea Ryongbong General Corp

North Korea

[Last updated 26 April 2009]

A Security Council committee on Friday placed three North Korean companies on a U.N. blacklist for aiding Pyongyang's missile and nuclear programs, eliciting a sharp rebuke from a North Korean envoy.

The three companies put on the list are:

- a. Korea Mining Development Trading Corp.
- b. Korea Ryongbong General Corp.
- c. Tranchon Commercial Bank

The decision said the three companies were linked to the military and active in procuring equipment and financing for North Korea's ballistic missile and other weapons programs.

Section Sierra

Sariwon Textile Mill

North Korea

[Last updated 18 December 2006]

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Pyongyang, the site of the Pyongyang Integrated Textile Mill is the country's textile capital, but Siniju and Sariwon have been gaining in importance.

S'ngri General Motor Works

North Korea

[Last updated 15 December 2006]

An expansion project completed in 1989 at the General Motor Works quadrupled the production capacity of the heavy-duty trucks and plant manufactures.

Sabujin,

City of Kim Chaek
North Hamkyong Province
North Korea's northeast coast on the Sea of Japan

[Last updated 9 March 2006]

North Korean missile test range

Reported to have fired two “short-range” SAMs on 8 March 2006, the range reached by the missiles was 60 miles.

Assuming the miles are statute, this would be equivalent to $1.609 \text{ km} = 1 \text{ mile} = 96.54 \text{ km}$

The North Korean inventory includes S-75, S-125 and S-200; therefore the only missile capable of flying this far theoretically is the S-200. However, if these were ballistic shots, then the S-75 could also fly this far but would then fall from the sky.

Samjiyon Airfield

North Korea

[Last updated 14 November 2008]

041.54.21.13N

128.24.42.06E

A 3,500 m long airstrip running from South West to North East

This airfield has a long taxi way

Parking facilities to the East of the taxi way as also is what appears to be a large military area

This area is within 11.5 km from the Chinese border

Samsu Power Station

Samsu
North Korea

[Last updated 29 May 2009]

On April 20, it was reported that Kim Jong Il, on a visit to the new Nyongwon Hydropower Station, called for the building of additional hydroelectric plants, citing their relative economy.

The North Korean media stated that hydroelectric plants were “not only edifices of eternal value but also more beneficial than thermal power stations and atomic power plants.”

Successes are being made in researches into and the work of prospecting more energy resources rich in the country.

A nation-wide effort has been bent to making best use of hydraulic power.

In recent years, dams of the Samsu Power Station and Nyongwon Power Station have been built and large hydro-power stations are under construction in various parts of the country, the prospect of which is also good.

Brisk is the construction of minor power stations are built in Jongphyong and Yonsa Counties and other areas with streams.

Priority is being given to geological prospecting and tunneling for securing more coal fields, so as to decisively ease the strain on power.

Solar hothouses built in institutions, industrial establishments and rural areas are paying off.

Bio-methane has found its way to rural dwelling houses in the Migok Co-op Farm in Sariwon City, North Hwanghae Province and other areas.

Wind-driven generators of various capacities are being manufactured and introduced to houses in rural and mountainous areas and efforts are being exerted to make an effective use of low-calorie coal and fly-ash.

Meanwhile, scientific research has been pushed ahead to widely use natural energies including solar, biological and tidal powers.

Sangham-ri Missile Base

South Hamgyong Province
North Korea

[Last updated 14 December 2006]

Other recent RoK press reports have identified facilities for No Dong and Taepo Dong missiles in:

- (a) Yongrim county, Jagang province
- (b) Sangham-ri in South Hamgyong province
- (c) Yongojo-Dong in Yanggang province

Sanum-dong Missile Research Centre

Sanum-don
(25 km North of P'yongyang)
North Korea

[Last updated 14 December 2006]

Associated with the following missiles:

- (a) Taepo-Dong 1
- (b) Taepo-Dong 2
- (c) Missile simulators

During 1981 – 82 the DPRK began to assemble the industrial infrastructure required to support an indigenous ballistic missiles programme.

In February 1994, US intelligence satellites detected a new missile simulator (Hardware mock-up) at Sanum Dong R & D facility. The mock-up has since been designated Taepo-dong – 2 and is a two stage missile with the first stage resembling the Chinese CSS-2.

This programme involved construction or conversion of:

- (i) The 125 Factory (P'yongyang)
- (j) A military Research and Development Facility at Sanum-don
- (k) The Musudan-ri Launch Facility
- (l) A variety of other related facilities

Satgatmol

Hwanghae Province
North Korea

[Last updated 14 December 2006]

Additional facilities are under construction near the DMZ at Satgatmol in Hwanghae province and Kumchon-ri in Kangwon province.

Science Research Institute

North Korea

[Last updated 18 December 2006]

Though North Korea has tried to develop its own computer manufacturing technology since the 1960s, only the most rudimentary computers are produced due to shortage of technical manpower and to the primitive semiconductor-related electronic industry.

Since the 1980s, research institutes like Science Research Institute have imported key components like CPUs and Ics and succeeded in assembling 8-bit grade computers.

Currently the Pyongyang Computer Assembly Factory possesses an annual production capacity of more than 30,000 units of computers.

The Pyongyang Programme Centre and Chosun Computer Centre develop or utilise more than 30 kinds of software such as:

- (j) Korean Front End Processor for Windows 95
- (k) Chosun word processing programme Tangun
- (l) Korean Word processor Changdock

Second Natural Science Academy

Also known as:

Engineering Research Institute

[Last updated 5 May 2010]

Development of missiles with particular emphasis of Surface-to-Air man-portable SAMs

Seungri Automobile Factory

North Korea

[Last updated 18 December 2006]

Automobile design and production is virtually all imitation.

The following organisations are known:

- (g) Seungri Automobile Factory
- (h) Pyongyang Railless Tram Car Factory
- (i) Chungjin Bus Factory

The organisations possess a total annual production capacity of over 30,000 units of freight cars, passenger cars, busses, etc.

Unable to develop new products, however, they are restricted to imitation of old Soviet and East-European automobiles.

Sing-ye Missile Base

South P'yonggan Province
North Korea

[Last updated 14 December 2006]

The RoK MND reports that a battalion with nine launchers and 40 No Dong missiles are based at Sino-ri in North P'yonggan province and Scuds at Sing-ye South P'yonggan province, with additional facilities under construction near the DMZ at Satgatmol in Hwanghae province and Kumchon-ri in Kangwon province.

Sinhung Chemical Plant

Sinhung
North Korea

[Last updated 11 August 2006-08-11]

A plant reported to be part of the Chemical Warfare Industry of North Korea.

Siniju Chemical Plant

Siniju
North Korea

[Last updated 18 December 2006]

A plant reported to be part of the Chemical Warfare Industry of North Korea.

18 Dec. 06

The government has called for accelerating the expansion projects at both the Siniju and Ch'ngjin chemical fibre complexes, Vinyln textile (100,000 tons) made from Anthracite coal + limestone, and viscous textile made from timber and reed occupy an 88% share of total production capacity.

Siniju Research Institute

North Korea

[Last updated 11 August 2006]

A Research Institute (RI) reported to be part of the Chemical Warfare Industry of North Korea.

Siniju Textile Mill

North Korea

[Last updated 18 December 2006]

The textile industry, the most important light industrial sector, utilises primarily locally produced synthetics and petrochemical based fibres, as well as cotton and silk.

Pyongyang, the site of the Pyongyang Integrated Textile Mill is the country's textile capital, but Siniju and Sariwon have been gaining in importance.

Sino-ri Missile Base

North P'yonggan Province
North Korea

[Last updated 14 December 2006]

The RoK MND reports that a battalion with nine launchers and 40 No Dong missiles are based at Sino-ri in North P'yonggan province and Scuds at Sing-ye South P'yonggan province, with additional facilities under construction near the DMZ at Satgatmol in Hwanghae province and Kumchon-ri in Kangwon province.

Sinosteel Corporation (Zhonggang)

Jilin
North Korea

[Last updated 14 November 2008]

Tonghua Iron & Steel Group (Tonggang), Yanbian Tianchi Company, and Sinosteel Corporation (Zhonggang)—contracted rights to exploit the Musan iron mines for 50 years.

Sinpo Shipyard

North Korea

[Last updated 11 August 2006]

Producers of the following classes of submarine:

- (a) Romeo (Type 033) class]
- (b) Sang-O class

Sogyang Trading Corporation Korea

Also known as:

British American Tobacco Korea

Taesong-BAT

Pyongyang
North Korea

[Last updated 13 November 2008]

BAT launched its business in North Korea in September 2001 after forming a joint venture company with a state-owned enterprise called the Korea Sogyong Trading Corporation, whose main interest had previously been exporting carpets.

BAT made an initial investment of \$7.1m in the enterprise, and owns 60% of the company they formed, which is known as Taesong-BAT.

It has since increased its investment, but declines to say by how much.

This company employs 200 people at its factory in Pyongyang, the capital, producing up to two billion cigarettes a year.

It initially produced an inexpensive brand called Kumgansan, named after a mountain in the east of the country, and is now producing brands that are known as Craven A and Viceroy.

Despite its previous involvement in smuggling, BAT denies that any of its cigarettes produced in North Korea are intended for the Chinese market, and insists that they are all for consumption in North Korea.

Sondok Airfield

Tongho-ri
North Korea

[Last updated 14 November 2008]

039.44.52.31N
127.28.42.13E

A 2,500 m long concrete airstrip with taxi way

This airstrip runs North/South

This airstrip is pot marked with ringed air-defence (probably guns)

Both heavy bomber jet type aircraft (11 at last count) and propeller (44 at last count) type aircraft are parked all around the airfield

This airfield is supported with a large infrastructure for operation and maintenance

Soonchun Vinylon Factory

North Korea

[Last updated 15 December 2006]

The petrochemical industry was initiated in the late 1970s and now possesses an annual oil refinery capacity of only 3.5 million tons.

Only 4 kinds of petrochemical products like acrylics are manufactured at the moment:

- (a) 2.8 Vinylon Factory produces 60,000 tons
- (b) Soonchun Vinylon Factory produces 50,000 tons

Sowi-ri Nuclear Plant

Sowi-ri
Yongbyon
North Pyongan Province
North Korea

[Last updated 18 February 2009]

A secret underground plant to make nuclear bombs from highly enriched uranium (HEU).

This facility can produce HEU for nuclear bombs.

It has been reported that the plant is located at Sowi-ri in Yongbyon, North Pyongan Province, where the North's plutonium-based nuclear complex is situated.

Sunch'n Chemical Plant

North Korea

[Last updated 14 December 2006]

A plant reported to be part of the Chemical Warfare Industry of North Korea.

Also known as

Sunch'on Vinalon Complex

Sunch'n Synthetic Fibre Complex

North Korea

Vinalon continues to be produced (2006) at the:

- (d) April 25 Vinalon Factory
- (e) February 8th Vinalon Factory
- (f) Sunch'on Vinalon Complex

All of these organisations are suspected of producing mustard, as well as blood agents (e.g., cyanogen chloride), choking agents (phosgene), and riot-control agents (CN).

15 Dec. 06

A synthetic fibre complex in Sunch'n the country's largest began operation in 1989 after completing its first stage of construction.

When all stages are completed, production capacity is expected to reach:

- (a) 100,000 tons of synthetic fibre
- (b) 1 million tons of calcium carbide
- (c) 750,000 tons of methanol
- (d) 900,000 tons of nitrogen fertilizers
- (e) 250,000 tons of caustic soda
- (f) 250,000 tons of vinyl chloride
- (g) 400,000 tons of soda ash per year

Sunchon Thermo-Electric Plant

Sunchon
North Korea

[Last updated 15 August 2006]

One of the largest Thermo-Electric Plants in North Korea, the others are:

- (a) Pukchang
- (b) Pyongyang
- (c) Unggi (Oung gi)
- (d) Chog Zin
- (e) Sunchon
- (f) Chengchengang
- (g) East Pyongyang

Sungni General Automotive Factory

North Korea

[Last updated 10 August 2006]

Associated with the development and modernisation of TELs such as the MAZ 543.

Other vehicles such as IVECO manufactured by Fiat in Italy and Nissan from the Nissan Diesel Industry have also been associated with this organisation.

Military vehicles

Sunjin Steel Manufacturing Plant

North Korea

[Last updated 15 December 2006]

Main steel producers like Kimch'aek, Hwanghae steel factory, Chullima steel mill, and Sunjin steel manufacturing plant were all constructed during the colonial era.

They were reconstructed and expanded with technical support from former Soviet Russia and China.

The Kimch'aek Integrated Iron and Steel Works has surpassed the Hwanghae Iron Works to become the largest steel and iron centre.

Section Tango

T'-gol District Coal Mine

North Korea

[Last updated 19 June 2006]

Coal deposits amounting to 10 million tons also exist in Chunbi, T'- gol, and Kangdong in Kangdong District

Taeon Heavy Machinery Works

North Korea

[Last updated 15 December 2006]

Extract from report: The quality of machinery generally is considered below international standards, some of the largest machinery plants are:

- (a) Yongsng Machinery Works
- (b) Rakwn Machinery Works
- (c) Taeon Heavy Machinery Works
- (d) Hich'n Machine Tool General Works
- (e) Ch'ngjin Machine Tool Plant

The Taeon Works was built during the Second Seven Year Plant (1978 – 1984) with Soviet assistance, and is the country's largest machinery plant.

Taepo-tong Launch Site

Hwadae-Kun
North Hamkyong Province
North Korea
(on the east coast)

[Last updated 10 August 2006]

Reported by a North Korean defector as a launch site for the SRBM missiles in the NK inventory.

Tanchon Airstrip

Also known as:

Tanchon South Highway Airstrip

Tanchon
North Korea

[Last updated 19 November 2008]

040.23.39.76N
128.51.58.22E

A 1,100 m [highway airstrip](#) that roughly runs from North West to South East

Tanchon Commercial Bank

Pyongyang
North Korea

[Last updated 25 August 2006]

Aug. 24--HANOI -- North Korea's Tanchon Commercial Bank, which has been identified by the United States as the primary financial facilitator of that country's ballistic missile program, had until recently held dollar and euro accounts at Vietnam's Military Commercial Bank, a Military Commercial Bank official said recently.

The official said millions of both dollars and euros, respectively, had been deposited in the accounts.

But the funds were hastily transferred to other banks, including a German bank, in July after the State Bank of Vietnam, the country's central bank, acceded to a U.S. request and began checking on any North Korean accounts involved in suspicious banking transactions.

Tanchon Commercial Bank is among North Korean entities that the United States has since June last year designated as proliferators of missiles and weapons of mass destruction, or their supporters, imposing sanctions aimed at denying them access to the U.S. financial and commercial systems.

The United States is urging other members of the United Nations to identify, track and freeze financial transactions and assets of such North Korean entities as the first step in implementing a binding U.N. Security Council resolution adopted last month.

The unanimous Security Council resolution, which condemned North Korea's ballistic missile launches in early July, requires all U.N. member nations to prevent the transfer of financial resources that could help North Korea's missile and WMD programs.

The U.S. Treasury Department identifies Tanchon Commercial Bank as the main financial agent for North Korea's sales of conventional arms, ballistic missiles, and goods related to the assembly and manufacture of such weapons, which have provided Pyongyang with a significant portion of its export earnings and financially aided its own weapons development and arms-related purchases.

The Pyongyang-based bank held accounts at Macao's Banco Delta Asia SARL, which the United States in September 2005 subjected to sanctions as a "primary money laundering concern" that had facilitated a range of North Korean illicit activities.

While it was not clear when the funds were deposited in the North Korean accounts at the Vietnam's Military Commercial Bank, the bank official said they were transferred from a German bank and from the Bank for Foreign Trade of Vietnam, or Vietcombank.

According to sources, financial intelligence authorities of the United States, South Korea and Japan recently compiled a report on North Korea's overseas bank accounts that singled out 23 accounts in 10 countries, including Russia, deemed suspicious.

Among the total, around 10 were in Vietnamese banks.

U.S. Treasury Undersecretary Stuart Levey, responsible for terrorism and financial intelligence issues, visited Vietnam in mid-July and called for Hanoi's cooperation in investigating and freezing the suspicious North Korean bank accounts.

Tongnimobong Precision Machine Plant

Obong-ri
Tongnim-kun
North Pyongan Province
125 km Northwest of Pyongyang
North Korea

[Last updated 5 May 2010]

Manufactures the launch tubes for the No. 7 launch tubes or 7-ho palsagwan that is a derivative of the RPG-7.

Works in association with Factory 39 in Oryong-nodongjagu.

The Committee for the Promotion of International Trade of the DPR Korea

Central District
Pyongyang
North Korea

[Last updated 14 August 2006]

Telephone: 850-2-18111

Telephone: 850-2-8054

Fax: 850-2-381-4440

Head of Committee: Kim Yong Mun

The Committee for the Promotion of International Trade of the DPR Korea , established in 1952, is a comprehensive organization for promoting foreign trade and economic relations between the DPRK and foreign countries.

Recently, the CPIT's activities have been focused on the introduction of transactions and of investment from western countries.

The Committee for the Promotion of External Economic Cooperation

Central District
Pyongyang
North Korea

[Last updated 14 August 2006]

Telephone: 850-2-381-6163

Fax: 850-2-381-4498

Fax: 850-2-381-4630

Head of Committee: Kim Jong-woon

Beijing Office:
Won Chang-jung
Mun Song-won

Past subsidiary organization of Committee for External Economy, especially Peking Representative Office is mainly in charge of investment consultation business of Rajin-Sunbong Region in the field of South and North Korea Economic Cooperation.

Toksan Airfield

Toksan
North Korea

[Last updated 14 November 2008]

039.59.46.94N
127.36.51.52E

A 2,500 m concrete airstrip running from South West to North East

This airfield includes a 2,000 m taxi way

In the South West corner of the taxi way are parked six military aircraft close by are two air-defence sites

At least seven MiG type aircraft are parked between the taxi way and the runway near to a hangar, this is all near the top North East part of the airstrip.

A further 23 military aircraft are parked at the end of the South West runway.

Tonghua Iron and Steel Group (Tonggang)

Jilin
North Korea

[Last updated 14 November 2008]

Tonghua Iron & Steel Group (Tonggang), Yanbian Tianchi Company, and Sinosteel Corporation (Zhonggang)—contracted rights to exploit the Musan iron mines for 50 years.

Tranchon Commercial Bank

North Korea

[Last updated 25 April 2009]

A Security Council committee on Friday placed three North Korean companies on a U.N. blacklist for aiding Pyongyang's missile and nuclear programs, eliciting a sharp rebuke from a North Korean envoy.

The three companies put on the list are:

- a. Korea Mining Development Trading Corp.
- b. Korea Ryongbong General Corp.
- c. Tranchon Commercial Bank

The decision said the three companies were linked to the military and active in procuring equipment and financing for North Korea's ballistic missile and other weapons programs.

Section Uniform

Uiju Airfield

North Korea

[Last updated 14 November 2008]

040.08.52.59N

124.29.44.15E

A 2,500 m airstrip that is running from South West to North East

The main airstrip is surrounded by two taxi ways to the East and West, the westerly taxiway also leads to a heavily defended area containing 10 large missile systems either S-200 or S-75.

At least 18 aircraft are parked at either end of the runway and taxi ways

Unggi (Oung gi) Therm-Electric Plant

Unggi
North Korea

[Last updated 15 August 2006]

One of the largest Thermo-Electric Plants in North Korea, the others are:

- (a) Pukchang
- (b) Pyongyang
- (c) Unggi (Oung gi)
- (d) Chog Zin
- (e) Sunchon
- (f) Chengchengang
- (g) East Pyongyang

The Unggi plant is capable of producing 200MW apparently requires so much fuel that it is piped in from Russia. This fuel is refined at the Unggi Refinery.

Unggi Oil Refinery

Unggi
North Korea

[Last updated 15 December 2006]

This refinery has a pipeline direct to Russia; oil received from Russian is refined and sent direct to the Unggi Thermo-Electric Plant.

15 Dec. 06

The petrochemical industry was initiated in the late 1970s and now possesses an annual oil refinery capacity of only 3.5 million tons.

Only 4 kinds of petrochemical products like acrylics are manufactured at the moment:

- (c) 2.8 Vinylon Factory produces 60,000 tons
- (d) Soonchun Vinylon Factory produces 50,000 tons

The nearby Unggi Refinery supplies the necessary crude petroleum.

UNHA

North Korea

[Last updated 22 September 2008]

Shirt and garment industry of North Korea

All men's suits are produced/manufactured in:

- (a) Moranbong
- (b) Tongdaewon
- (c) Taedonggang
- (d) Songyo
- (e) Phongwon

Unphasan Pharmaceutical Institute Category

North Korea

[Last updated 11 May 2009]

Director: Sonu Su Yong (May 2007 -)

The Unphasan Pharmaceutical Institute of the DPRK has developed and perfected natural medicines efficacious for the diseases such as:

- a. Arteriosclerosis
- b. Hyperlipemia
- c. Diabetes
- d. Obesity
- e. Hhyperuricemia
- f. Hepatitis
- g. Ppancreatitis which should be treated for a long time

Now the medicines are being applied to clinical treatment.

Uranit GmbH

Germany

[Last updated 14 August 2006]

One source reports that uranium enrichment information may have been diverted from the German partner in URENCO, Uranit GmbH, to Pakistan via Switzerland and then re-exported to North Korea.

Section Victor

Section Whiskey

Wonsan Airfield

Wonsan Penisular
Wonsan
North Korea

[Last updated 11 February 2009]

This airfield runs from South East to North West and has a 2,400 m long runway.

39.10.00.05N
127.29.02.83E

In Feb 2009, there were 41 x jet aircraft parked in the South West corner of the airfield adjacent to the singular runway.

Close to the aircraft are heavy berms that appear to be unoccupied.

6 x possible MiG-21 aircraft were parked to the west of the runway alongside what appears to be either a road or taxiway running from South West to North East.

Wonsan Railway Cars Factory

North Korea

[Last updated 18 December 2006]

Various types of railroad cars are produced at:

- (a) Kim Jong Tae Locomotives Factory
- (b) Wonsan Railway Cars Factory
- (c) Chungjin Railway Factory

Wonsan Shipyard

North Korea

[Last updated 18 December 2006]

There are over 10 shipyards in North Korea all are based in:

- (a) Nampo
- (b) Wonsan
- (c) Chungjin

Because they lack proper docking facilities, they presently can build only less than 20,000 DWT-level vessels.

Because designing methods is inadequate, ships are built on the basic model of 14,000 and 20,000 DWT grade cargo vessels and 3,750 DWT fishing vessels.

Few ships are exported.

Section Xray

Section Yankee

Yanbian Tianchi

Jilin
North Korea

[Last updated 14 November 2008]

Tonghua Iron & Steel Group (Tonggang), Yanbian Tianchi Company, and Sinosteel Corporation (Zhonggang)—contracted rights to exploit the Musan iron mines for 50 years.

Yongbyon Nuclear Facilities

North Korea

[Last updated 20 September 2008]

North Korea is reportedly constructing a MRBM site 25 km north of Yongbyon, at present nothing more is known about this site.

[Yongbyon site map](#)

27 Mar. 07

Start up problems at the Yongbyon reprocessing facility may also affect the quality of the plutonium.

The reactor must run almost continuously for at least a year before it produces enough plutonium for five or six nuclear weapons.

The 1950s vintage plant has to be operated on a hands-on basis, making it prone to highly dangerous leaks and spillages.

These problems can lead to repeated and extended shutdown periods and the loss of plutonium into the waste stream.

They could also result in a catastrophic nuclear accident.

13 June 2008

UN inspectors have discovered that equipment made in Japan, the archenemy of North Korea, has been used for uranium enrichment in the communist state.

Police raided two private companies earlier this month (June 08) after receiving the information from the International Atomic Energy Agency (IAEA), public broadcaster NHK and other Japanese media reported.

Tokyo Vacuum, based in Kanagawa prefecture near the capital, and Tokyo-based trade agency Nakano Corp. are suspected of exporting vacuum pumps without permission to Taiwan, violating Japan's trade control law, the reports said.

Inspectors believe that the vacuum pumps, which can be used to separate uranium, were then sent to North Korea, which tested an atom bomb in 2006.

Nakano Corp. president Hiroshi Nakano told reporters that the company had received an order from Taiwan for the product and "simply responded."

“I had no idea the Taiwanese maker had that kind of relationship” with North Korea, he said. “If I had known about it, I would not have exported it.”

Tokyo Vacuum was not immediately available for comment.

IAEA inspectors discovered the vacuum pumps when probing North Korea’s Yongbyon nuclear complex and other nuclear-related facilities last July 2007.

20 Sep. 08

North Korea is restarting its Yongbyon nuclear reactor in response to what the communist Asian country says is a failure by the United States to hold up its end of the disarmament deal signed by six countries in 2007.

A north Korean diplomat told reporters at a press conference Friday that technicians are already performing “thorough preparations” to restart the reactor complex at the Yongbyon nuclear site.

Hyun Hak Bong spoke to an international group of reporters in the “truce village” of Panmunjom, shared by North and South Korea in the Demilitarized Zone (DMZ).

Bong told reporters that since the United States and other countries were not following through in supplying energy aid to North Korea as promised in the historic deal, his country has already lifted the disablement order placed on the reactor last year and has commenced work on restarting it.

Yongampo Shipyard

North Korea

[Last update 11 August 2006]

Associated with the building of the following craft:

- (a) Soju class (FAC)

Yongpo Airfield

Yongpo-ri
North Korea

[Last updated 14 November 2008]

039.47.30.52N
127.32.10.76E

A 1,000 m long runway running from North West to South East

A single strip airfield with many varied berms to the South of the only runway

A total of 31 aircraft (propeller type) seen in the berms with 5 others parked near the runway

Youngjo-dong Missile Base

Yanggang Province
North Korea

[Last updated 14 December 2006]

On 6 July 1999, South Korea discloses that North Korea is building a new missile base with 10 launch towers for the Taep'o-dong or No-dong missiles at Youngjo-dong in Yanggang province, 20 km from the North Korean – Chinese border.

It is assessed by western analysts that the facility is strategically located to mke it difficult to attack with precision munitions or cruise missiles.

Yongjo-ri, Hagap

North Korea

[Last updated 14 August 2006]

A potential site for Uranium enrichment, other sites include:

- (g) Taechon
- (h) Pyongyang
- (i) Ch'onma-san

Yongrim Missile Base

Yongrim County
Jagang Province
North Korea

[Last updated 14 December 2006]

Other recent RoK press reports have identified facilities for No Dong and Taepo Dong missiles in:

- (a) Yongrim county, Jagang province
- (b) Sangham-ri in South Hamgyong province
- (c) Yongojo-Dong in Yanggang province

Yongsng Machinery Works

North Korea

[Last updated 15 December 2006]

Extract from report: The quality of machinery generally is considered below international standards, some of the largest machinery plants are:

- (f) Yongsng Machinery Works
- (g) Rakwn Machinery Works
- (h) Taeon Heavy Machinery Works
- (i) Hich'n Machine Tool General Works
- (j) Ch'ngjin Machine Tool Plant

Yukdaeso-ri Shipyard

North Korea

[Last updated 10 August 2006]

The Yugo class midget submarines are built at the Yukdaeso-ri shipyard and have been since early 1960s.

Some of these Yugo submarines have been lost in operations against South Korea and are now (2006) being phased out in favour of the Song-O class.

Section Zulu

Zokwang Trading

Macau
China

[Last updated 13 November 2008]

International Trader: Pak Ku Po (Nov 08 -)

Zokwang Trading, a state-owned North Korean company in Macau, which in the past has been accused of being involved in:

- a. The distribution of counterfeit money
- b. Arms smuggling
- c. Terrorist training

North Korea had been accused of state-sponsored terrorism long before Afghanistan decided to give shelter to Osama bin Laden and the seeds of the present conflict in Central Asia were sown.

Zokwang is involved mainly in the export of North Korean ginseng to Asian countries, and sweaters and other knitwear to France and Canada.

Over the past few years, North Korea has embarked on a vigorous commercial drive across the globe, and, for the first time, it is making serious attempts to attract foreign investment.

Annex “A”**Naval Bases****West Coast Fleet (Yellow Sea)**

HOME PORT	TYPE OF VESSELS	INFORMATION
Cho-do		There is also an Air Force airfield at this location
Haeju		There is also an Air Force airfield at this location
Kaompo		
Kwangyang-ni		
Namp’o		Fleet Command HQ
Pip’a-got (Submarine base)	Romeo	4 x Diesel boats based here
Pupo-ri		
Sagon-ri		Also known as Sagot
Sohae-ri		
Sunwi-do		
Tasa-ri		
Yomju-gun		
Yongwi-do		

4 x OSA 1 Fast Attack Craft are based on the West Coast, port unknown

4 x Soju Fast Attack Craft are based on the West Coast, port unknown

6 x Hainan Large Patrol Craft based on the West Coast, port unknown

SO 1 Large Patrol Craft, a few may be based on the West Coast, port unknown

12 x Shanghai 2 Fast Attack Craft (Gun) based on the West Coast, port unknown

Taechong 1 and Taechong 2 Large Patrol Craft, mainly based on the East Coast but a few may be on the West Coast, port unknown

Chong-Ju Large Patrol Craft a few may be based on the West Coast, port unknown

24 x Chaho Fast Attack Craft (Gun), based on the West Coast, port unknown

East Coast Fleet

HOME PORT	TYPE OF VESSELS	INFORMATION
Changion	Taechong 1	Large Patrol Craft
	Taechong 2	Large Patrol Craft
	Sariwon	580 Tonne Fleet Minelayer
	Chongjin	Fast Attack Craft Gun
	Chaho	Fast Attack Craft Gun
	Sinhung	Fast Attack Craft
	Soju	Fast Attack Craft Missile
	SO 1	Large Patrol Craft
Munch'on	Chaho	Fast Attack Craft Gun
	Sinhung	Patrol Craft Hydrofoil
	Sinhung	Fast Attack Craft
	Hanchon	Landing Craft Utility
	Nampo	Landing Craft Personnel
	Chongju	Large Patrol Craft
	Chongjin	Fast Attack Craft Gun
Mugyepo	Najin	Frigate Light or Corvette
	Soju	Fast Attack Craft Missile
	SO 1	Large Patrol Craft
	Taechong 2	Large Patrol Craft
	Chongju	Large Patrol Craft
	Sinhung	Patrol Craft Hydrofoil
	Hanchon	Landing Craft Utility
	Nampo	Landing Craft Person
Mayang Do	Romeo class submarine	Diesel boat
	Yukto 1	Coastal Minesweeper
	Yukto 2	Coastal Minesweeper
	Kowan	Submarine Rescue Ship
Ch'aho-nodongiagu	Romeo class submarine	Diesel boat
	Hanchon	Landing Craft Utility
Najin	Sohung Patrol Gunboat	
	Chaho	Fast Attack Craft Gun
	Sinhung	Fast Attack Craft
	Sinhung	Fast Attack Craft Torpedo
	Hantae	Landing Craft Utility
Puam Dong	Nampo	Landing Craft Person

	Sinhung	Fast Attack Craft
	Sinhung	Fast Attack Craft Torpedo
Songion-Pando	Sang-O class submarine	Small diesel boat used for personnel infiltration
	Yugo Submarine Midget	All in reserve
	Kong Bang	Landing Craft Personnel
Toejo Dong	Soho Frigate	One of class only
	Mayang Patrol Craft	Probably scrapped or in reserve
	Chongjin	Fast Attack Craft Gun
	Sinhung	Fast Attack Craft Torpedo
	Sinhung	Fast Attack Craft

4 x Komar Fast Attack Craft are based on the East Coast, port unknown

Annex “B”**Air Force Bases**

The following is a list of those North Korean Air Force bases that are known from open source materiel. Research Analyst Defence (Waterlooville) Limited freely admits the list is probably not complete and accepts no responsibility for those missing.

NAME	TYPE OF BASE	INFORMATION
Avang Ni Highway Strip	Airstrip	
Changjin up	Airfield	
Changyon Highway Strip	Airstrip	
Chasan Highway Strip	Airstrip	
Chik Tong	Airfield	
Cho-do	Airfield	
Changjin	Airport	
Haeju	Airfield	
Hoeyang Southeast	Airfield	
Hwangju	Air Base	MiG-19 fighter regiment
Hwangsuwon	Air Base	MiG-21 fighter regiment
Hyesan	Airfield	
Hyon-ni	Airfield	
Ichon	Airfield	
Ihyon	Airfield	
Ihyon	Airport	
Ichon Northeast	Airfield	
Iwon	Air Base	MiG-21 fighter regiment
Kaechon	Airfield	
Kang Da Ri	Airfield	
Kangdong	Airfield	
Kilchu Hwy	Airfield	
Kojo	Airfield	
Koksan	Air Base	MiG-21 fighter regiment
Koksan South Highway Strip	Airstrip	
Kuktong	Airfield	
Kuum-ni	Airfield	
Kwail	Air Base	MiG-21 fighter regiment
Kwaksan	Air Base	Il-28 bomber regiment
Kyongsong-Chuul	Airfield	
Maengsan	Airfield	
Manpo	Airfield	
Mirim	Airfield	
Nuchon Ni Highway Strip	Airstrip	
Okpyong ni	Airfield	

Onchon	Airport	
<u>Ongjin</u>	Airfield	
<u>Orang</u>	Air Base	MiG-19 fighter regiment
<u>Paegam</u>	Airfield	
<u>Panghyon</u>	Airfield	
<u>Panghyon South Highway Strip</u>	Airstrip	
Pukch'ang	Air Base	Su-25, 24 MiG-29 fighter regiments
<u>Pyong Ni South Highway Strip</u>	Airstrip	
<u>Pyongsul Li</u>	Airfield	
<u>Pyongyang</u>	Airfield	
<u>Samjijon</u>	Airfield	
<u>Sangwon Highway Strip</u>	Airstrip	
<u>Seanchan Highway Strip</u>	Airstrip	
<u>Singye Highway Strip</u>	Airstrip	
<u>Sinhung Highway Strip</u>	Airstrip	
<u>Sinuiju</u>	Airfield	
<u>Sohung South</u>	Airfield	
<u>Sonchon</u>	Airfield	
<u>Sondok</u>	Air Base	Il-28 bomber regiment
<u>Sunan</u>	Airfield	
<u>Sunan-up North Highway Strip</u>	Airstrip	
Sunchon	Air Base	MiG-23 fighter regiment
Sungam ni	Airfield	
Taebukpo Ri	Airfield	
Taechon	Airfield	
Taechon Northwest	Airfield	
T'aet'an-pihaengjang	Airfield	
Toha Ri North	Airfield	
Toksan	Air Base	Il-28 bomber regiment
Uiju	Airfield	
Unchon Up	Airport	
Uthachi	Airfield	
<u>Wong Yo Ri Highway</u>	Airstrip	
<u>Wonsan</u>	Air Base	MiG-19 fighter regiment
Yong Hung	Airfield	

Annex “C”

Weapon Systems

Air-to-Air (AAM)

NAME	TYPE OF WEAPON	INFORMATION
	AAM	NATO AA-2 Atoll
	AAM	NATO AA-7 Apex

Air-to-Surface (ASM)

Surface-to-Surface (SS)

NAME	TYPE OF WEAPON	INFORMATION
M-1985	240 mm MRLS	
M-1991	240 mm MRLS	
M-1985	122 mm MRLS	
BM-11	122 mm MRLS	
Type-63	107 mm MRLS	

Surface-to-Air (GUNS)

NAME	TYPE OF WEAPON	INFORMATION
M-1983		
M-1990		
M-1992		
	37 mm	Self-propelled anti-aircraft gun (SPAAG)
	57 mm	Towed anti-aircraft gun (AAA)
	57 mm	Self-propelled anti-aircraft gun (SPAAG)

Surface-to-Air (Missiles)

NAME	TYPE OF WEAPON	INFORMATION
S-75	Medium-range SAM	NATO SA-2 Guideline
HQ-2	Medium-range SAM	NATO CSA-1
Pechora	Medium-range SAM	NATO SA-3 Goa
S-200	Long-range SAM	NATO SA-5 Gammon
Strela-2	Man-portable SAM	NATO SA-7a Grail
Strela-2M	Man-portable SAM	NATO SA-7b Grail
Strela-3	Man-portable SAM	NATO SA-14 Gremlin
Igla-1	Man-portable SAM	NATO SA-16 Gimlet
NK-2	Man-portable SAM	N. Korean copy of Strela-2
	Man-portable SAM	N. Korean copy of Igla-1

Main Battle Tank (MBT)

NAME	TYPE OF WEAPON	INFORMATION
Type-63	MBT	
Type-82	MBT	Also known as PT-85

Armoured Vehicles (AV)

NAME	TYPE OF WEAPON	INFORMATION
M-1973	Armoured Vehicle	Also known as VTT-323
M-1992	Armoured Vehicle	
Type 85	Armoured Vehicle	With Anti-Tank Guided Missile

Artillery Pieces

NAME	TYPE OF WEAPON	INFORMATION
M-1974	152 mm	Self-propelled Gun
M-1975	130 mm	Self-propelled Gun
M-1977	122 mm	Self-propelled Gun
M-1978	170 mm	Self-propelled Gun
M-1981	122 mm	Self-propelled Gun
M-1985	152 mm	
M-1989	170 mm	Self-propelled Gun
M-1991	122 mm	Self-propelled Gun
M-1992	120 mm	Self-propelled Gun
M-1992	130 mm	Self-propelled Gun