# ANTARCTIC TREATY

## Exchange of Information – Republic of Korea

## Permanent Information

*This information is provided in accordance with Korea's obligations under Article III (1)a and Article VII (5) of the Antarctic Treaty to provide advance information on the Korean activities in Antarctica, as well as obligations within the Protocol on Environmental Protection to the Antarctic Treaty and its Annexes to exchange information.*

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## I. Scientific Information

### *Automatic Recording Stations/Observatories*

**Automatic Weather Station (AWS)**

- Site name: King Sejong Station
- Co-ordinates: 62°13'S, 58°47'W
- Elevation: 9.85 m
- Parameters recorded: Wind, temperature, pressure, relative humidity, dew point temperature, precipitation, solar radiation, UV radiation, IR radiation, total ozone
- Observation frequency: Every 10 min.
- Reference number: WMO Index No. 89251

**Geomagnetic Observatory**

- Site name: KGI (King Sejong Station)
- Co-ordinates: 62°13.4818'S, 58°47.4744'W
- Elevation: 7.0 m
- Observation frequency: 10 seconds (data backup: weekly)
- Reference number: INTERMAGNET

**Gravity Observatory**

- Site name: King Sejong Station
- Co-ordinates: 62°13.4495'S, 58°47.4725'W
- Elevation: 7.5 m
- Observation frequency: 5 seconds (data backup: weekly)
- Reference number: Relative gravity-value in LaCoste Romberg G-899

**Seismic Observatory**
- Site name: King Sejong Station
- Co-ordinates: 62°13.5136'S, 58°47.0953'W
- Elevation: 37.0 m
- Observation frequency: 1 seconds (data backup: weekly)
- Reference number: Broad Band, Quanterra 4124 Recorder & STS-2 Sensor

**GPS Observatory**
- Site name: King Sejong Station
- Co-ordinates: 62°13.438132'S, 58°47.501900'W
- Elevation: 6.0 m
- Observation frequency: 5 seconds (data backup: daily)
- Reference number: Ashtech Z-12 Sensor

## II. Operational Information

### A. Stations

**King Sejong Station** (year round)
- Region: Barton Peninsula, King George Island
- Latitude: 62°13'S
- Longitude: 58°47'W
- Inauguration date: 17th February 1988
- Maximum population: 65 person (summer), 16 person (winter)
- Medical support: First aid facility
- Fuller details of the King Sejong Station are to be found on the web-site (http://www.polar.re.kr).

### B. Vessels

**R/V Yuzhmorgeologiya**
- Flag state: Russia
- Operator: CGGE International, USA
- Ice strength: USSR register Class KM*L2 1 A2
- Gross tonnage: 5,512 t
- Length: 104.5 m
- Remarks: This vessel is recently used every year, but not permanently.

**C. Aircraft**

- Korea does not operate its own aircrafts in Antarctica
- Resupply is mainly treated by vessel, and transportation of manpower is sometimes by Chilean and Uruguayan C-130.

**D. Aircraft landing facilities**

- None

**E. Communications facilities and frequencies**

**INTELSAT**

- Equipment: ENTEL 48 kbps
- Tel: +56 (2) 441-0257
- Fax: +56 (2) 441-0258
- Email: sejong.kordi.re.kr
- This equipment will be changed to ChileSat 256 kbps in December 2003.

**INMARSAT**

- Equipment: JEU-45A MII (JRC)
- Tel: +874 166 0307
- Fax: +874 166 0521
- INMARSAT is used just for backup in emergency.

**HF**

- Equipment: OceanLink 800W
- Frequency: 3,100, 8,890 kHz

**VHF**

- Equipment: Motorola, Kenwood
- Frequency: Always available on Ch. 16 (156,800 MHz, common), Ch 8 (156,400 MHz, between crews)

## III. Waste Management Plans

All waste generated at the station is carefully sorted into four groups:

**Group 1 – Sewage and domestic liquids**

- Volume of wastewater: no more than 10 $m^3$/day
- Sewage treatment system: UNEX Simultan-40 (Rauma-Repola)

  - BOD: <50 $mgO_2$
  - SS: <50 mg/l
  - Fecal coliform: <250/100 ml
- Type of treatment: Aeration/Settling down/Chemical & biological (38% $FeCl_3$, 10% NaOCl) treatment
- Type of discharge of sewage liquid: Discharged into pebble zone in tidal area
- Disposal and treatment of solids: The sludge is shipped out of Antarctica.
- Monitoring on wastewater: Seawater and benthic environment are annually monitored around the sewage trap.

**Group 2 – Liquid Chemicals and lubricants**

- All lubricants and chemical liquid waste is stored and shipped out of Antarctica.

**Group 3 – Combustible Solid Waste**

- This group comprehends paper, wood, food, plastics and rubber (tires). Once a week, papers and water-removed food are burned in an incinerator fitted with anti-pollutant filters. This process is continuously monitored for gas emission. Wood, plastic and rubber are stored and shipped out of Antarctica.

**Group 4 – Other solid waste**

- Glass, aluminum, battery, non-liquid chemical waste, empty drums, incinerator ashes and other solids belonging to this group, are compacted in a hydraulic press, stored and shipped out of Antarctica.

## IV. Contingency Plans

- Information available in Korean until now.
- Contact point: polar@kordi.re.kr

## V. Inventory of Past Activities

- No inventory of past activities has been drawn up at present time.

## VI. Relevant National Legislation

- *Draft on Antarctic Environment Act* has been submitted to National Assembly for adoption on April 2003. We expect that the draft law will be adopted early

next year.