

ANTARCTIC TREATY

EXCHANGE OF INFORMATION IN ACCORDANCE WITH ARTICLE VII (5) SOUTH AFRICAN ACTIVITIES 2005/2006

1. THE NAMES, TYPES, NUMBERS, DESCRIPTIONS AND ARMAMENT OF SHIPS, AIRCRAFT, AND OTHER VEHICLES, INTRODUCED, OR TO BE INTRODUCED, INTO THE ANTARCTIC TREATY AREA, AND INFORMATION OF MILITARY EQUIPMENT, IF ANY, AND ITS LOCATION IN THE AREA

◆ **Ships**

Mv SA Agulhas - Cross-tonnage 6122,96 tons, Lloyds Register of Shipping Class C1 ice-strengthened for Antarctic operations. Service speed 12,5 knots, maximum speed 14,0 knots.

◆ **Aircraft**

Helicopters - Present at SANAE IV station during the period 26 December 2005 to 10 February 2006. Two Bell 212 Helicopters.

◆ **Military equipment**

None

2. DATES OF EXPEDITIONS LEAVING FOR, AND ARRIVING IN THE ANTARCTIC TREATY AREA, DURATION OF STAY, ITINERARY TO AND FROM THE AREA AND ROUTES FOLLOWED WITHIN THE AREA

The schedule for the mv SA Agulhas to Antarctica in 2005/2006 was as follows:

VOYAGE SCHEDULE			
S.A. AGULHAS 2005/2006			
DEPART	ARRIVE	ACTION	DURATION
30 November 2005 (Cape Town)	14 December 2005 (Neumayer)	<ul style="list-style-type: none"> ▪ Voyage to Antarctica 	14 days
		<ul style="list-style-type: none"> ▪ Discharge heavy lifts and priority cargo ▪ Back-load cargo 	5 days
19 December 2005 (Neumayer)	20 December 2005 (Penguin Bukta)	<ul style="list-style-type: none"> ▪ Voyage to Penguin Bukta 	1 day

		<ul style="list-style-type: none"> ▪ Discharge flyable cargo ▪ Off-load personnel ▪ Discharge all bulk fuel ▪ Back-load E-Base material 	13 days
2 January 2006 (Penguin Bukta)	16 January 2006 (Penguin Bukta)	<ul style="list-style-type: none"> ▪ SAWS buoy deployment 	14 days
		<ul style="list-style-type: none"> ▪ Ship on standby for back loading of cargo ▪ Back-load passengers 	16 days
1 February 2006 (Penguin Bukta)	2 February 2006 (Neumayer)	<ul style="list-style-type: none"> ▪ Voyage to Neumayer 	1 day
		<ul style="list-style-type: none"> ▪ Back-load Heavy lifts ▪ Load German cargo 	11 days
13 February 2006 (SANAE)	21 February 2006 (Cape Town)	<ul style="list-style-type: none"> ▪ Voyage to Cape Town 	8 days

TOTAL DURATION OF RELIEF VOYAGE: 83 DAYS

3. THE NAMES, LOCATIONS AND DATES OF OPENING OF THE PARTY'S BASES AND SUBSIDIARY STATIONS ESTABLISHED OR PLANNED TO BE ESTABLISHED IN THE ANTARCTIC TREATY AREA, LISTED ACCORDING TO WHETHER THEY ARE FOR SUMMER AND/OR WINTER OPERATIONS

The new SANAE IV base was completed during the 1996/97 summer season on the nunatak Vesleskarvet, situated at 71° 40' 25" South and 02° 49' 44" West.

4. THE NAMES OF THE OFFICERS-IN-CHARGE OF EACH OF THESE BASES, SUBSIDIARY STATIONS, SHIPS AND AIRCRAFT: THE NUMBER, OCCUPATIONS AND SPECIALIZATIONS OF PERSONNEL (INCLUDING ANY DESIGNATED BY OTHER GOVERNMENTS), WHO ARE OR WILL BE STATIONED AT EACH OF THESE BASES AND SUBSIDIARY STATIONS AND ONBOARD THESE SHIPS AND AIRCRAFT, INCLUDING THE NUMBER OF PERSONNEL WHO ARE MEMBERS OF THE MILITARY SERVICES, TOGETHER WITH THE RANK OF ANY OFFICERS AND THE NAMES AND PROFESSIONAL AFFILIATIONS OF PERSONNEL ENGAGED IN SCIENTIFIC ACTIVITIES

- ◆ **Officer-in-Charge:** Mr Angelo van Niekerk (*summer season*)
Mr Rivaaj Garibdass (*over wintering*)
- ◆ **Officer-in-Charge of ship:** Capt Dave Hall

- ◆ **Officer-in-Charge of aircraft:** Capt. Andre Stroebel

Number, occupations and specialisation of personnel:

5. Summer personnel

POSITION	SANA E	S.A. AGULHAS
Officers-in-Charge	2	1
Helicopters crew	8	
Maintenance personnel	15	
<i>Expedition personnel:</i>		
Medical Doctors	2	
Mechanical Engineers	2	
Electrical Engineers	2	
Electronic Engineers / Team Leader	2	
Diesel Mechanics	4	
Scientists	6	
<i>Other support personnel</i>	18	
Scientists	10	
Ships crew		40
TOTAL	71	41

6. Winter personnel

Electronic Engineer	1
Diesel Mechanics	2
Electrical Engineers/Technicians	1
Senior Meteorologist	1
Mechanical Engineers/Technicians	1
Leader & Doctor	1
Physicists	2
TOTAL	9

7. THE PROGRAMME OF WORK, INCLUDING SCIENTIFIC INVESTIGATION, BEING DONE AND PLANNED AT EACH OF THESE BASES AND SUBSIDIARY STATIONS AND ONBOARD THOSE SHIPS AND AIRCRAFT AND ALSO THE AREA OR AREAS OF OPERATION TO BE COVERED BY SUCH A PROGRAMME

Research in the following disciplines was conducted by the South African National Antarctic Programme at SANAE:

- ◆ Cosmic rays and ionosphere research
- ◆ Antarctic Magnetosphere, Ionosphere Ground based Observations
- ◆ Meteorology
- ◆ Seismology
- ◆ GPS

From the mv S.A. Agulhas:

- ◆ Meteorology
- ◆ Iceberg observations

8. PRINCIPAL SCIENTIFIC EQUIPMENT, WHICH MAY BE LISTED ACCORDING TO THE BASE AT WHICH IT IS CUSTOMARILY USED

Cosmic rays and ionosphere research –

- ◆ A 6NM64 (*Chalk River*) neutron monitor
- ◆ A 4NMD (*Chalk River*) neutron moderated detector
- ◆ A64-beam narrow angle imaging riometer (*galactic radio wave receiver*) at 51.4 MHz
- ◆ Wide angle riometers at 30, 38.8 and 51.4 MHz
- ◆ A Bartington MAG-03MC magnetometer

- ◆ A Quanterra/STS-2 Streckeisen seismograph, operated on behalf of the Alfred Wegener Institute, Germany

Southern Hemisphere Auroral Radar Experiment -

- ◆ Radar transmitter/receiver system with an array of 16 antennae

Antarctic Magnetosphere, Ionosphere Ground Based Observation -

- ◆ Digital Analysis System (*AVDAS*)
- ◆ VLF direction finders (*Goniometers*)
- ◆ SAOZ - Ozone Monitor
- ◆ YES - UV-B Pyranometer Computers
- ◆ Micropulsations Magnetometers
- ◆ Omnipal Receiver System VCRs
- ◆ Auroral CCD Camera Systems
- ◆ Interference filters
- ◆ Imaging processing cards
- ◆ GPS receivers
- ◆ CD writer
- ◆ Satellite Tracking & Data Acquisition system

Meteorology

- ◆ Automatic Weather Station
- ◆ RM young Wind sensor
- ◆ PRT Temperature sensor
- ◆ Barograph

Seismology

- ◆ Seismology equipment

9. TRANSPORTATION FACILITIES AND COMMUNICATION EQUIPMENT FOR USE WITHIN THE ANTARCTIC TREATY AREA

A. TRANSPORTATION

Surface transport: Vehicle fleet

ITEM NO	DESCRIPTION	QUANTITY
1	Caterpillar D6H LGP with blade	3
2	Caterpillar D6H LGP with crane	3
3	Caterpillar D4E	1
4	Caterpillar Challenger 65B	1
5	Caterpillar Challenger 65C	2
6	Caterpillar Challenger DV87	2
7	Caterpillar Challenger MT865	1
8	Snow scooters: Alpine 11	16
9	Snow scooters: Yamaha VK54011	4
10	30 tonne cargo sleds	15
11	4 Tonne cargo sleds	4
12	Crane on sledge	1
13	18 000 Litre tanker containers on sleds	8
14	25 000 Litre tanker containers on sleds	7
15	6m Containers on sleds	6
16	8m Insulated caravan on sled	2
17	Small sleds for Skidoo's	6
18	3 000 Litre tankers	5
19	Reefer (refrigeration) containers on sleds	2
20	6 000 Litre sludge tank	1

B. COMMUNICATION FACILITIES

See *Annexure A*.

C. DESCRIPTION OF AIRFIELD IN ACCORDANCE WITH RECOMMENDATION 3 (1) PARTICULARS OF LOCATION, OPERATING CONDITIONS AND LIMITATIONS, RADIO AIDS TO NAVIGATION, FACILITIES FOR RADIO COMMUNICATIONS AND INSTRUMENT LANDING

There is no permanent airfield at SANAE IV. However, the terrain is such that light aircraft equipped with skis can land near these stations. The surface is non-treated snow. Prevailing winds are generally from the South-East. There are neither facility for instrument landing nor aids for navigation.

10. FACILITIES FOR RENDERING ASSISTANCE

Medical facilities, equipment and supplies are available with two medical doctors at SANAE during the summer season. During the summer months the *mv S.A. Agulhas* and two helicopters can render assistance when in the vicinity of SANAE and/or Western Droning Maud Land.

11. NOTICE ANY EXPEDITION TO ANTARCTICA NOT ORGANISED BY THE PARTY BUT ORGANISED IN, CALLING AT, OR PROCEEDING FROM THE PARTY'S TERRITORY

None.

12. NAME, POSITION, LOCATION, DATE OF ESTABLISHMENT, DATE OF MOST RECENT EXAMINATIONS, ESTIMATE OF AVAILABLE FACILITIES, FOOD, FUEL AND SUPPLIES OF OTHER KINDS

	SKIDOO FUEL	JET A1	POLAR DIESEL
Onboard <i>mv S.A. Agulhas</i>	Nil	35 000 litres	450 000 L
At SANAE	21 x 210 L drums	55 x 210 L drums	450 000 L
AWI fuel at SANAE		119 x 210 L drums	
BAS fuel at SANAE		44 x 210 L drums	
DROMLAN fuel at SANAE		54 x 210 L drums	
DROMLAN Avgas at SANAE		Nil	

13. **ANNUAL RETURN OF THE NUMBERS OF EACH SPECIES KILLED OR CAPTURED IN THE ANTARCTIC TREATY AREA IN ACCORDANCE WITH ARTICLE XII OR THE AGREED MEASURES FOR THE CONSERVATION OF ANTARCTIC FAUNA AND FLORA USING THE FORMAT ANNEXED TO RECOMMENDATION 4 (9)**

Nil return.

14. **NOTICE OF INTENDED USE OF SCIENTIFIC RESEARCH ROCKETS IN THE ANTARCTIC TREATY AREAS**

None.

15. **RESEARCH PROGRAMMES IN THE ANTARCTIC TREATY ARE INCLUDING INFORMATION REQUIRED IN CATEGORIES 1 TO 6 ABOVE**

Routine weather observations during voyage and the deployment of a number of drifting weather buoys.

The following research programmes were be conducted in the Antarctic Treaty area:

- ◆ Characterization of meo-Proterozoic to Paleozoic crustal evolution of Western Droning Maud Land.
- ◆ Stable isotope investigation into fluid interaction during regional metamorphism.
- ◆ Geodesy and geographic information.
- ◆ Southern Hemisphere Auroral Radar Experiment (SHARE).
- ◆ Antarctic Magnetosphere-Ionosphere Ground-based Observations (AMIGO).
- ◆ Antarctic research on cosmic rays.
- ◆ Meteorological research.

**DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM
DIRECTORATE: ANTARCTICA AND ISLANDS**

Date: 7 March 2006

ANNEXURE A

INFORMATION ON TELECOMMUNICATIONS EQUIPMENT AND SCHEDULES FOR THE YEAR 2005/2006

ADDRESS FOR CORRESPONDENCE ON THIS INFORMATION:

**Director: Antarctica and Islands
Department of Environmental Affairs and Tourism
Directorate: Antarctica and Islands
P.O. Box 8172
ROGGEBAAI
8012
Republic of South Africa**

COUNTRY : Republic of South Africa

STATION : SANAE LAT 71° 40' 25" South LONG 2° 49' 44" West

CALLSIGN : ZRP

TEL : + 27/12/351 1801 (International)

FAX : + 27/12/351 1701 (International)

TRANSMITTERS				RECEIVERS				REMARKS
Type	Frequency band (MHz)	Types of transmissions and power	Frequency selection (Crystal Vfo, etc.)	Type	Frequency bands (MHz)	Types of reception available	Frequency selection (Crystal Vfo, etc.)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I Comm. 738 Transceiver	2.0 to 30 MHz	100 Watts	Synthesized	I Comm. 738 Transceiver	2.0 to 30 MHz	USB, LSB, AM	N/A	N/A
Yaesu FL 7000	2.0 to 30 MHz	1000 Watts	Linear Amp	Yaesu FL 7000	1.8 to 30 MHz	N/A	N/A	N/A
TR48S HF Transceiver	1.6 to 30 MHz	20 Watts	N/A	TR48S HF Transceiver	1.6 to 30 MHz	N/A	N/A	N/A
Motorola GM300	147 - 156 MHz	25 Watts	N/A	Motorola GM 300	147-156 MHz	N/A	N/A	N/A
Bi-Directional Repeater Station Motorola GM300	147 to 174 MHz	20 Watts	N/A	Motorola GM300	147 to 174 MHz	N/A	N/A	N/A
Simplex Link System connected back-to-back Motorola GM300	147 to 174 MHz	20 Watts	N/A	Motorola GM300	147 to 174 MHz	N/A	N/A	N/A
Sailor Marine Radio	Marine Frequency	25 Watts	VHF	Sailor Marine Radio	Marine Frequency	N/A	N/A	
VSAT System	Up link Freq 6.418 GHz Down Link Freq 4.193 GHz	10 Watts	SATELLITE	VSAT System	Up link Freq 6.418 GHz Down Link Freq 4.193 GHz	N/A	N/A	Tel.no +27-12-351-1801
Fax facility	N/A	N/A	SATELLITE	VSAT System	N/A	N/A	N/A	Fax: +27-12-351-1701 E-mail: Sanae@Sanap.org.za

Radio frequencies and times of schedules are arranged prior to departure for Antarctica. Due to atmospheric conditions the pre arranged frequencies may vary. The most common frequencies used are 3195, 4143, 8265, 13425 and 16552.

To contact the mv S.A. Agulhas:

S.A. AGULHAS PHONE	+ 27 21 4193023	Landline Ship's Office
PHONE + 27 83 644 0431		Mobile Master (in port only)
FAX + 27 21 419 3023		Landline Ship's Office
FLEET 77 VOICE 1 09871 7639 13448		Inmarsat Radio Room + Bridge
FLEET 77 VOICE 2 09871 6003 53720		Inmarsat Radio Room + Bridge
FLEET 77 FAX 9871 6003 54299		Inmarsat Radio Room
FLEET 77 DATA	master@saagulhas.amosconnect.com	Inmarsat Radio Room
E-MAIL (Stratos)	460101059@stratosmobile.net	Satellite C Bridge – simple (messages only)
E-MAIL (IN PORT ONLY)	agulhas@smit.com	Master's Office

National Antarctic Operator:

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