CTBTO PREPARATORY COMMISSION | preparatory commission for the comprehensive nuclear-test-ban treaty organization

JOB DESCRIPTION

POST: Associate Seismoacoustic operations officer – Junior Professional Officer

ORGANIZATIONAL SETTING: Division of Administration, Financial Services section
GRADE: P-1 (step2)

RESPONSIBLE TO: Chief, Operations section

DUTIES AND RESPONSIBILITIES

Under the supervision of the Chief, Operations Section and in coordination with the responsible seismoacoustic officer(s) to:

- Monitor the operations of IMS stations including evaluation of station performance, identify problems with data acquisition or data quality and communicate with the station operators;
- Review, make preliminary evaluation, classify and update reports as well as ensure proper distribution and storage thereof. Assure the conformity with the IMS operational procedures;
- Participate in the IMS station troubleshooting, evaluation and trouble reporting. In coordination with PTS maintenance and support staff and with IMS station operators, manage incidents and provide assistance for first level maintenance at the IMS stations;
- Prepare Post Certification Activity terms of reference for contracts and assist in the evaluation of the new proposals. Contribute to the evaluation of the station operators through the monthly reports and summary reports; participate in the revision of the new post certification activities budgets;
- Collaborate in the development of operational procedures, contribute to the development of technical documentation, as required;
- As part of a team, participate in the Operations Center activities, monitoring the status of the IMS Network
- and provide assistance on the development of new procedures;
- Visit IMS stations periodically for training purposes and development of on-site experience;
- Perform other duties as assigned.

QUALIFICATIONS

1. A university degree (Bachelor's degree or equivalent) in geophysics, acoustic, atmospheric physics or a related field;
2. At least two years relevant working experience in the analysis of geophysical time-series data or in the
3. application of a wave-technology network development or in station management preferably part of which should have been in an international environment;
4. Experience in the use of databases in a UNIX environment is essential;
5. Knowledge of Python or Perl, and TCP/IP networking concepts are an asset;

LANGUAGE

English is the working language of the CTBTO. Excellent written and oral communications skills in English are essential. Working knowledge of another UN official language is an asset.

ADDITIONAL COMPETENCIES

Post No: TBD
(Date 01.04.2015)

- Professionalism: Professional competencies in geophysics, acoustic, atmospheric physics or a related field; Shows pride in work and in achievements; demonstrates professional competence and mastery of subject
- matter; is conscientious and efficient in meeting commitments, observing deadlines and achieving results; is motivated by professional rather than personal concerns; shows persistence when faced with difficult problems
- or challenges; remains calm in stressful situations.

- Planning and Organizing: Develops clear goals that are consistent with agreed strategies; identifies priority activities and assignments; adjusts printouts as requested; allocates appropriate amount of time and resources for completing work; foresees risks and allows for contingencies when planning; monitors and adjusts plans and actions as necessary; uses time efficiently.

- Communication: Speaks and writes clearly and effectively; listens to others, correctly interprets messages from others and responds appropriately; asks questions to clarify, and exhibits interest in having two-way communication; tailors language, tone, style and format to match the audience; demonstrates openness in sharing information and keeping people informed.

- Teamwork: Works collaboratively with colleagues to achieve organisational goals; solicits input by genuinely valuing others' ideas and expertise; is willing to learn from others; places team agenda before personal agenda; builds consensus for task purpose and direction with team members; supports and acts in accordance with final group decisions, even when such decisions may not entirely reflect own position; shares credit for team accomplishments and accepts joint responsibility for team shortcomings.

- Technological Awareness: Keeps abreast of available technology; understands applicability and limitations of technology to the work of the office; actively seeks to apply technology to appropriate tasks, shows willingness to learn new technology.

LEARNING ELEMENTS

At the end of the assignment, the Associate Budge Officer would:

- have gained a substantive knowledge and understanding of the Comprehensive Test Ban Treaty Organization, as well as the numerous activities undertaken to promote its entry into force and the numerous and important involvement of the Provisional Technical Secretariat in capacity building and provisional implementation of the International Monitoring System.
- have gained a substantive experience and knowledge of scientific and technical expertise of the interantioanl Monitoring stations, their monitoring and implementation, along with the analysis of the related data
- be able to confidently interact at an international diplomatic level with representatives of member States, international intergovernmental and non-governmental organizations and national space-related agencies, associations and industry; and
- be able to research, draft and edit official international studies, technical reports, conference proceedings, articles and statements relating to CTBTO scientific and technical activities.

BACKGROUND INFORMATION

The Comprehensive Nuclear-Test-Ban Treaty (CTBT) bans nuclear explosions by everyone, everywhere: on the Earth's surface, in the atmosphere, underwater and underground.

The CTBT was negotiated in Geneva between 1994 and 1996. One hundred and eighty three countries have signed the Treaty, of which 166 have also ratified it, including three of the nuclear weapon States: France, the Russian Federation and the United Kingdom. But 44 specific nuclear technology holder countries must sign and ratify before the CTBT can enter into force. Of these, eight are still missing: China, Egypt, India, Iran, Israel, North Korea, Pakistan and the USA. India, North Korea and Pakistan have yet to sign the CTBT. The last Annex 2 State to ratify the Treaty was Indonesia on 6 February 2012.

Since the Treaty is not yet in force, the organization is called the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO). It was founded in 1996, has over 260 staff from over 70 countries,

and is based in Vienna. The CTBTO's main tasks are the promotion of the Treaty and the build-up of the verification regime so that it is operational when the Treaty enters into force. The annual budget is around US$130,000,000 or €120,000,000.

The International Monitoring System (IMS) will, when complete, consist of 337 facilities worldwide to monitor the planet for signs of nuclear explosions. Around 90 percent of the facilities are already up and running. The IMS uses the following four state-of-the-art technologies (numbers reflect final configuration):

- Seismic: 50 primary and 120 auxiliary seismic stations monitor shockwaves in the Earth. The vast majority of these shockwaves – many thousands every year – are caused by earthquakes. But man-made explosions such as mine explosions or the announced North Korean nuclear tests in 2006, 2009, 2013, 2016 and 2017 are also detected.
- Hydroacoustic: 11 hydroacoustic stations "listen" for sound waves in the oceans. Sound waves from explosions can travel extremely far underwater.
- Infrasound: 60 stations on the surface can detect ultra-low frequency sound waves (inaudible to the human ear) that are emitted by large explosions.
- Radionuclide: 80 stations measure the atmosphere for radioactive particles; 40 of them also pick up noble gas. Only these measurements can give a clear indication as to whether an explosion detected by the other methods was actually nuclear or not. They are supported by 16 radionuclide laboratories.

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