IAEA

Ongoing Monitoring and Verification In Iraq

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Resolution 687 establishes the purpose

...to assure that Iraq complies with its obligations "not [to] acquire or develop nuclear weapons or nuclear-weapons-usable material or any subsystems or components or any research, development, support of manufacturing facilities related to the above".
Objectives

On-going monitoring and verification should

- "... be credible, comprehensive, and sustainable." (Ambassador Albright)
- Detect a program for the acquisition of nuclear materials and other essential components before weapons can be developed
- Deter Iraq, through risk of detection, from undertaking a weapon development program

It is unrealistic to expect detection of small-scale activities: theoretical studies, laboratory research, development of proto-type machines.
The Plan

The OMV plan provides the IAEA with extensive rights:

- Inspection anywhere, anytime
- Unrestricted freedom of movement, including use of its own aircraft
- No-notice inspections
- Advance notice by Iraq of planned nuclear facilities, and of imports and exports
- Inspection by the IAEA of imports, exports, and transportation vehicles
- Continuous monitoring: inspector presence, surveillance equipment, seals
- Uncensored radio, satellite, and other forms of communication
There are two inter-related components to monitoring

- Monitoring declarations
- Detecting and investigating suspected covert activities
Declarations serve several important purposes

- Remove valuable resources from use for a nuclear program
- Permit the search for covert activities to focus elsewhere
- Prevent Iraq from conducting any weapon development activities without violating resolution 687

Techniques

- Interviews with Iraqi personnel
- Inspection
- Materials and equipment accounting
- Sampling
- Continuous, unattended monitoring: tags, seals, MIVS cameras

Applications: Inventories of nuclear material, facilities (including those supplied by more than 10 MW), equipment, isotopes
We have been using a number of techniques in the search for covert activities

- Olive Branch and other aerial surveys
- Intelligence from Member States
- No-notice inspections
- Environmental monitoring
An integrated set of databases provides for the management and analysis of data

- Seized documents (We broke the code)
- Inspection reports: text and imagery
- Materials and equipment
- Iraqi personnel
- Tags and seals
- Declarations
- Open sources
- Olive Branch and helicopter-based imagery are handled manually
- HUMINT and other classified information is handled manually

The analysis and assessment process combines inputs from Member States, UNSCOM, and the IAEA
OMV is implemented with the assistance of, and in full cooperation with, the UN Special Commission (UNSCOM).

- Logistics (Offices in Bahrain and Baghdad)
- Technical/administrative services (medics, vehicles, interpreters, photographers, communicators)
- High (Olive Branch) and low (heli) altitude imagery
- Designation of new sites
- Sharing of intelligence information
- Sharing of inspection-derived information and of databases
- Avoidance of duplication in overlapping activities
- Export/import monitoring
Member State assistance is essential to the success of OMV

- The essence of identifying covert activities is cuing from all sources
- Member States will continue to be the principal source of cuing information
- We must depend on the initiative of Member States. We cannot ask about that which we do not know.
On-going monitoring and verification is comprised of the following functions:

- Monitoring
- Analysis
- Inspections
- Analysis
- Assessment
Information Gathering Cycle in the Ongoing Monitoring and Verification System

Total Declared Nuclear Activity

- Initial Iraqi Declaration
- Additional Declaration #1
- Additional Declaration #2
- Additional Declaration #n

Challenges:
- Inspection Results
- Environmental Sampling Results
- Information from Member States

Growing information base from ongoing monitoring and verification activities.
Prototypical system

The monitoring system will be an integration of IAEA, UNSCO and Member States resources

Satellites
- Photointerpretation
- Power estimates
- Environmental monitoring
- Other

Analysis
- Trends
- Correlations
- Declarations
- Data fusion
- Archiving
- Display

Ground-based
- Containment & Surveillance
- Gamma surveys
- Air sampling
- Electric power & signals

Inspectors
- Declarations
- Suspect sites

Other sources
- EX/IM data
- Open press
- Financial transactions
- Technical training
- Key personnel assignments

Aircraft
- Photointerpretation
- Power estimates
- Environmental monitoring
- Gamma surveys
- Other

HUMINT
List of monitoring techniques

Member State intelligence
   Overhead imagery
   HUMINT, defectors, etc.
   Miscellaneous

UNSCOM imagery resources
   Olive Branch
   AIT

Mobile air sampling network
   Ground vehicles
   Helicopters

Vegetation sampling

Smear samples

Soil deposition samples

Airborne gamma survey equipment
Surface vehicle gamma survey equipment
Hand-carried gamma survey equipment

Manually-operated ground-penetrating radar
Uranium soil deposition detector
Surveillance cameras
Tags and seals
EX/IM monitoring mechanism

Other data integrated in our computer database
EX/IM data
Open sources
Key personnel interviews
Inspectors
Continuous presence
Experienced personnel
Experts for special circumstances

Fixed site air samplers