

# ON-SITE INSPECTIONS UNDER THE 1996 COMPREHENSIVE NUCLEAR TEST BAN TREATY (CTBT): MODALITIES **EDWARD IFFT**

## BACKGROUND

It has long been understood that a provision for robust on-site inspections (OSI) would be needed for a Comprehensive Test Ban Treaty (CTBT). For example, in the Kennedy–Khrushchev CTBT negotiations in the 1960s, as well as in the Trilateral (U.S./UK/USSR) negotiations of the late 1970s, although the issues of the frequency and intrusiveness of inspections were not solved, the fact that there should be some inspections was understood by all parties. The reason for this is that a nuclear explosion, especially one carried out underground, leaves unique and long-lasting effects which are difficult to hide, but whose precise location may be difficult to determine, except by a properly designed OSI.

Thus, the idea that there should be an effective OSI regime was not controversial in the 1994–96 negotiations in the Conference on Disarmament. However, the detailed modalities and procedures of the OSI regime were, and to some extent continue to be, difficult to work out to the satisfaction of all States Parties.

## EXPERIENCE WITH OSI

There are many unique features to the CTBT OSI regime compared to OSI regimes in other treaties—for example, the length of the inspection, the large number of inspectors and the variety of technologies employed. However, international experience with arms control inspections is more extensive than is generally recognized, and this experience helps to pave the way and provide reassurance that such inspections can be effective, while still protecting the legitimate security interests of the Inspected State Party (ISP). For example, thousands of inspections in hundreds of facilities in most countries of the world have been successfully conducted in support of a range of arms control treaties. The major relevant treaties are the 1968 Nuclear Non-Proliferation Treaty (NPT), 1993 Chemical Weapons Convention (CWC), 1990 Conventional Forces in Europe Treaty (CFE), 1987 Intermediate-Range Nuclear Forces Treaty (INF) and 1991 Strategic Arms Reduction Treaty (START). In addition to all this experience, the work of the 1992–1998 United Nations Special Commission (UNSCOM) and the 1999–2003 United Nations Monitoring, Verification and Inspection Commission (UNMOVIC) in Iraq provides valuable lessons in operating a regime under which the inspectors had sweeping powers, but had to deal with a sometimes uncooperative host.

The Preparatory Commission of the CTBT Organization (CTBTO) has also acquired valuable inspection experience directly related to the Treaty. Several tabletop and field exercises have been carried out, including testing radiation detection equipment in the Chernobyl Exclusion Zone. The most recent and most elaborate effort was Integrated Field Exercise 2008 (IFE08), carried out last year at the former Soviet Semipalatinsk Test Site in Kazakhstan. There have also been U.S.–Russia tabletops and tabletops in the U.S. to determine how a CTBT OSI might proceed at a sensitive U.S. facility.

In some respects, the CTBT regime is more intrusive than others, in that a broad array of technical measurements can be carried out. On the other hand, because CTBT inspections can only occur as a result of a challenge from another State Party, they will be very infrequent compared to the numbers under other treaties. In addition, one can expect that such operations will almost certainly be carried out in relatively remote areas and will generally not even need to involve access to buildings. In contrast, CWC inspections are carried out in commercial establishments and involve sensitive proprietary information issues, while START Treaty OSIs routinely involve access to sensitive military facilities, including nuclear weapons and their delivery systems.

## MODALITIES AND POLITICAL CONSIDERATIONS

The procedures for authorizing and carrying out an OSI are spelled out in Article IV of the CTBT and in Part II of a Protocol on verification. Technical details are specified in an Operational Manual, which is still under preparation in Vienna. The Treaty makes clear that “The sole purpose of an on-site inspection shall be to clarify whether a nuclear weapon test explosion or any other nuclear explosion has been carried out in violation of Article I and, to the extent possible, to gather any facts which might assist in identifying any possible violator.” The process is triggered by a request from a State Party, based upon information collected by the International Monitoring System (IMS) or from National Technical Means (NTM—satellites and other technical information-gathering systems controlled by individual States Parties). Because certain local effects of a nuclear explosion not detectable by the IMS are time-sensitive, emphasis is placed on completing the necessary procedures and getting inspectors to the site quickly. For example, seismic aftershocks may occur for a couple weeks

after an underground explosion and radionuclides may only be detectable for a limited time due to their half-lives—for example, the half-life for Xenon-133 is 12 days and for Argon-37 is 35 days. Assuming a process of consultation and clarification is not successful in resolving the ambiguity, the Executive Council (EC) must decide whether or not to authorize the OSI within 96 hours after the Director-General has conveyed the request to the EC. Approval requires positive votes by at least 30 of the 51 EC members, who are chosen from six geographical groups. This approval mechanism (the so-called “green light” procedure) creates a higher threshold than was wanted by some countries, but proved necessary to protect against fears of frivolous or abusive requests, and has led to some criticism that it will be impossible to obtain approval to carry out an OSI. The response to this concern is that the integrity, fairness and competence of the CTBTO will be such that evidence presented in support of an OSI—for example, coming from the IMS—will be convincing to at least 30 members of the EC. Inspectors will be international and trained and certified by the CTBTO.

Assuming approval by the EC, the inspection team (IT) of up to 40 persons will begin its activities at the inspection site within 10 days from the request. It will operate within an Inspection Mandate issued by the Director-General, which will specify an inspection area of up to 1,000 square kilometers. No later than 25 days after approval, the IT must submit a progress report to

the EC. Unless the EC decides to terminate the OSI, the inspection will continue on for 60 days from the date of approval (continuation phase). At this point, the IT may request, and the EC approve, another 70 days of activities (extension phase). If it has high confidence that it knows the exact location of the explosion, the IT may request, and the EC approve by majority vote, drilling. Drilling would only be expected to occur in exceptional circumstances, due to the expense and extensive equipment required.

In general, decisions regarding compliance are reserved to the individual States Parties. However, the EC will review inspection reports and address whether any non-compliance has occurred. If this is the case, the Conference of States Parties, taking into account the recommendations of the EC, may recommend collective remediation measures in conformity with international law. The Conference, or, if the case is urgent, the EC, may also bring the issue to the attention of the United Nations.

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The views expressed are those of the author and do not necessarily reflect the policies and assessments of the U.S. State Department or Georgetown University.

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