



# Chemical Weapons Convention Bulletin

Department of Commerce  
Bureau of Industry and Security

## Chemical Weapons Convention: Lessons Learned from Industry Inspections

On December 30, 1999, the Bureau of Industry and Security (BIS) promulgated interim regulations implementing the Chemical Weapons Convention (CWC). The CWC Regulations (CWCR) (15 CFR 710 et seq.) require commercial facilities engaged in the production, processing, or consumption of certain toxic chemicals and their precursors to submit annual declarations and to provide access for on-site inspections conducted by the Organization for the Prohibition of Chemical Weapons (OPCW), which administers the Convention.

BIS acts as the host and escort for OPCW inspection teams during inspections of U.S. facilities subject to the CWCR (see part 716 of the CWCR). In addition, BIS provides advance preparation assistance for inspections during site assistance visits and Advance Team activities which occur immediately after a facility is notified of an inspection. To date, BIS has hosted more than 40 inspections at Schedule 1, Schedule 2, Schedule 3, and unscheduled discrete organic chemical (UDOC) facilities. Although all facilities have unique characteristics and proprietary concerns, there are common issues that have arisen in preparation for and during inspections. This publication highlights these issues and offers advice to facilities on preparing for and expediting inspections.

### **Plant Site Delineation**

How a company delineates a facility or plant site affects the potential scope of on-site verification activities conducted by OPCW inspection teams. Schedule 1 facilities tend to be relatively small, self-contained areas that are easy to delineate. Schedule 2, Schedule 3, and UDOC plant sites are sometimes more difficult to delineate given their size and the complexity of their activities and organizational structure. While there are common conceptions of what the terms “plant site” and “plant” mean to U.S. industry, the CWCR contains precise definitions (see §710.1) that should be followed and assist in establishing the scope and conduct of on-site verification activities.

*Plant site* is the local integration of one or more plants, with

any intermediate administrative levels, which are under one operational control, and includes “common infrastructure” (e.g., medical center, central analytical laboratory, utilities, warehouse storage). Operational control is the key criterion and does not necessarily equate to ownership. Chemical complexes that have multiple operators under one owner – e.g., at the business unit or division level – should delineate a plant site that is not equivalent to the fence line. Although there is no treaty-based criterion for determining operational control, the operator is likely responsible for budget, profits, production planning, and decision making for declared and undeclared “plants” under its control within a chemical complex. A company with multiple tiers of on-site operators should use this criterion as the baseline for determining the appropriate plant site delineation.

All declared and undeclared *plants*, defined as relatively self-contained areas, structures, or buildings containing one or more *units* (items of equipment, including vessels and vessel set up, necessary for the production, processing, or consumption of a chemical) with “auxiliary and associated infrastructure” (e.g., storage/handling areas for feedstock and products, waste treatment), under one operational control, plus “common infrastructure,” whether or not controlled by this operator, constitute the “declared plant site.” “Auxiliary and associated infrastructure” usually are dedicated to the declared plant’s operations (i.e., not shared among declared or undeclared plants) and under the plant site operator’s control.

If the “declared plant site” is not the company’s fence-line, it is useful if the plant site name on the declaration is unique to the declared area (i.e., not the name of the chemical complex). This notifies inspection teams prior to arrival on-site that the “declared plant site” will not be equivalent to the fence line and facilitates discussions of plant site delineation. Companies are responsible for explaining the delineation of declared plant sites to the BIS Host or Advance Team prior to inspection team arrival (e.g., via organizational charts).

### **Pre-Inspection Briefing**

The key to a successful inspection is a comprehensive pre-inspection briefing (PIB). The PIB sets the tone and mood for the inspection, affording company representatives the



# Chemical Weapons Convention Bulletin

Department of Commerce  
Bureau of Industry and Security

opportunity to inform and orient the inspection team to the facility and propose a methodology for demonstrating compliance while minimizing burdens on operations.

Section 716.4(c) of the CWC outlines required and suggested topics for the PIB. A comprehensive PIB covers:

- introduction of key facility personnel;
- management, organization and history;
- activities, business and manufacturing operations with an emphasis on the commercial end-uses of the products associated with the declared chemicals;
- physical layout of the chemical complex for orientation;
- delineation of the declared facility (highlighting plants, auxiliary and associated infrastructure, common infrastructure) with explanations of the operational control concept if the declared plant site is not equivalent to the fence line and activities occurring on the declared site;
- identification of units specific to declared operations;
- list and location of all declared and undeclared scheduled chemicals on-site;
- explanation of the chemistry associated with the declared activities (UDOC plant sites do not have to identify chemical names);
- simplified process flow or block flow diagram;
- confidential business information (CBI) concerns;
- types and locations of records to verify the declaration;
- updates/amendments to the declaration;
- indicators of the absence of Schedule 1 chemicals, except if in accordance with the CWC (see discussion below on indicators of Schedule 1 chemicals);
- health and safety orientation, including information on plant site alarms and evacuation routes, and areas where access may be restricted for health and safety reasons;
- administrative and logistical information (e.g., locations of work rooms, bathrooms, lunchroom, transportation, etc.);
- review of (draft) facility agreement, if applicable;
- proposed inspection plan, specifying times/dates personnel and areas are available to support inspection activities; and
- question and answer period.

Click [here](#) for a template of a PIB.

All facility personnel involved with the inspection should attend the PIB. This ensures that all personnel have the same understanding as the inspection team of the ground rules for inspection activities (e.g., areas of sensitivity). The PIB may not exceed three hours. As soon as the PIB is completed, the inspection period begins.

## **“Windshield” (Orientation) Tour**

A “windshield” tour is normally conducted as soon as the inspection period commences and helps orient the inspection team to the declared plant site. Although the tour is not a regulatory requirement, it facilitates inspection activities as they progress. All areas comprising the declared plant site (i.e., declared and undeclared plants, auxiliary/associated infrastructure, common infrastructure) should be included on the windshield tour along with explanations of the purpose of each area, building, or structure. The windshield tour normally includes visual access of the units and auxiliary/associated infrastructure related to declared activities. Since verifying the absence of Schedule 1 chemicals is a primary aim of all inspections, the facility should point out the lack of indicators of Schedule 1 chemicals during the windshield tour (see discussion below on indicators of Schedule 1 chemicals).

There are no access requirements for conducting a windshield tour. Facilities, in cooperation with BIS Advance Teams, should plan routes in advance of inspection team arrival to avoid sensitive areas and information.

## **Access**

The Convention contains explicit provisions governing access during inspections. Inspection teams have “*unimpeded access*” to declared Schedule 1 facilities. Under the CWC’s “*unimpeded access*” provisions, the Host Team and facility may take such measures as necessary to protect CBI provided that compliance can be demonstrated.

For Schedule 2 inspections, inspection teams have “*unimpeded access*” to declared plants, which are the focus of the inspection. Inspection teams requesting access to other areas of a declared Schedule 2 plant site to clarify an ambiguity have *managed* access to such areas. Under



# Chemical Weapons Convention Bulletin

Department of Commerce  
Bureau of Industry and Security

*managed* access, inspection teams are limited to viewing only those areas where clarification is requested and the Host Team and facility have the right to take measures to protect sensitive installations and prevent disclosure of CBI not related to chemical weapons.

Inspection teams have “*unimpeded access*” to declared Schedule 3 plants and *managed* access to declared UDOC plants, which are the focus of the inspection. If inspection teams request access to other areas of a declared Schedule 3 or UDOC plant site to clarify an ambiguity, the extent of access must be *agreed* by the Host Team.

Since the focus of a Schedule 1 inspection is the declared facility and the focus of a Schedule 2, Schedule 3, and UDOC inspection is the declared plant(s), facilities should focus their efforts on identifying CBI in these areas and developing protective measures to prevent disclosure. Protective measures include *inter alia* route planning (i.e., routing inspectors around and through areas, structures, or buildings to avoid sensitive installations) and shrouding. All facility personnel should understand what information and areas are sensitive, and provide consistent responses to inspection team requests. Facilities should inform Host Teams of what information is sensitive and should not be disclosed to the inspection team.

The suggested route for providing visual access to the declared facility or plant is to follow the process flow -- i.e., from raw material storage/handling, to production/processing/consumption, to the transfer of the final product from the declared area. Access to other areas of the plant site will be case-by-case pursuant to a clarification request.

## **Absence of Schedule 1 Chemicals**

Verifying the absence of Schedule 1 chemicals, except if present in accordance with obligations under the Convention, is an inspection aim for Schedule 2, Schedule 3, and UDOC inspections. It is not possible to prove a negative and the Convention does not propose an inspection protocol for verifying the absence of Schedule 1 chemicals. BIS has developed an inspection hosting protocol for verifying the absence of Schedule 1 chemicals by demonstrating the absence of potential indicators of Schedule 1 activity.

During inspection activities, plant site representatives should point out the absence of possible indicators of Schedule 1 activity. BIS recognizes that facilities have legitimate reasons for having indicators (many of which are required or routine in the United States but possibly not in other countries) that may need to be explained to the inspection team. While not exhaustive, discussion of the following list of indicators has enabled plant sites to demonstrate compliance with this inspection aim:

- precursors of Schedule 1 chemicals on-site;
- proximity of plant site to residential areas vs. government installations;
- routine personal protective equipment used on-site;
- decontamination equipment;
- alarm systems;
- posted evacuation routes;
- chemical release monitoring equipment, deluge systems, and spray systems;
- emergency shelters;
- enclosed control rooms, storage, and process areas, and laboratories;
- blast (overpressure) protection systems;
- process equipment metallurgy and materials of construction; and
- medical facilities prepared to respond to Schedule 1 exposures.

Records that may assist in demonstrating the absence of Schedule 1 chemicals include the SARA Title III, Tier II list (from 40 CFR Part 355) and a database search for Schedule 1 CAS numbers.

## **Records Review**

Records review is critical to verifying the consistency of the declaration and assists in verifying other inspection aims such as the absence of Schedule 1 chemicals (see discussion above) and non-diversion of Schedule 2 chemicals. It also is a laborious process, requiring detailed attention to material accountancy and the protection of CBI. Advance Teams can provide assistance in preparing documentation for review.

BIS has developed a methodology for assisting Schedule 2 plant sites in preparing records for review. The first step is



# Chemical Weapons Convention Bulletin

Department of Commerce  
Bureau of Industry and Security

to provide inspection teams with an overview of the facility's recordkeeping system and the methodology used for preparing the declaration. Next, records should be organized so that inspection teams can quickly move from the annual production, processing, consumption declaration numbers to individual accountancy sheets (e.g., batch, receipt, transfer): annual summary sheet → monthly summary sheet → batch records. Inspection teams request selected batch records to verify the summary sheets.

The type of information provided to inspection teams should be based on a material accountancy methodology. The following equations provide a suggested methodology for verifying the declared levels of production, processing, or consumption:

- production: opening inventory + amount produced = transfers + closing inventory.
- processing: opening inventory + receipts (amount processed) = transfers + closing inventory.
- consumption: opening inventory + receipts = amount consumed + closing inventory.

This accountancy should, in theory, balance out to zero. Deviations, usually for reasons such as waste, reblends, calculations, material not completely removed from drums or other storage vessels, etc., need to be explained to inspection teams. In addition to verifying the declaration, this material balance allows inspection teams to verify the non-diversion of Schedule 2.

Records review during Schedule 3 and UDOC inspections must be agreed between the host and inspection teams. Material balance accounting is not necessary. Instead, a summary sheet of production activities or spot checks of records (e.g., production logs, maintenance records, utility reports) should suffice in verifying that the quantity produced is consistent with the range declared.

Prior to disclosure, the Host Team will classify and control all information provided to the inspection team. Unless agreed otherwise by the facility, all information reviewed by the inspection team will remain on-site and must be returned at the end of the inspection. The facility will acknowledge release and return receipt and the inspection team will acknowledge receipt and return of all information

on the Host Team's information control log.

## **Other Declaration Verification Activities**

Although it has become routine to expect an inspection team to "verify that activities are consistent with the information provided by the inspected State Party in the declarations" using records (e.g., production) and GPS readings to confirm the site's location, there are a number of other data elements included in declarations that can be verified. Of particular interest to inspection teams recently has been ownership and product group codes (PGCs).

Very often, ownership can be demonstrated through some simple document, such as correspondence from a local governmental agency to the company. In order to verify the "main activities" of a Schedule 2 or 3 **plant** or of a UDOC **plant site**, an inspection team may wish to confirm the PGCs identified in the declaration. This can be of particular concern during UDOC inspections, where the declaration does not provide details of the specific chemicals produced, and where main activities encompass an entire plant site, whether or not related to a declared plant.

Careful attention should be given to how to demonstrate that the activities on the site are consistent with the declared PGCs. This may be done using open source information (e.g., company brochures or website discussing chemical operations) or by demonstrating features of the plant site that indicate the types of operations present. The goal, if possible, is to demonstrate the appropriate links during the PIB so that additional records will not be necessary. Even if the verification is to be done visually, these links can still be documented in the PIB to prepare the inspection team for the site tour.

In the preparation of declarations, it is important to identify the PGCs appropriate to describing the main activities of the plant or plant site. For example, Schedule 2 and Schedule 3 plant declarations should identify those PGCs relevant only to the declared plant (whether or not related to the scheduled chemical).

## **Further Information**

To learn more about CWC inspections or request a site assistance visit, visit our website at [www.cwc.gov](http://www.cwc.gov) or contact BIS's Treaty Compliance Division at (703) 605-4400 or fax (703) 605-4424.