

## Chapter 2

# NBC Warning and Reporting System (NBCWRS)

The primary means of warning units of an actual or predicted CB hazard is the NBC Warning and Reporting system (NBCWRS). It is a key in limiting the effects of CB attacks. The NBCWRS allows units to determine required protective measures and plan operations. Units take action depending on the mission and type of hazard present. If the mission allows, affected units alter plans to avoid the hazard. Otherwise, the units upgrade protective measures and occupy or cross the hazard area

### Standard NBC Reports

The NBCWRS consists of six reports. Each is standardized by ATP 45/STANAG 2103 Change 4, dated Jan 89 and the United States Message Text Format (USMTF). The U.S., NATO and British, Canadian, and Australian use the same message formats. The six standard reports are—

- NBC 1-Initial report, used for passing basic data compiled at unit level.
- NBC 2-Report used for passing evaluated data.
- NBC 3-Report used for immediate warning of predicted contamination and hazard areas.
- NBC 4-Report used for passing monitoring and survey results.
- NBC 5-Report used for passing information on areas of actual contamination.
- NBC 6-Report used for passing detailed information on chemical or biological attacks.

The reports use standard formats to shorten the message being passed. The warning and reporting system is based on a code letter system. The meaning of each letter used to transmit an NBC message is described in Table 2-1 and GTA 3-6-5. The following paragraphs described each report. Specific instructions for acquiring the information and sending the report are discussed later in this chapter. Refer to Chapter 4 for specific use of the NBCWRS for biological attacks.

### NBC 1 Report

The NBC 1 Report is the most widely used report. The observing unit uses this report to provide CB attack data. All units must be familiar with the NBC 1 Report format and its information. The unit must prepare this report quickly and accurately and send it to the next higher headquarters.

Battalion and higher elements decide which NBC 1

*TABLE 2-1. Meaning of line items in NBC reports.*

Line	Chemical and Biological	Remarks
A	Strike serial number.	Assigned by NBC center.
B	Position of observer..	Use coordinates (UTM or place)
C	Direction of attack from observer.	Direction measured clockwise from grid north or magnetic north (state which) in degrees or mils (state which)
D	Date-time group for start of attack.	Designate time zone used.
E	Date-time group for end of attack.	Designate time zone used.
F	Location of area attacked.	Use grid coordinates (or place). State whether the location is actual or estimated.
G	Kind of attack.	State whether attack was by artillery, mortars, rockets, missiles, bombs, or spray.
H	Type of agent/type of burst/persistency. P (persistent) or NP (nonpersistent).	Specify air, or surface. State whether ground, airburst, or spray attack for chemical.
I	Number of munitions or aircraft.	If known.
J	NA	
K	Description of terrain and vegetation.	NBC 6 only.
L	NA	
M	Line MIKE removed from CB reports by ATP 45/STANAG 2103.	
N	NA	
O	NA	
P	Line PAPA removed from system by ATP 45/STANAG 2103	
PA	Predicted hazard area (coordinates).	If wind speed is 10 kmph or less, this item is 010 (the radius of the hazard area in km).
PB	Duration of hazard in attack and hazard areas.	In days, hours, minutes, etc..
Q	Location of sampling and type of sample.	UTM or place. State whether the test was air or liquid.

*Table 2-1. Meaning of line items in NBC reports  
(continued).*

Line	Chemical and Biological	Remarks
Q	Location of sampling and type of sample.	UTM or place. State whether the test was air or liquid.
R	NA	
S	Date-time contamination detected.	State time initial identification test sample was taken. State time zone used.
T	Date-time of latest contamination survey of the area.	NBC 5 and NBC 6 reports only.
U	NA	
V	NA	
W	NA	
X	Area of actual contamination.	Plot in yellow.
Y	Downwind direction of hazard and wind speed.	Direction: 4 digits (degrees or mils); Wind speed—3 digits (kmph or knots).
Z	NA	
ZA	Significant weather phenomena.	Air stability (1 digit). Temperature in centigrade (2 digits). Humidity (1 digit). Significant weather phenomena (1 digit). Cloud cover (1 digit). See Figure 3-11, Chapter 3, for explanation of codes.
ZB	Remarks.	Some NATO forces will use GENTTEXT.
ZI	Line ZULU INDIA removed from system by ATP 45/STANAG 2103.	

Reports to forward to the next higher headquarters. If several reports are received on the same biological or chemical attack, then a consolidated NBC 1 Report is forwarded. This reduces the number of reports to a manageable level. If the NBC 1 Report, however, is based on a chemical agent alarm going off and there is no other indication of an attack (such as in-coming artillery rounds) the battalion chemical staff should inform higher headquarters, but request that the sending unit verifies the attack with two or more sampler/detector tickets from a M256 Chemical Agent Detector Kit. The attack should be verified at this level before the NBC 1 Report is sent to higher headquarters. This helps to eliminate a false report from causing an entire brigade task force or division to go into Mission Oriented Protective Posture (MOPP). NBC 1 Reports are not routinely passed to corps or higher NBC centers (NBCC) except for the initial use report.

Precedence of the NBC 1 Report depends on whether or not it is an initial report. The initial use report is FLASH precedence, all others are IMMEDIATE precedence.

Individuals identified by unit SOP submit observations to the unit NBC defense team at company/battery or troop level. They need not use the NBC 1 Report format or individual line items of the NBCWRS to pass this data to the NBC Defense Team. (This report is generally in the form of a SPOT report or SALUTE report). The unit NBC defense team normally consists of the unit chemical NCO (54B20) or an NBC NCO that has been school trained at an area NBC defense two week school, an officer and an enlisted soldier (Specialist 4 or above) that has attended the same two week school. These soldiers will have the expertise at unit level of advising the commander on NBC defense matters and forming NBC reports.

Normally, the unit NBC defense team formats NBC 1 Reports. This ensures the content of the report is known to the commander or his or her representative. It also ensures that the report is in the proper format and is as correct as possible.

All data is sent in a single, complete NBC 1 Report. Do not divide data into two parts to create a subsequent report. NBC 1 Reports are not attack notifications, they simply pass data. Separate procedures must be developed for attack notification and are beyond the scope of this manual. Attack notification may take the form of a SALUTE, SPOT or SITREP Report and should be addressed in detail in unit SOPs.

### Initial Use Report

The first time a CB weapon is used against US forces the observing unit will send the NBC 1 Report with a FLASH precedence. Each intermediate headquarters will forward the report with a FLASH precedence (or IMMEDIATE precedence if a previous NBC 1 Report has been forwarded). If the report is of a second attack within the division, use IMMEDIATE.

The observer determines the date-time group of the attack, location of the attack, means of delivery, type of burst (air or ground), and if possible, type of agent. The NBC defense team then formats the NBC 1 Report and forwards it to the next higher headquarters. All units prepare and forward NBC 1 Report.

Battalion and higher headquarters screen NBC 1 Reports and decide which report(s) to forward. If the headquarters receives several reports pertaining to the same attack, it forwards a consolidated NBC 1 Report instead of separate reports. All reports must include line items Bravo (position of observer), Delta (date/time group), Hotel (type of burst), and either Charlie (direction of attack) or Foxtrot (location of attack). Use

other line items if the information is known. If the unit is capable of providing local weather information as listed in line items Yankee (downwind direction of hazard and wind speed) and Zulu Alpha (significant weather phenomena) this information should be included in the report.

### **NBC 2 Report**

The NBC 2 Report is based on one or more NBC 1 Reports. It is used to pass evaluated data to higher, subordinate, and adjacent units. Division NBCC is usually the lowest level that prepares NBC 2 Reports. Brigade and battalion NBC personnel may prepare the NBC 2 Report if they have sufficient data. However, these units will not assign a strike serial number.

Units use the NBC 2 as a factor in determining whether to adjust MOPP levels, and to assist in planning future operations. Line items Alfa (strike serial number), Delta (date/time group), Foxtrot (location), Golf (means of delivery), and Hotel (type of burst) are always contained in the NBC 2 Chemical or Biological Report. Items Yankee (downwind direction speed), Zulu Alfa (weather), and Zulu Bravo (remarks) should be included in the chemical or biological report. Line item Zulu Bravo (remarks) should include the type and case of attack, if known. Use other line items if the information is known.

### **NBC 3 Report**

Division NBCC uses the NBC 2 Reports and the current wind information to predict the downwind hazard area. This is sent as an NBC 3 Report. It is sent to all units that could be affected by the hazard. Each unit plots the NBC 3 Report and determines which of its subordinate units are affected and warns those units accordingly.

The NBC 3 Report is a prediction of a downwind hazard area. This prediction is safesided to ensure that a militarily significant hazard will not exist outside of the predicted hazard area. Commanders should use the report as battlefield intelligence when considering courses of action. When a unit is in a downwind hazard area, the commander must decide whether to stay or move. This decision is based on the mission, and higher headquarters guidance. As the Automated Nuclear, Biological, and Chemical Information System (ANBACIS) is improved, the commander will be able to view the modeled hazard area on a computer screen instead of basing his decision on the safe-sided STANAG plots. This will provide a more realistic depiction of the hazard area. ANBACIS is addressed in more detail later in this chapter.

Units within the chemical downwind hazard area must adjust their MOPP level, if necessary. They must ensure

that chemical agent alarms are placed far enough upwind to provide adequate warning. The NBC 3 Chemical Report is re-evaluated every two hours. The hazard prediction could change significantly. Units currently affected and those previously affected must be notified that they are in (or are no longer in) the hazard area. Line items Alfa (strike serial number), Delta (date/time group), Foxtrot (location), Hotel (type), Papa Alfa (predicted hazard area), Papa Bravo (duration of hazard) (if ground contamination is present), Yankee (downwind hazard and speed), and Zulu Alfa (weather) are used for a chemical hazard prediction. In order that a recipient of an NBC 3 Chemical Report be able to plot the downwind hazard area easily and quickly, Line Zulu Bravo may contain the following information—type and case of attack, or the downwind hazard distance (DHD). Use other line items if the information is known.

### **NBC 4 Report**

Actual contamination is reported using an NBC 4 Report. Separate NBC 4 Reports are plotted on the tactical map to show where the hazard exists. If monitoring information is incomplete, a survey may be directed. Line items Hotel (type of attack), Quebec (location of sample), and Sierra (date/time of contamination was detected) are reported for a chemical hazard. These items are used as often as necessary to complete the report. Other items may be included if available and necessary to complete the report. A contamination overlay is sent to all units by computer data base update, electrical facsimile, messenger, liaison officer, and the NBC 5 Report.

### **NBC 5 Report**

The NBC 5 Report is prepared from the contamination plot. This report is last in order because it consists of a series of grid coordinates. Often this message must be sent on FM radio nets. This requires lengthy transmission. The recipient is required to plot each coordinate and redraw the plot. Complete details can follow later on the facsimile or messenger-delivered plot.

For CB contamination, line items Alfa (strike serial number), Delta (date/time group), Hotel (type of burst), Sierra (date/time of sample), Tango (date/time of latest survey), and X-Ray (area of actual contamination) are reported.

With the exception of line item Alfa, when a user has previously received data through other NBC reports, the data need not be repeated on the NBC 5.

This message may be sent before or after a contamination plot has been received. The NBC 5 Report

is also used to report the closure of a decontamination site. The NBC 5 Report should include coordinates for the site and sump so as to notify other units of the contamination area.

## **NBC 6 Report**

This report summarizes information concerning a chemical or biological attack(s) and is prepared at battalion level, but only if requested by higher headquarters. It is used as an intelligence tool to help determine enemy future intentions. The NBC 6 Report is submitted to higher headquarters. It is written in narrative form, with as much detail as possible under each line item. The NBC 6 Report may also be used to warn and report suspected biological attacks. Information concerning this use of an NBC 6 Report is described in detail in Chapter 4.

## **Managing the NBC Warning and Reporting System**

Managing the NBCWRS is crucial for the success of a command. To be useful, CB information must be collected, reported, and evaluated. Once evaluated, it can be used as battlefield intelligence. Obtaining and converting CB information into usable CB intelligence does not just happen. The volume of information that needs to be collected and reported could easily disrupt both communications and tactical operations if not properly managed. This section describes what information is available and how that information gets to the person or unit needing it.

### **Collecting CB Information**

The first step in managing the NBCWRS is to determine what information is available and who is available to collect it. Two types of data must be collected. Observer data provides information that an CB attack has occurred. Monitoring, survey, and recon data provide information on where the hazard is located.

### **Observer Data**

Every unit is responsible for observing and recording CB attacks. But every unit does not automatically forward NBC 1 Reports. Any unit aware of a chemical or biological attack promptly prepares and forwards an NBC 1 Chemical or Biological Report.

### **Monitoring, Survey, and Reconnaissance Data**

NBC 1 Reports allow the NBCC to predict where the

hazards will be. This prediction (NBC 3 Report) is only an estimation of the hazard area. Feedback is needed from units to determine exactly where the contamination is located.

This feedback comes from monitoring, survey and recon (NBC 4 Reports). Monitoring and recon operations give the initial location of CB hazards to the NBCC. Initial monitoring and recon reports are generally forwarded through intelligence channels to the NBCC. This information may also be sent to the NBCC by ANBACIS. ANBACIS is the Automated NBC Information System and is described later in this chapter. The NBCC plots the information on the situation map. If more information is needed, the NBCC recommends a unit (picked because of its location and/or capability) to collect and forward the necessary data. This unit may be an organic unit NBC defense team or an NBC reconnaissance platoon from the divisional chemical defense company. Special operations forces will depend on special forces operational detachments (SFOD) with attached LB teams, special forces group (SFG) chemical detachments, or organic unit NBC defense teams. The reconnaissance platoon may be tasked organized to support a maneuver brigade in NBC reconnaissance collection efforts.

Collecting CB information is a joint effort between units and the NBCC. The unit does the actual collecting of information. The NBCC plans for and directs the collection effort. The division FSOP/OPORD/OPLAN should describe who collects and forwards CB information for evaluation. More detailed information concerning this collection effort is addressed in Chapter or in FM 3-19.

## **Evaluating CB Information**

The CB data must be collected and evaluated by the NBCC and used as battlefield intelligence. Units and intermediate headquarters use the raw data to develop CB intelligence for their own use until detailed results are available from the NBCC.

### **Unit Procedures**

Unit procedures for determining the location of contamination are simplified and less accurate than NBCC procedures. Emphasis is on speed rather than accuracy.

With-exception of designated observer reporting units, intermediate headquarters (such as battalion and brigade) consolidate and screen NBC reports to reduce the number sent to the NBCC.

### **NBCC Procedures**

Procedures used by the NBCC are more detailed and complex than those at unit level.

NBC 2, NBC 3, and NBC 5 Reports from division NBCC supersede those done by subordinate units.

## Transmitting CB Information

Procedures used to transmit CB information to and from the NBCC are an important part of the CB information system. Figure 2-1 shows the direction that various NBC reports travel. Usually the flow is through the chain of command—from company to battalion to brigade to division. There are exceptions to this—

- The NBCC may request data such as survey information. The unit doing the survey may report directly back to division. The monitoring unit must also send an information copy back to the parent unit for command and control (C<sup>2</sup>) and for reordering CB defensive stocks.

- Attached or OPCON units may have no direct contact with a parent unit. In these cases the headquarters to which they are OPCON passes CB information.

- Units that operate independently (such as military police or engineers) will report through the controlling headquarters.

The method of transmitting information depends on the tactical situation and mission of the unit. Methods are specified in FSOP/OPLAN/OPORD and unit SOP. At brigade and higher headquarters, NBC Reports usually

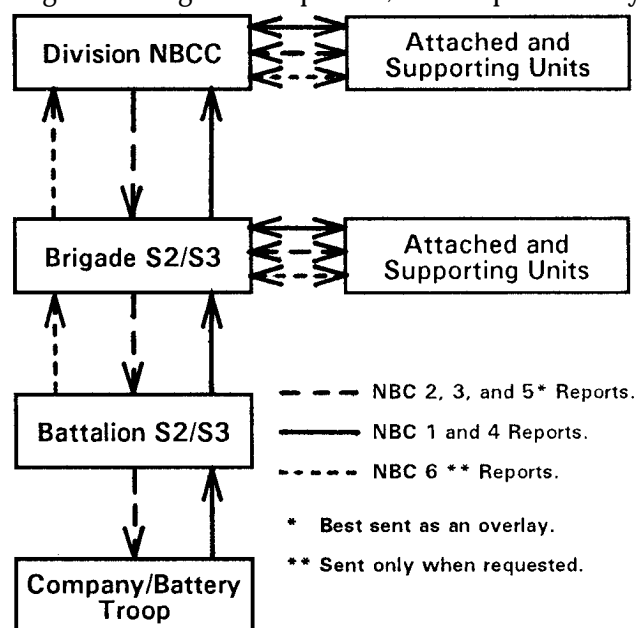


Figure 2-1. Flow of NBC Reports.

are passed on the intelligence net rather than the command net. At battalion level and lower there is generally only one FM net available. This net is required to communicate command information. Therefore, NBC Reports should be formatted ahead of time and be as short and concise as possible. In this case, wire communications are best. Support units use Admin-Log nets. However, these units need to also inform the brigade TOC or division TOC when operating in that units Area of Operations (AO). Wire communications are excellent, if available. There are numerous methods to communicate CB information. One of which is ANBACIS, which accesses information from the maneuver control system (MCS). The NBCC should evaluate all possible methods and select those that best suit the purpose. Again, this information should be contained in the unit SOP or current operations order.

Each unit and command element has a specific function in a CB environment. This function is in addition to normal combat functions. The exception to this is the NBCC whose primary function is NBC operations. The preceding pages described procedures and requirements for collecting, evaluating, and transmitting CB information. This section describes responsibilities at each command level and is intended to be only a guide.

### Actions at Unit Level

Unit level collection, processing, and analysis techniques are designed for rapid evaluation of CB data. The results are not as accurate as those obtained by the NBCC, but they are sufficient for planning until replaced by data from the NBCC. Although analysis techniques are similar for company, battalion, and brigade, each has specific responsibilities for collecting and processing CB information. The responsibilities are discussed here. Analysis techniques are explained in the appropriate chapter.

The major portion of CB information is collected and reported by company/ battery/ troop-level units. These units must be trained and equipped to—

- Report CB attack data using the NBC Warning and Reporting System.
- Monitor for chemical agents.
- Plot simplified downwind hazards.
- Identify toxic chemical agents.
- Collect and forward soil and water samples.
- Conduct chemical and biological surveys/reconnaissance.

Organization and training of personnel to perform these tasks will be in accordance with AR 350-42.

### Battalion Level

The battalion monitors the information gathering of

subordinate units. Battalion chemical personnel ensure each subordinate unit is trained. Battalion personnel also are trained to—

- Consolidate and forward NBC reports.
- Estimate effects of CB hazards.
- Disseminate information on CB activities.
- Coordinate unit CB recon elements with and through the battalion S2/S3 sections and the chemical company platoon leader tasked to support the battalion.
- Coordinate with Brigade to obtain additional smoke or decon assets, if required.
- Advise the commander on how to employ CB assets.
- Plan and supervise decentralized CB surveys.
- Maintain a CB situation overlay.

**Brigade/Task Force Level**

The chemical personnel at brigade must perform the same functions as battalion chemical personnel. Brigade personnel also must—

- Coordinate with all attached NBC units.
- Coordinate with other staff sections and advise them on CB matters.
- Plan and supervise decentralized CB surveys.
- Collect information from and assist CB personnel within the task force.

**NBCC Level**

NBCC techniques involve more complicated procedures and are based upon the comparison of data from many sources. Much of this data is not available to a single unit. In addition to performing detailed analysis, the NBCC also —

- Receives, collates, evaluates, and disseminates reports of enemy CB attacks.
- Prepares and disseminates wind messages.
- Estimates the effects of enemy and friendly chemical and enemy biological attacks, including hazard predictions.
- Coordinates recon and survey activities with higher, lower, and adjacent units.
- Maintains a CB situation map.
- Provides advise to G2 on CB intelligence matters.
- Provides technical assistance to all staff levels.
- Coordinates with other staff sections and advises those staff sections on CB matters.
- Provides technical assistance in the interrogation of POWs on CB matters. This technical assistance is generally in the form of providing the interrogator with a list of questions to ask the prisoner. The questions may include—
  - Employment tactics.
  - CB munitions.
  - Types of agents available.

- Defense training status.
- Types of defensive equipment used by soldiers.

**Chemical Attack Warning  
(CHEMWARN)**

The CHEMWARN message is very similar to the NBC 3 Chemical Report. The meaning and use of each line item are shown in Table 2-2. Figure 2-2, on page 2-7, shows some examples of CHEMWARN messages.

Two hazard areas exist for a chemical attack—the attack area and the downwind hazard area. Under normal conditions, a chemical attack will not be carried out if friendly troops are within the attack area. Personnel in the downwind hazard area may don MOPP gear.

*Table 2-2. Meaning and use of CHEMWARN line items.*

Line Item	Meaning	
A	Strike serial number or code word/nickname.	Indicate that this is a chemical attack.
D	Date-time group of attack.	Give only the date and time of the attack. This should be encoded.
F	Location of attack.	Grid coordinates of center of attack. If attack is spread over large areas, a series of coordinates may be given to indicate the center of mass of the attack. This should be encoded.
G	Delivery means.	Tell how delivered and how disseminated.
H	Type of agent.	Classify agent by physiological effect and duration of effectiveness.
PA	Attack area and predicted hazard area.	Six-digit coordinates will be given.
PB	Duration of hazard.	In days, hours, minutes, etc.
Y	Downwind direction and wind speed.	Downwind direction, four digits in degrees or mils (state which), wind speed, three digits in kmph only.

**Automated Nuclear,  
Biological, and Chemical  
Information System  
(ANBACIS)**

ANBACIS is a software information system which will support the chemical staff officer and NCOs as well as

Area of hazard	
<b>CHEMWARN</b>	
A	AF002Chem
D	020830Z
F	PG 560750
G	Artillery ground burst
H	Nonpersistent Nerve
PA	PG 556751 PG 559754 PG 632774 PG 610694 PG 558747
Y	0015 Deg 015 kmph

Multiple attack hazard area (sprayline)	
<b>CHEMWARN</b>	
A	AB104Chem
D	141330Z
F	UC310060 UC370061
G	Spray
H	Persistent Nerve
PA	UC 373071 UC 485013 UC 307900 UC 300060 UC 305068 UC 305068
PB	PB Attack area 2 to 4 days Hazard area 1 to 2 days

Figure 2-2. Examples of CHEMWARN messages.

chemical units (squad to brigade) with the communication, recordkeeping, and calculation of NBC warning and reports, tactical decision aids, and databases essential to accomplish their tasks. One module is the NBCWRS which is an automation of the manual data processing as described in this manual. ANBACIS was designed to operate on the Army common hardware and also to operate in the stand alone mode on any IBM compatible computer. ANBACIS is user friendly with drop down windows and is operated by chemical staff personnel.

It can receive any number of NBC 1 Reports and create the correct number of NBC 2 Reports. It will then convert the NBC 2 Reports to NBC 3 Reports utilizing the correct weather information that has been previously received electronically from the staff weather officer. It will take the basic wind report and create the Chemical Downwind Report in seconds.

ANBACIS supports battle management by—

- Reducing human error on assisting in soldier

endurance. By relieving the chemical staff from repetitious and intensive calculational tasks, the soldiers will be able to apply their skills more effectively at assisting the commanders and other staff members. By not expending time and effort on those tasks, they will be more mentally alert and less subject to making mistakes.

- Calculate the NBC 3 and 5 Reports from the NBC 1 and 4 Reports and then display them on the electronic map (E-MAP) with the units, boundaries, and other map information. This overlay information will be available to the other terminals for use in their planning and operations.

- Communication capability. ANBACIS will not have any inherent communications capability. It is designed to use the communications from the maneuver control system or army common hardware and software packages.

- Found at all force level staff sections (such as battalion, brigade, division), and chemical units down to squad level.

- Handle all NBC Reports 1 through 5. It utilizes many checks and constraints to prevent false information from being used. It will automatically look-up and utilize the correct weather information contained in the database. In addition, it will create flame field expedient plans, smoke plans, and NBC 4 Reports from monitor and survey reports.

- Operated by the normal Chemical Corps staff or unit representative, all enlisted and officers.

- ANBACIS is designed to work best in the maneuver control system organization. A stand-alone capability will be maintained to work on most IBM compatible computers. This will allow continuity of operations and allow work to be accomplished when separated from the MCS environment. When the operator returns to the MCS, he can load the plans into the MCS-ANBACIS using a diskette.

It has other modules including smoke plan creation and flame field expedients (FFE), and others.

For additional information on ANBACIS, refer to the ANBACIS User's Guide.