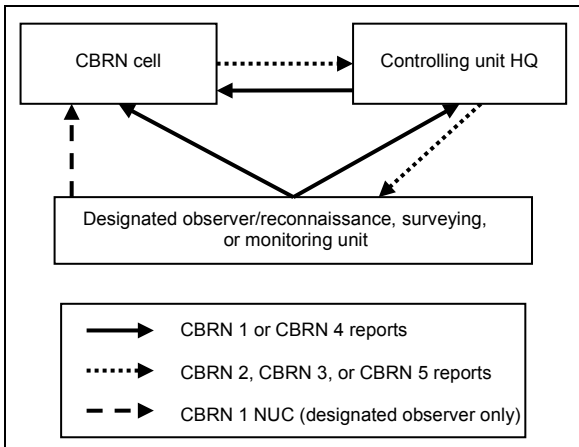


CBRN

Warning and Reporting System

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**Headquarters, U.S. Army Chemical, Biological,
Radiological, and Nuclear School
October 2011**

*This publication supersedes GTA 03-06-008, November 2007.

Sample CBRN 1 Report (Observer's Initial Report)

Line	Nuclear	Chemical	Biological	Radiological
A	C	C	C	C
B	M /32UNB062634/ 2500MLG//	M /32UNB057642/ 2500MLG//	M /33SVB307672/ 235DGG//	M /504108N0021554W/ 099DGM//
D	M /201405ZSEP2010/-//	M /201405ZSEP2010/-//	M /040600ZJUL2010/-//	M /100209ZAUG2010/-//
F	O /-//	O /32UNB058640/EE//	O /33SVB308672/AA//	O /504056N0021515W/EE//
G	M /SUS/AIR/1/BOM/1//	M /OBS/AIR/1/BOM/2//	M /OBS/AIR/1/BOM/-//	M /OBS/TPT/1/DRUM/NKN//
H	M /SURF//	NA	NA	NA
I	NA	M /AIR/NERV/P/MPDS/-//	M /SURF/BIO/-/-//	NA
IR	NA	NA	NA	M /RWM/MXR/-/PD/-//
J	O /57//	NA	NA	NA
L	O /18DRG//	NA	NA	NA
M	O /TOP/33DRG/9KM//	NA	NA	NA
MR	NA	M /-//	M /-//	M /DPC/CONT//
PC	O	NA	NA	NA
PD	O	NA	NA	NA
T	NA	O /FLAT/URBAN//	O /FLAT/URBAN//	O /FLAT/URBAN//
Y	NA	O /270DGT/015KPH//	O /180DGG/17KPH//	O /075DGT/005KPH//
Z	NA	O /4/10C/7/5/1//	O /4/20C/0/0/0//	O /4/10C/7/5/1//
GEN-TEXT	O	O	O /CBRNINFO/MUNITIONS EXPLODED IN DUST LIKE CLOUDS, AND INTELLIGENCE HAS INDICATED THAT A BIO RELEASE IS LIKELY//	O /CBRNINFO/DAMAGE TRANSPORT CONTAINER//

M = mandatory (must be provided)

O = operationally determined (should be provided if known/command discretion)

C = conditional

Sample CBRN 2 Report (Evaluated Data)

Line	Nuclear	Chemical	Biological	Radiological
A	M /DEU/A234/001/N//	M /DEU/WEP/001/C//	M /ITA/1DIV/001/B//	M /GBR/123/001/R//
D	M /201405ZSEP2010/-//	M /201405ZSEP2010/-//	M /040600ZJUL2010/-//	M /101800ZAUZG2010/-//
F	M /32UNB186483/EE//	M /32UNB058640/EE//	M /33SVB308672/AA//	M /504056N0021515W/EE//
G	M /SUS/AIR/1/BOM/1//	M /OBS/AIR/1/BOM/2//	M /OBS/AIR/1/BOM/-//	M /OBS/PLT/1/CON/NKN//
H	M /SURF//	NA	NA	NA
I	NA	M /SURF/NERV/P/MPDS/-//	M /SURF/BIO/-/-//	NA
IR	NA	NA	NA	M /MDS/CO60/-/HGSM/-//
MR	NA	M /-/-//	M /-/-//	M /EXS/CONT//
N	M /50//	NA	NA	NA
T	NA	O /FLAT/URBAN//	O /FLAT/URBAN//	O /FLAT/URBAN//
Y	NA	O /270DGT/015KPH//	O /180DGG/17KPH//	O /075DGT/005KPH//
Z	NA	O /4/10C/7/5/1//	O /4/20C/0/0/0//	O /4/10C/7/5/1//
GEN-TEXT	O	O	O /CBRNINFO/TYPE P CASE 2 – MUNITIONS EXPLODED IN DUST- LIKE CLOUDS, AND INTELLIGENCE HAS INDICATED THAT A BIO RELEASE IS LIKELY//	O /CBRNINFO/EXPOSED COBALT-60 MEDICAL SOURCE//

M = mandatory (must be provided)

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C = conditional

Formulas:

$$DL = 1.5 \times DA$$

$$DT = 0.5 \times DA$$

where—

DL = distance leading edge of cloud in kilometers

DT = distance trailing edge of cloud in kilometers

DA = total downwind distance in kilometers

$$(^{\circ}\text{Celsius} \times 1.8) + 32 = ^{\circ}\text{Fahrenheit}$$

$$(^{\circ}\text{Fahrenheit} - 32) \div 1.8 = ^{\circ}\text{Celsius}$$

Sample CBRN 3 Report (Immediate Warning of Expected Contamination or Hazard Area)

Line	Nuclear	Chemical	Biological	Radiological
A	M /DEU/A234/001/N//	M /DEU/WEP/001/C//	M /ITA/1DIV/001/B//	M /GBR/123/001/R//
D	M /201405ZSEP2010 I-I//	M /201405ZSEP2010/-I//	M /040600ZJUL2010/-I//	M /012100ZAUG2010/-I//
F	M /32UNB186483/ EE//	M /32UNB058640/EE//	M /33SVB308672/AA//	M /504056N0021515W/EE//
G	O /SUS/AIR/1/ BOM/4//	O /OBS/AIR/1/BOM/2//	O /OBS/AIR/1/BOM/-I//	O /OBS/PLT/1/BUK/NKN//
H	M /SURF//	NA	NA	NA
I	NA	M /AIR/NERV/P/MPDS/-I//	M /SURF/BIO/-I-I//	NA
IR	NA	NA	NA	M /FMS/MXR/-VBRAD//
MR	NA	M I-I//	M I-I//	M /ESD/PUFF//
N	O /50//	NA	NA	NA
O	C	C	C	C
PA	NA	M /1KM/3-10DAY/10KM/2-6DAY//	M /2KM/-36KM/-I//	NA
PB	M /019KPH/ 33KM/5KM/ 272DGT/312DGT//	NA	NA	NA
PC	O	NA	NA	NA
PD	O /030DGT//	NA	NA	NA
PR	NA	NA	NA	M I-/1500M/70M/15M//
PX	NA	M /201400ZSEP2010/ 32UNB078640/32UNB068622/ 32UMB958559/32UMB958721/ 32UNB068658/32UNB078640//	M /040600ZJUL2010/ 33SVB307692/33SVB325683/ 33SWA201136/33SUA389151/ 33SVB291683/33SVB307692//	M /102000ZAUG2010/ 504056N0021515W//
T	NA	O /FLAT/URBAN//	O /FLAT/URBAN//	O /FLAT/URBAN//
XB	O	O	O	O
Y	NA	O /270DGT/015KPH//	O /180DGG/17KPH//	O /075DGT/005KPH//
Z	NA	O /4/10C/7/5/1//	O /4/20C/0/0/0//	O /4/10C/7/5/1//
GEN-TEXT	O	O	O /CBRNINFO/TYPE P CASE 2//	O /CBRNINFO/RELEASE FROM A FISSLE MATERIAL STORE//

M = mandatory (must be provided)

O = operationally determined (should be provided if known/command discretion)

C = conditional

GTA 03-06-008

October 2011

Sample CBRN 4 Report (Reconnaissance, Monitoring, and Survey Results)

Line	Nuclear	Chemical	Biological	Radiological
A	O /BEL/001/001/N//	O /BEL/001/001/C//	O /BEL/001/001/B//	O /GBR/123/001/R//
I	NA	M /AIR/NERV/P/MPDS- //	M /AIR/BAC/NP/OTR-//	NA
IB	NA	NA	O	NA
IC	NA	O -/-/-/-//	NA	NA
IR	NA	NA	NA	M /RDPS/GAM-/PD//
K	O /NKN//	NA	NA	NA
Q	M /31UDS984628-/- MPDS/HGSM/-/-/-/- -//	M /31UDS874496/LIQ/ MPDS/-OM/-/-/-/-//	M /31UES062425-/-OTH/ 1M/-/-/-/-/-//	M /504056N0021515W-/- HGSM/-/-/-/-/-/-//
R	M /38CGH/DECR/DN//	O /2MGM2/-/-//	O /50000CFUM2/-/-//	M /30CGYH/-/-//
S	M /030900ZAPR2010//	M /030830ZAPR2010//	M /031040ZAPR2010//	M /100209ZAUG2010//
T	NA	O /FLAT/BARE//	O /FLAT/BARE//	O /FLAT/URBAN//
W	O /POS/POS/Y/HIGH//	O -/-/-/-//	O /POS/POS/N/MED//	O
Y	NA	O /270DGT/015KPH//	O /180DGG/17KPH//	O /075DGT/005KPH//
Z	NA	O /4/10C/7/5/1//	O /4/20C/0/0/0//	O /4/10C/7/5/1//
GEN- TEXT	O	O	O /CBRNINFO/HHA HAND-HELD ASSAY//	O /CBRNINFO/RELEASE FROM AN RDPS//

M = mandatory (must be provided)

O = operationally determined (should be provided if known/command discretion)

C = conditional

Sample CBRN 5 Report (Areas of Actual Contamination)

Line	Nuclear	Chemical	Biological	Radiological
A	M /BEL/001/001/N//	M /DNK/A234/001/C//	M /ITA/1DIV/001/B//	M /GBR/123/001/R//
D	O /030726ZAPR2010//	O /201405ZSEP2010/-//	O /040600ZJUL2010/-//	O /102100ZAUG2010/-//
I	NA	M /AIR/NERV/P/MPDS/-//	M /SURF/BIO/-/-//	NA
IR	NA	NA	NA	M /RWM/MXR/-/PD/-//
O	M /030826ZAPR2010//	M /201505ZSEP2010//	M /040700ZJUL2010//	M /102200ZAUG2010//
XA	M /600CGH/31UES051714/ 31UES082701/ 31UES080669/ 31UES054643/ 31UES017643/ 31UES028698/ 31UES051714// /300CGH/31UES056727/ 31UES093714/ 31UES106719/ 31UES069635/ 31UES004598/ 31UES004640/ 31UES012682/ 31UES030714/ 31UES056727// /150CGH/31UES103724/ 31UES062551/ 31UDS955434/ 31UDS848387/ 31UDS845452/ 31UDS908565/ 31UDS978677/ 31UES041727/ 31UES103724//	M /LCT50/32VNJ575203/ 32VNJ572211/ 32VNJ560219/ 32VNJ534218/ 32VNJ575203//	M /20PPM/33SVB308675/ 33SVB314672/ 33SVB312667/ 33SVB306660/ 33SVB303671/ 33SVB303673/ 33SVB308675//	M /0.3CGH/ 504106N0021515W/ 504046N0021515W/ 504056N0021205W/ 504056N0021225W//
GEN-TEXT	O	O	O -//	O /CBRNINFO/DAMAGED TRANSPORT CONTAINER//

M = mandatory (must be provided)

O = operationally determined (should be provided if known/command discretion)

C = conditional

Sample CBRN 6 Report

(Detailed Information of CBRN/RAD Attack/Incident)

Line	Nuclear	Chemical	Biological	Radiological
A	<input type="radio"/> /DEU/A234/001/N//	<input type="radio"/> /DNK/A234/001/C//	<input type="radio"/> /ITA/1DIV/001/B//	<input type="radio"/> /GBR/123/001/R//
D	<input type="radio"/> /201405ZSEP2010/-//	<input type="radio"/> /201405ZSEP2010/ 201420ZSEP2010//	<input type="radio"/> /040600ZJUL2010/-//	<input type="radio"/> /100209ZAUG2010/-//
F	<input type="radio"/> /32UNB058640//	<input type="radio"/> /32UNB058640/EE//	<input type="radio"/> /33SVB308672/AA//	<input type="radio"/> /504056N0021515W/EE//
G	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> /OBS/TPT/1/DRUM/NKN//
GC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I	<input type="radio"/> NA	<input type="radio"/> /AIR/NERV/P/MPDS/-//	<input type="radio"/> /SURF/BIO/-/-//	<input type="radio"/> NA
IB	<input type="radio"/> NA	<input type="radio"/> NA	<input type="radio"/>	<input type="radio"/> NA
IC	<input type="radio"/> NA	<input type="radio"/>	<input type="radio"/> NA	<input type="radio"/> NA
IR	<input type="radio"/> NA	<input type="radio"/> NA	<input type="radio"/> NA	<input type="radio"/> /RWM/MXR/-/PD/-//
MCB	<input type="radio"/> NA	<input type="radio"/> /-/-/-/-/-/-/-/-//	<input type="radio"/> /-/-/-/-/-/-/-/-//	<input type="radio"/> NA
MR	<input type="radio"/> NA	<input type="radio"/> /-//	<input type="radio"/> /-//	<input type="radio"/> /DPC/CONT//
Q	<input type="radio"/> M /32UNB283704/GAMMA /-/-/-/-/-/-/-//	<input type="radio"/> M /32UNB059645/-/MPDS /-/-/-/-/-/-/-//	<input type="radio"/> M /36SVD960290 /-/OTR/MPDS/-/-/-/-/-//	<input type="radio"/> M /504056N0021515W /-/HGSM/-/-/-/-/-/-//
R	<input type="radio"/>	<input type="radio"/> /-//	<input type="radio"/> /20PPM//	<input type="radio"/> /30CGYH/-//
S	<input type="radio"/> /202300ZSEP2010//	<input type="radio"/> /202300ZSEP2010//	<input type="radio"/> /040700ZJUL2010//	<input type="radio"/> /100215ZAUG2010//
GEN-TEXT	<input type="radio"/> /CBRNINFO/WEAPON YIELD ESTIMATED FOR EVALUATION OF COLLATERAL DAMAGE PURPOSES ONLY//	<input type="radio"/> M /CBRNINFO/SICA LAB REPORT HAS IDENTIFIED THE AGENT AS VX//	<input type="radio"/> M /CBRNINFO/SIBCA LAB REPORT HAS IDENTIFIED THE AGENT AS ANTHRAX//	<input type="radio"/> M /CBRNINFO/VEHICLE CARRYING RADIOACTIVE FISSILE MATERIAL IN TYPE A PACKAGE OVERTURNED ON ROUTE 25//

M = mandatory (must be provided)

O = operationally determined (should be provided if known/command discretion)

C = conditional

Notes:

1. This report summarizes information concerning all forms of CBRN attacks and is prepared by the reporting unit or service equivalent if requested by higher HQ.
2. This report is written in narrative form, with as much detail as possible. (GENTEXT is mandatory). It is used as an intelligence tool to help determine trends and future enemy actions.
3. Line Q is repeatable up to 20 times to describe multiple detection, monitoring, or survey points.

Meaning of Line Items in CBRN Reports

Line	Nuclear	Chemical and Biological	Radiological	Remarks
A	Line ALFA is the Incident Serial number	Line ALFA is the Incident Serial number	Line ALFA is the Incident Serial number	Assigned by CBRN center
B	Location of observer and direction of incident	Location of observer and direction of incident	Location of observer and direction of incident	Use coordinates or place
D	DTGs of start and incident end	DTGs of start and end of incident	DTGs of start and end of incident	Use Zulu time (Nuc) State time zone used (Chem/Bio)
F	Location of incident	Location of incident	Location of incident	Grid coordinates or place (actual or estimated) (EE or AA)
G	Means of delivery and quantity information (See legend)	Means of delivery and quantity information (See legend)	Means of delivery and quantity information (See legend)	State suspected (SUS) or observed (OBS) and size of spill (See legend)
GC	Confidence in delivery and quantity of information	Confidence in delivery and quantity of information	Confidence in delivery and quantity of information	None
H	Type of nuclear burst	NA	NA	AIR = Air SURF = Surface SUBS = Subsurface NKN = Not known
I	NA	Release information on biological/chemical incidents Type of agent/type of burst: <ul style="list-style-type: none"> • Persistent (P) • Nonpersistent (NP) • Thickened (T) • Not known (NKN) 	Release information on biological/chemical incidents or RAD events UN/NA identification number (4-digit number taken from the Emergency Response Guidebook)	Chem/Bio: Air, ground, or spray All: Type of detection (point, standoff, survey) (See legend)
IB	NA	Release of sampling information on biological incidents	NA	None
IC	NA	Release of sampling information on chemical incidents	NA	None
IR	NA	NA	Release of sampling information on radiological incidents	None
J	Flash-to-bang time	NA	NA	Use seconds
K	Crater description	NA	NA	Presence or absence of crater, (state measurement in meters)
L	Nuclear burst Angular cloud width at H+5 minutes	NA	NA	State degrees or mils

Meaning of Line Items in CBRN Reports (Continued)

Line	Nuclear	Chemical and Biological	Radiological	Remarks
M	Stabilized cloud size at H+10 minutes	NA	NA	Nuc: State angle as cloud top (TOP) or bottom (BOT) in degrees or mils. State height as cloud TOP or BOT in meters or feet
MCB	NA	Description and status of chemical, and biological substance or storage or release information	NA	None
MR	NA	Description and status of chemical, biological incidents	Description and status of radiological incident (See legend)	None
N	Estimated yield	NA	NA	Use kilotons
O	Reference DTG for estimated/ actual contour lines	Reference DTG for estimated/actual contour lines	Reference DTG for estimated/actual contour lines	None
PA	NA	Predicted Release and hazard area in kilometers Duration of hazard in incident and hazard areas in days, hours, and minutes	Predicted radius for hazard area in kilometers Duration of hazard in incident and hazard areas in days, hours, and minutes	None
PB	Detailed fallout hazard prediction parameters (wind speed, Zone I, cloud radius, left and right radial lines)	NA	NA	Effective wind speed (3 digits and unit of measurement) Downwind distance of Zone I (3 digits and unit of measurement) Cloud radius (2 digits and unit of measurement) Left and right radial lines (3 digits and unit of measurement)
PC	Radar-determined external contour of radioactive cloud	NA	NA	Geographic positions
PD	Radar-determined downwind direction of radioactive cloud	NA	NA	Downwind direction of radioactive cloud and unit of measurement
PR	NA	NA	Radiological hazard predictions parameters	None
PX	NA	Hazard area location for weather period Field 2 may be repeated up to 20 times to describe the hazard area outline	Hazard area location for weather period Field 2 may be repeated up to 20 times to describe the hazard area outline	DTG of start of weather period Field 2: Hazard area coordinates

Meaning of Line Items in CBRN Reports (continued)

Line	Nuclear	Chemical and Biological	Radiological	Remarks
Q	<p>Location of reading/sample/ detection and type of sample/detection</p> <p>Repeatable up to 20 times to describe multiple detectors and monitoring or survey points (See legend)</p>	<p>Location of reading/sample/ detection and type of sample/detection</p> <p>Repeatable up to 20 times to describe multiple detectors and monitoring or survey points (See legend)</p>	<p>Location of reading/sample/ detection and type of sample/detection</p> <p>Repeatable up to 20 times to describe multiple detectors and monitoring or survey points (See legend)</p>	<p>Location coordinates</p> <p>Type of sample (see legend)</p> <p>Type of detection (see legend)</p> <p>Height of measurement above ground level and unit of measurement</p>
R	<p>Level of contamination, dose rate trend, and decay rate trend</p> <p>Dose rate trend/decay rates:</p> <ul style="list-style-type: none"> • BACK = Background • DECR = Decreasing • INCR = Increasing • INIT = Initial • SAME = Same • PEAK = Peak <p>Relative decay rates:</p> <ul style="list-style-type: none"> • DN = Decay normal • DF = Decay faster than normal • DS = Decay slower than normal 	<p>Level of contamination, if known:</p> <ul style="list-style-type: none"> • LDXX lethal dose xx = LD1 to LD99 • IDXX incapacitating dose xx = ID1 to ID99 • ICTXX incapacitating dosage xx = ICT1 to ICT99 • LCTXX lethal dosage xx = LCt1 to LCt99 • MCTXX eye-affecting dosage xx (miosis) = MCT1 to MCT99 	<p>Level of contamination, dose rate trend, and decay rate trend, if known:</p> <ul style="list-style-type: none"> • LDXX lethal dose xx = LD1 to LD99 • IDXX incapacitating dose xx = ID1 to ID99 • ICTXX incapacitating dosage xx = ICT1 to ICT99 • LCTXX lethal dosage xx = LCt1 to LCt99 • MCTXX eye-affecting dosage xx (miosis) = MCT1 to MCT99 	<p>Repeatable up to 20 times to describe multiple detectors and monitoring or survey points</p>
S	<p>DTG of reading or initial detection of contamination</p>	<p>DTG of reading or initial detection of contamination</p>	<p>DTG of reading or initial detection of contamination</p>	<p>Repeatable up to 20 times to describe multiple detectors and monitoring or survey points</p>
T	<p>NA</p>	<p>Terrain/topography and vegetation description</p> <p>Repeatable up to 20 times to describe multiple detectors and monitoring or survey points</p>	<p>Terrain/topography and vegetation description</p> <p>Repeatable up to 20 times to describe multiple detectors and monitoring or survey points</p>	<p>Terrain/topography:</p> <ul style="list-style-type: none"> • FLAT = Flat • URBAN = Urban • HILL = Hill • SEA = Sea • VALLEY = Valley • NKN = Not known <p>Vegetation:</p> <ul style="list-style-type: none"> • BARE = Bare • SCRUB = Scrubby vegetation • WOODS = Wooded terrain • URBAN = Urban • NKN = Not known

Meaning of Line Items in CBRN Reports (continued)

Line	Nuclear	Chemical and Biological	Radiological	Remarks
W	Sensor information	Sensor information	Sensor information	Generic alarm results: <ul style="list-style-type: none"> • POS = Positive • NEG = Negative Confirmatory test: <ul style="list-style-type: none"> • YES = Conducted • NO = Not conducted Confidence level of results: <ul style="list-style-type: none"> • IND = Indicative • PRE = Presumptive • DEF = Definitive • EVI = Evidential
XA	Actual contour information and unit of measurement, dose rate/dosage CGH = Centigray per hour	Actual contour information and unit of measurement BIO-CFU = Colony-forming units, if known	Actual contour information	Actual contour information Use MGRS (Military Grid Reference System), latitude/longitude, or UTM (Universal Transverse Mercator)
XB	Predicted contour information	Predicted contour information	Predicted contour information	Predicted contour information
Y	NA	Downwind direction and speed	Downwind direction and speed	4 digits for direction and unit of measure 3 digits for wind speed and unit of measure
Z	Measured weather conditions	Measured weather conditions	Measured weather conditions	1 digit for air stability 2 digits for temperature (C) 1 digit for humidity 1 digit for significant weather phenomena 1 digit for cloud cover
GEN-TEXT	CBRN INFO Use for additional information needed for CBRN reports (mandatory for CBRN 6)	CBRN INFO Use for additional information needed for CBRN reports (mandatory for CBRN 6)	CBRN INFO Use for additional information needed for CBRN reports (mandatory for CBRN 6)	CBRN SITREP (as other text indicator) Use for CBRN SITREP

Legend

<p>Type of CBRN Report</p> <p>CHEM = chemical report BIO = biological report MIR = missile intercept report NUC = nuclear report NKN = not known RAD = RAD report SIT = CBRN situation report WARN = CBRN warning friendly targeting of infrastructure</p> <p>Type of Incident</p> <p>C = chemical B = biological N = nuclear R = radiological U = not known</p> <p>Event Description</p> <p>CLOUD = visible cloud ESD = evidence of site disruption EXFIRE = explosions and fire EXS = exposed source FIRE = burning fire INWAT = substance spill into water LEAK = continuous flow from damaged pipe or container LIQUID = liquid NARDD = nonactivated radiological dispersion device POOL = large quantity of still liquid RUP = catastrophic ruptured tank SPILL = small quantity of still liquid</p> <p>Location Qualifier</p> <p>AA = actual area EE = estimated area NKN = not known</p> <p>Type of Sample</p> <p>LIQ = liquid VAP = vapor SOIL = soil sample SOLID = solid sample VEG = vegetation sample WATER = water sample</p> <p>Type of Detection</p> <p>OTR = other, use GENTEXT MPDS = manned point detection system MSDS = Manned Standoff Detection System MSVY = manned survey UMPDS = unmanned point detection system UMSDS = Unmanned Standoff Detection System UMSVY = unmanned survey</p>	<p>Agent Container Type</p> <p>BML = bomblets BMP = bulk missile payload (bulk warhead) BOM = bomb BTL = pressurized gas bottle BUK = bunker CMP = canister missile payload (binary agent warhead) CON = Generic Storage container DRM = nominal 200-L storage drum GEN = generator (aerosol) IBC = intermediate bulk container ISO = large ISO containers MNE = mine (CBRN-filled only) NKN = not known NWH = nuclear warhead PIP = pipe or pipeline RCT = reactor RKT = rocket SHL = shell SMP = sub-munitions missile payload (sub-munitions warhead) SPR = spray (tank) STK = stockpile STN = storage tank (stationary or mobile) TOR = torpedo WST = waste</p> <p>Type of Chemical Agents</p> <p>BL = Blister Agent BLOD = Blood Agent CHOK = Choking Agent G = G agent H = mustard agent INCP = incapacitating agent IRT = Irritant NERV = nerve agent NIL = no substance detected (only used in CBRN 4) NKN = not known OTR = other substance PENT = penetrating agent T = thickening agent V = V-agent VMT = vomiting agent</p> <p>Type of Nuclear Burst or Agent Release Height</p> <p>AIR = air SURF = surface (release on ground impact) SUBS = subsurface (only used on NUC reports) NKN = not known</p>	<p>Size of Spill or Release</p> <p>SMLCHEM = small (<200 L or KG) MEDCHEM = medium (>200 to ≤1,500 L or KG) LRGCHEM = large (>1,500 to ≤50000 L or KG) XLGCHEM = extra large (>50000 L or KG) SMLBIO = small (<1 KG) MEDBIO = medium (>1 to ≤10KG) LRGBIO = large (>10 to ≤100 KG) XLGBIO = extra large (>100 KG) SMLRAD = small (evidence of disruption/intact package or device) LRGRAD = large (fire/exposed source) XLGRAD = extra large (explosion and fire/damaged package and contamination) NKN = not known</p> <p>Means of Delivery</p> <p>AIR = aircraft BOM = bomb (bomblets only) CAN = cannon DEV = device FFF = fuel fabrication facility FMS = fissile material storage FRF = fuel reprocessing facility MLR = multiple-launch rocket MOR = mortar NKN = not known PLT = plant RLD = railroad car RNP = reactor nuclear plant RNR = research nuclear reactor RWS = radioactive waste storage SHP = ship TIR = toxic industrial radiological facility TPT = road transport</p> <p>Unit of Measurement (Speed)</p> <p>MPS = meters per second KPH = kilometers per hour KTS = knots MPH = miles per hour</p> <p>Unit of Measurement (Direction)</p> <p>DGM = degrees/magnetic north DGT = degrees/true north DGG = degrees/grid north MLM = mils/magnetic north MLT = mils/true north MLG = mils/grid north</p>
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Effective Downwind Message Format

Line	Format	Meaning
Common message heading followed by:		CBRNTYPE/EDM//
ALFAM	/-ddd/sss/-//	≤2 KT
AREAM	/RRRRR//	Affected area: map sheet number or an area such as V Corps (below).
BRAVOM	/-ddd/sss/-//	>2 KT to ≤5 KT
CHARLIEM	/-ddd/sss/-//	>5 KT to ≤30 KT
DELTAM	/-ddd/sss/-//	>30 KT to ≤100 KT
ECHOM	/-ddd/sss/-//	>100 KT to ≤300 KT
FOXTROT M	/-ddd/sss/-//	>300 KT to ≤1,000 KT (1MT)
GOLF M	/-ddd/sss/-//	>1,000 KT to ≤3,000 KT (3MT)
UNITM	/LL/DDD/SSS/-//	LL = km; DDD = Degrees/True North (DGT); SSS = knots (KTS)
ZULUM	/ddtttZMMMMYYYY /ddtttZMMMMYYYY /ddtttZMMMMYYYY//	Date and time when real winds were measured; <i>dd</i> represents the day; <i>ttt</i> represents the hour in Zulu time (GMT)

Notes:

1. Lines AM through GM provide data for the prescribed yield groups; the first field is radius of Zone 1.
2. The letters *ddd* represent the effective downwind direction in degrees from GN.
3. The letters *sss* represent the effective wind speed to the nearest KPH

Chemical Downwind Message

201405ZSEP2010	201405ZSEP2010
V Corps	
WM	/135/009/1/04/7/4/2//
XM	/125/010/2/08/6/0/0//
YM	/170/012/3/09/8/7/1//

Notes:

1. Areas affected may be AREAM, map sheet number, or an area such as V Corps.
2. CDM is valid for only 6 hours, subdivided into three 2-hour periods.
3. WM, first 2 hours; XM, next 2 hours; and YM, last 2 hours.

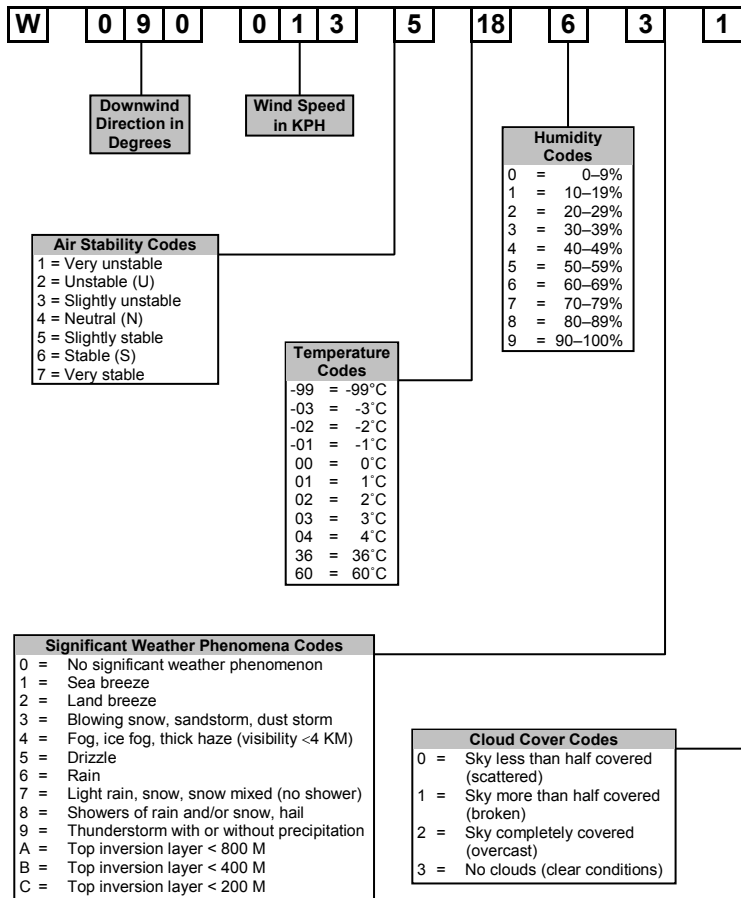
Special Case Chemical Downwind Message

AREAM/NDEL12341234// UNITM/-DGT/KPH/C// WHISKEYM/070/022/4/15/-/1// ZULUM/140300ZSEP2010/140300ZSEP2010/140330ZSEP2010//

Notes:

1. Use for when local situation are appropriate (such as topography and size of release).
2. Line WHISKEYM contains the only line of actual weather information.
3. Line ZULUM "observation time" to "effective date-time valid to" is 30 minutes.

How to Read Weather Information in a Chemical Downwind Message



Transmission/Protection Factors

Environmental Shielding		Transmission Factor	Protection Factor
Armored Vehicles			
M1 Tank		0.0400	25.00
M48 Tank		0.0200	50.00
M60 Tank		0.0400	25.00
M2 Infantry Fighting Vehicle		0.2000	5.00
M3 Cavalry Fighting Vehicle		0.2000	5.00
M113 Armored Personnel Carrier		0.3000	3.33
M93A1 CBRN Reconnaissance Vehicle (FOX)		0.2000	5.00
M109 Special Purpose Howitzer		0.2000	5.00
M548 Cargo Vehicle		0.7000	1.43
M88 Recovery Vehicle		0.0900	11.11
M577 Command Post Carrier		0.3000	3.33
M551 Armored Reconnaissance Airborne Assault Vehicle		0.0200	5.00
M728 Combat Engineer Vehicle		0.0400	25.00
Trucks			
¼-ton		0.8000	1.25
¾-ton		0.6000	1.67
2½-ton		0.6000	1.67
4-ton to 7-ton		0.5000	2.00
Structures			
Multistory buildings	Top floor	0.0100	100.00
	Lower floors	0.1000	10.00
Frame houses	First floor	0.6000	1.67
	Basement	0.1000	10.00
Urban areas (in the open)		0.7000 *	1.43 *
Woods		0.8000 *	1.25 *
Underground shelters (minimum 3-foot earth cover)		0.0002	5,000.00
Foxholes		0.1000	10.00

* Applies to aerial survey dose rates only.

Formulas used to determine correlation/protection factors:

$$TF = \frac{1}{PF} \quad \text{or} \quad \frac{1}{CF} \quad (\text{PF and CF are interchangeable, and are reciprocal of TF})$$

$$TF = \frac{ID}{OD} \quad (\text{TF is always less than 1})$$

$$PF \text{ (or CF)} = \frac{1}{TF} = \frac{OD}{ID}$$

$$OD = \frac{ID}{TF} \quad (\text{ID must be converted to OD before reporting})$$

$$OD = ID \times PF \text{ (or } ID \times CF)$$

$$ID = \frac{OD}{PF} \text{ (or } \frac{OD}{CF})$$

$$ID = OD \times TF$$

where—

ID = inside dose

OD = outside dose

TF = transmission factor

PF = protection factor

CF = correlation factor