

Develop by TSWG (Technical Support Working Group)

Available from The BTSC is available for \$3.75 per package of 10 (\$4.69 outside of the U.S.). To order, cite stock number 064-000-00028-4. Orders may be placed via the Internet, phone, fax, and mail.

For secure ordering via the Internet, visit the U.S. Government Online Bookstore at bookstore.gpo.gov.

Phone: (202) 512-1800


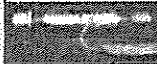




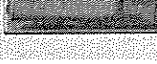
Monday through Friday, 7:30 a.m.-5:00 p.m., eastern standard time

Fax: (202) 512-2250 at any time

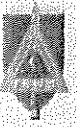
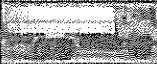
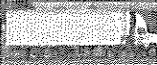
Mail: send to:

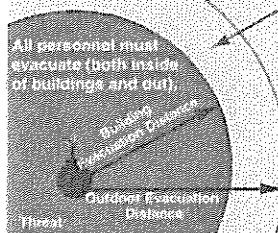
Superintendent of Documents,
P.O. Box 371954,
Pittsburgh, PA 15250-7954.

All orders require prepayment, either by check, money order, VISA, MasterCard, Discover/NOVUS, or GPO Deposit Account.

 Terrorist Bomb Threat Stand-Off	THREAT	THREAT DESCRIPTION	EXPLOSIVES CAPACITY ¹ (TNT EQUIVALENT)	BUILDING EVACUATION DISTANCE ²	OUTDOOR EVACUATION DISTANCE ³
		PIPE BOMB	5 LBS/ 2.3 KG	70 FT/ 21 M	850 FT/ 259 M
		BRIEFCASE/ SUITCASE BOMB	50 LBS/ 23 KG	150 FT/ 46 M	1,850 FT/ 564 M
		COMPACT SEDAN	500 LBS/ 227 KG	320 FT/ 98 M	1,500 FT/ 457 M
		SEDAN	1,000 LBS/ 454 KG	400 FT/ 122 M	1,750 FT/ 534 M
		PASSENGER/ CARGO VAN	4,000 LBS/ 1,814 KG	640 FT/ 195 M	2,750 FT/ 838 M
		SMALL MOVING VAN/DELIVERY TRUCK	10,000 LBS/ 4,536 KG	860 FT/ 263 M	3,750 FT/ 1,143 M

This card supersedes any previous updated versions 11/99

 Terrorist Bomb Threat Stand-Off	THREAT	THREAT DESCRIPTION	EXPLOSIVES CAPACITY ¹ (TNT EQUIVALENT)	BUILDING EVACUATION DISTANCE ²	OUTDOOR EVACUATION DISTANCE ³
		MOVING VAN/ WATER TRUCK	30,000 LBS/ 13,608 KG	1,240 FT/ 375M	6,500 FT/ 1,982 M
		SEMI-TRAILER	60,000 LBS/ 27,216 KG	1,570 FT/ 475 M	7,000 FT/ 2,134 M



All personnel must evacuate (both inside of buildings and out).

Building Evacuation Distance

Outdoor Evacuation Distance

Threat

All personnel must either seek shelter inside a building (with some risk) away from windows and exterior walls, or move beyond the Outdoor Evacuation Distance.

Preferred area (beyond this line) for evacuation of people in buildings and mandatory for people outdoors.

¹ Based on maximum volume or weight of explosive (TNT equivalent) that could reasonably fit in a suitcase or vehicle.

² Governed by the ability of an unstrengthened building to withstand severe damage or collapse.

³ Governed by the greater of fragment throw distance or glass breakage/falling glass hazard distance. Note that pipe and briefcase bombs assume cased charges which throw fragments farther than vehicle bombs.

WMD Agent Precursors

Precursor	Used for
Alcohol Acetone Acetylene Acetic anhydride Acid gases Acrylonitrile Agar Allyl Alcohol Aluminum powder Ammonia Ammonium nitrate Ammonium bifluoride Aniline Anhydrous acids Arsenic trichloride Arsenic arsenic salt Aspirin	Acetone peroxide Lewisite Corrosive smoke Corrosive smoke Industrial Pathogens Industrial Explosive, Incendiary devices, Smoke agent Industrial, Cyanogen, (Blood agent) AMFO (Explosive) G series nerve disinfectant, glass etching Adamsite (Vomiting agent) Corrosive smokes Lewisite, Choking agents, Vomiting Agents, Vesicants Arsine (Blood agent), Arsenicals (Vesicants) Picric acid (Explosives)
Benzillic acid Benxyl chloride Bentonite Bicarbonate of soda Bis(2-chloroethyl ether) Blasting caps Boron tribromide Boron Trichloride Boron Trifluoride Bromine bifluoride Bromine	Buzz Choking Pathogen Pathogen Industrial Explosives, Dispersion Industrial Industrial Corrosive smoke, Industrial Industrial Choking agents
Cab-O-Sil Calcium hypochlorite Cadmium metal Carbon dioxide gas Carbon monoxide gas Castor beans Calcium carbide Carbon disulfide	Agent VX Incendiary devices, Vomiting agents, Chloropicrin, Choking agents, Cyanogen (Blood agents), Mustard, Choking agents (metal fume) Pathogen Vomiting Agents, phosgene oxime, Nickel Carbonyl (Choking agent) Ricin (Toxin) Lewisite

Carbon tetrachloride Charcoal 2-Chloroethanol Chlorine gas Chlorosulfonic acid Chloroform 2, chloro-N-N-diisopropylethyl amine Chlorobenzene Cotton Chloroacetophenone o-Chlorobenzylidene Citric acid Crotonaldehyde Cyanide salts	Industrial Ricin Ni (CO), (Choking agent), Black Powder, Phosgene oxime Vomiting Agents Mustard Cyanogen-chloride, Vomiting agent, Phosgene oxime, Dimethylsulfate, Industrial, (Vesicant) Cyanogen (Blood agent) Agent VX Vomiting Agents Explosive Pepper spray (Tear agent) Pepper spray (Tear agent) HMTD (Explosive) Industrial Vomiting Agents, Tabun
Diesel fuel Diethylamino ethanol Diethylethylphosphate Sarin/soman Diethylethylphosphite Diethylmethylphosphonate Diethylphosphite Diisopropylamine Diisopropylaminoethanethiol Dimethylamine Dimethylethylphosphonate Dimethylnethylphosphonate Dimethyl phosphate Dimethyl polysulfide Diphenylnethane-4 diisocyanate DMSO Disodium sulfate	ANFO Agent VX Sarin/soman Sarin/soman Sarin/soman Agent VX Agent VX Agent VX General nerve General nerve Sarin/soman Binary VX Industrial Ricin (Toxins) Commercial organophosphates Ricin (Toxins)
Ethanol Ether Ethylene diglycol Ethyl-diethanolamine	Tabun, Mustard Junk mustard Nitrogen mustard
Ethylphosphonothioicdichloride Ethylphosphinyldichloride Ethylphosphinyldifluoride Ethylphosphonyl dichloride Ethylene oxide Ethylene (ethene)	Sarin/soma Sarin/soman Sarin/soman Sarin/soman Mustard Mustard

Flammable liquids/solids Fluorine Formaldehyde Formaldehyde Freon	Incendiary devices Industrial Industrial BCME Pathogen
Glycerin Gun powder (smokeless)	Nitro glycerin (Explosive) Acrolien (Tear agent) Acetone peroxide (Explosive)
Hexamine Hexachloroethane Hydrogen Bromide Hydrogen chloride Hydrogen fluoride Hydrogen peroxide Hydrogen sulfide Hydroxyl amine•HCl 3-hydroxy-1-methylpiperidine	HMTD (Explosive), Incen Smoke agent Industrial Tabun, Arsenicals, Mustard, Industrial, Vomiting agents BCME,(Choking agent) Arsine (Blood agent) Corrosive smokes Sarin/soman Acetone peroxide Mustard, Blood agent Phosgene oxime Buzz
Ice Iodine Iron oxide Isopropyl alcohol Isopropyl amine (Scavenger)	Ricin Incendiary devices Incendiary devices Sarin Binary Sarin
Jequirity beans Jimsom weed	Toxin Incapacitating agent
Lithium hypochlorite	Incendiary devices
Matches Magnesium filings Magnesium sulfate (anhyd) Malononitrile Methanol Methylphosphinyldichloride Methylphosphonic acid Methyldiethylnol amine Methylphosphinyldifluoride Methylphosphonic difluoride Methyl benzilate Methylphosphonic dichloride	Explosive Incendiary devices, and accelerent Acrolein (Tear agent) Pepper spray (Tear agents) Dimethylsulfate (Vesicants), Ricin Sarin/Somas Sarin/Somas Nitrogen mustard Sarin/Somas Binary Sarin/Somas Buzz Binary Sarin/Somas

Methyl phosphonothioic dichloride Muriatic acid (see Hydrochloric acid)	Sarin/Somas Junk Mustard
Naphthalene Nickel metal Nitric acid Nitrogen liquid Nitrobenzene Nitromethane N,N-Dimethylphosphosamidic dichloride N,N-Diisopropyl-2-aminoethanol	Incendiary devices Ni (CO) ₄ (Choking agent) Picric acid (Explosive), Chloropicrin (Choking agent), Pathogen Explosive Explosive Sarin/Somas VX
O-Ethylmethylphosphonothioic acid O-ethyl, 2-diisopropylaminoethylmethyl phosphonite Oleum Ortho chlorostyrene	VX VX Dimethylsulfate (Vesicant) Tear agents
Oxygen producing fertilizer	Explosive
Picric acid Pentaborane Pesticides, Arsenic Pesticides, Catbamates Pesticides Fumigants Penacolyl alcohol Perchloric acid Phenol Phosphorus pentasulphide Phosphorus oxychloride Phosphorus pentachloride Phosphorous trichloride Potassium nitrate Potassium chlorate Potassium cyanide Potassium bifluoride Potassium bisulfide Potassium fluoride Potassium permanganate Prell detergent Propylene glycol	Chloropicrin (Choking agent) Industrial Industrial Industrial Industrial Soman ' Explosives Picric acid, (Explosive), Chloropicrin (Choking agent) Binary VX Sarin/Soman, Tabun, VX Sarin/Soman, VX, Industrial, Sarin/Soman, VX, Corrosive smoke Black powder (Explosive) Explosives Tabun, Cyanogens (Blood agents), Vomiting agents Sarin/Soman Choking agents Sarin/Soman Explosive, Incendiary Incendiary devices Buzz

3-Quinuclidinol	Buzz
Radiator fluid Red phosphorus	Incendiary devices, junk nerve Armstrong powder (Explosive), Incendiary
Selenium Sodium Arsenide (14) Sodium bifluoride Sodium cyanide Sodium sulfide Sodium sulfite Sodium fluoride Sodium hydroxide	Choking agent (metal fume) Sarin/Soman Tabun, Cyanogen (Blood agents), Choking agents Mustard Mustard Sarin/Soman Cyanogen (Blood agent), Buzz, Mustard
Sodium hypochlorite Stannic chloride Sulfide salts Sulfur Sulfur dioxide Sulfuric Acid Sulfur dichloride Sulfur monochloride Sulfur trioxide	Incendiary devices Choking agent (metal fume) Blood agents Binary VX, Black Powder (Explosive) Industrial Nitro glycerin, Picric acid (Explosives), Chloropictin (Choking agent), Industrial Mustard Mustard Corrosive smoke
Turpentine Tetraethyl Lead Tetramethyl lead Thionyl chloride Thiodiglycol Toluene Titanium tetrachloride Trimethylphosphite Triethanolamine Toluene-2-4-diisocyanate Trans-8-methyl-N-vanillyl-6 nonenamide Triethylphosphite Tungsten hexafluoride Table salt	Incendiary devices Industrial Industrial Sarin/Soman, Mustard, Corrosive smoke Mustard Explosive Corrosive smoke Sarin/Soman, Arbuzov method Nitrogen mustard Industrial Pepper spray (Tear agent) Sarin/Soman Industrial Ricin, Buzz (Can make hydrogen chloride with salt and H ₂ SO ₄)
Vaseline™	Plastic explosive
Zinc	Phosgene oxime, Smoke agent, AsH ₃ (Blood agent), Vomiting agent

Military Coding For WMD Agents

<u>Chemical Name</u>	<u>Common name</u>	<u>Type</u>	<u>max@ 25C</u>
AC Hydrogen cyanide		Blood agent	100,000
BZ 3-Quinuclidinyl benzilate (QNB)	Buzz	Incapacitating agent	N
CA Bromobenzylcyanide		Tear agent	
CG Carbonyl chloride	Phosgene	Choking agent	
CH 1-Methoxy-1,3,5-cycloheptatriene		Tear agent	
CK Cyanogen chloride		Blood agent	
CI Chlorine		Choking agent	
CN Chloroacetophenone	Mace	Tear agent	
CR Dibenz(b,0-9:4-oxazepine		Tear agent	
CS 2-chlorobenzalmalononitrile		Tear agent	
CX Phosgene oxime		Urticant	
DA Diphenylchloroarsine		Vomiting agent	
DC Methylphosphonic dichloride	MPOD	Binary Nerve agent	
DC Diphenylcyanoarsine		Vomiting agent	
DF Methylphosphonic dichoride		Binary Nerve agent	
DM Diphenylaminochloroarsine		Tear agent	
DM 10-Chloro-5,10-dihydrophenbarsazine	Adamsite	Vomiting agent	
DP Trichloromethyl chloroformate	Diphosgene	Choking agent	
DP		Nerve agent	
EA (CH3)2NP(O)(F)OCH2CH2N(CH3)2	DMAPDMAPP	Nerve agent	
ED Ethylene dichloro arsine	Arsenicals	Vesicant	
FM Titanium tetrachloride		Smoke	
FS Sulfur trioxide - chlorosulfonic acid		Smoke	
GA Ethyl N,N-dimethyl-phosphoramidocyanide	Tabun	Nerve agent	610
GB Isopropyl-methylphosphonofluoridate	Sarin	Nerve agent	23,000. P
GD 1,2,2-Trimethylpropyl methylphosphonofluoridate	Soman	Nerve agent	3,900 N

GF Cyclohexyl-methylphosphonofluoridate	Cyclosarin	Nerve agent	P
GP (CH ₃)NP(O)(F)OCH ₂ CH ₂ N(CH ₃) ₂	DMAEDMAFP	Nerve agent	
GV		Nerve agent	
H Impure sulfur mustard	Mustard	Vesicant	
HC Zinc oxide, hexachloroethane, 7% grained aluminum		Smoke	
HD bis-2-Chloroethyl sulfide	Mustard	Vesicant	900
HE Hexachloroethane		Smoke	
HL Mixture Lewisite/mustard		Vesicant	
HS	Mustard agent	Vesicant	
HT Mixture HD and T		Vesicant	
L 2-Chlorovinyl dichloroarsine	Lewsite	Vesicant	
MC Methyl difluoroarsine			
MD Methyl dichloroarsine	Arsenicals	Vesicant.	
NE Sulfur in Cab-O-Sil	Agent VX	Binary Nerve agent	
NH Three compounds, tertiary amines	Nitrogen Must	Vesicant	
NM mixture of dimethylpolysulfides, containing sulfur	Agent VX	Binary Nerve agent	
OC	Pepper spray	Tear agent	
PD Phenyl dichloro benzene	Arsenicals	Vesicant	
PS Chloropicrin		Choking agent	
Q ClCH ₂ CH ₂ SCH ₂ CH ₂ SCH ₂ CH ₂ Cl	Sesqui Must	Vesicant	
QL 0,0'-ethyl (2-diisopropylaminoethyl)	EDMP	Binary Nerve agent	
SA AsH ₃ (Arsine)	Arsine	Blood agent	
T (ClCH ₂ CH ₂ SCH ₂ SH ₂) ₂ O	O-Mustard	Vesicant	
TR Residue of Mustard			
VM CH ₃ P(O)(OCH ₂ CH ₃)SCH ₂ CH ₂ CH		Nerve agent	
VX 0-Ethyl S-{2-(diisopropylamino)ethyl}		Nerve agent	
Vx CH ₃ P(O)(OCH ₂ CH ₂)	V-gas	Nerve agent	
WP white Phosphorus		Smoke	

M8/M9 Paper WMD Agent Colors

		M8		M9
Contact	Vapor	Compound	Contact	Vapor
Red	Red	Benzene	Dark red	Slight red
Red	NR	Toluene	Dark red	NR
Dark red	NR	Phenol	Red spots	Faint red
NR	NR	Hexane	NR	NR
	NR	Propane		NR
NR	Oil		NR	
Dark red	Red	Methylene	Red	We
Slight red	Red	Perk	NR	NR
Red	Slight red	Benzyl chloride		
Green,	Slight red	Acetone	Strong red	Red
Light red	NR	Methyl ethyl	Red	NR
NR to yellow	Slight red spots	Methanol	Red	Slight red
NR to yellow	Slight red spots	Ethanol	NR	Slight red
NR to yellow	NR	Isopropyl alcohol	Red	Slight red
Brown		Ethylene glycol	Red	
NR		Glycerin	N R	
NR		Acetonitrile	Bright red	Slight red
Green		Triethanol amine	Red	
Green		Epoxy catalyst	Red	
Breen		Brake fluid	Bright red	
Light red	NR	Amyl nitrite	Red	NR
Dark green	Slight green	Quanadine	Red ring	Slight red
Yellow	NR	Ammonia	Darkens	NR
Light red	NR	Amyl acetate	Red	NR
Light red		Cellosolve	Red	
Light red		Dimethyl esters	Bright red	
Dark red	NR	Benzaldehyde	Bright red	
Yellow	NR	Oleoresin	Red	
NR	NR	Formic acid	Red ring	Slight red
Faint red	Faint red	Methyl ethyl	Faint red	Faint red spots
Dark red	Red spotting	Tetrahydrofuran	Red	Red Spots
Red		Limonine	Darkens	
Faint red	NR	Tupintine	NR	NR
Light red		MEK Peroxide	Faint red	Faint Red
Light red		Gasoline	Slight red	
Red		Malathion in	Bright red	
		Silanes	NR	
		Balsam oil	Bright red	
Dark Blue		V Agent		
Yellow		G Agents		
Red		Mustard		
Black		Sulfuric acid		
Yellow	Household			
Red	DANC			
Red	Defoliants			

COMMON CHEMICAL WARFARE AGENT REFERENCE CHART

Agent type	Agent Name	Military Symbol	NFPA 704	CAS #	UN#	DOT Hazard Class	ERG Guide #	Hazard
Blood	Arsine	SA	442	784-422-1	2188	2.3	119	Respiratory
	Cyanogen Chloride	CK	302	506-77-4	1589	2.3	125	Respiratory
	Hydrogen Cyanide	AC	442	74-99-8	1051	6.1	117	Respiratory
Blister (Vesicant)	Lewisite	L	411	541-25-3	2810	6.1	153	Respiratory
	Mustard Gas	H, HD	411	505-60-2	2810	6.1	153	Respiratory, Skin, Eyes
Choking	Chlorine	Cl	300	782-50-5	1017	2.3	124	Respiratory
	Phosgene	CG	301	75-44-5	1076	2.3	125	Respiratory
Nerve	Sarin	GB	411	107-44-8	2810	6.1	153	Respiratory Skin, Eyes
	Soman	GD	411	96-64-0	2810	6.1	153	Respiratory Skin, Eyes
	Taban	GA	421	77-81-6	2810	6.1	153	Respiratory Skin, Eyes
	V-agent	VX	411	50782-69-9	2810	6.1	153	Respiratory

EXPLOSIVES PROTECTION REFERENCE CHART FOR VEHICLES

Explosive Amount (POUNDS)	Fatal Blast Area (ft)	Min. Evacuation Distance (ft)	Fall Glass Hazard (ft)	Type of Vehicle
Up to 500	100	1,500	1,250	Compact
500-1,000	125	1,750	1,750	Full Size
1,000-4,000	200	2,750	2,750	Van
4,000-10,000	300	3,750	3,750	Small Box Truck
10,000-30,000	450	6,500	6,500	Box, Water or Fuel Truck
30,000-60,000	600	7,000	7,000	Semi-trailer

EXPLOSIVES PROTECTION REFERENCE CHART FOR SMALL PACKAGES

TYPE	Amount (lb.)	Building Evac. Dist.	Outside Evac. Dist.
Pipe	Up to 5	70 feet	850 feet
Briefcase/Suit Case	Up to 50	150 feet	1,850 feet

CONSIDERATION FOR SELF-PROTECTION -TDS

Time Exposed – **LIMIT IT**

Distance – **MAXIMIZE IT** – the distance between you and the hazard

Shielding – **USE IT** – Protective clothing and respiratory

WHAT DOES A CLANDESTINE LABORATORY LOOK LIKE?

A clan lab can be very elaborate or simple. The location of the lab could be clean, well organized or dirty, messy and disorganized. Clan labs have been found in every neighborhood on Oahu. Rich and poor residential neighborhoods, in industrial areas, hotel rooms, condominium, town houses, open fields, abandoned structures, buses and other vehicles.

WHAT ARE SOME OF THE SIGNS OR INDICATIONS OF A CLAN LAB?

- ☐ Extra ordinary security precautions being taken by the people to protect their privacy, such as security cameras, added locks, bars over windows, etc.
- ☐ Chemical containers, even more so when the labels are obliterated.
- ☐ Unusual foot traffic, containers moved in and out.
- ☐ Persons who come outside only to smoke and/or eat and drink.
- ☐ Unusual odors coming from a structure or location, such as the odor of ether or acetone (odor of fingernail polish remover).
- ☐ Dead foliage in run off areas.
- ☐ The discarding of numerous match books with only the striker pads missing.
- ☐ The discarding numerous empty containers or blister packs of over-the-counter cold medicines.

WHAT TYPES OF DRUGS ARE MADE IN CLAN LABS?

The most common type of illicit drug manufactured in a clandestine drug lab is Methamphetamine. Other types of drugs that have been found in clandestine drug laboratories across the United States:

Amphetamine - Speed
Methamphetamine - Ice, Batu, Crystal Meth GHB - Gamma-hydroxy butyrate, Date Rape Drug, Salty Water LSD - D-lysergic acid Diethylamide, Acid
MDMA - 3,4-methylenedioxymethamphetamine, Ecstasy, XTC, Hug Drug, Adam

WHAT TYPE OF LABORATORY EQUIPMENT WOULD YOU SEE AT A CLAN LAB?

A Clan Lab may have the latest in professional laboratory chemical equipment and glassware. Usually they consist of an assortment of normal household cooking equipment like, Mason canning jars, 1 or 2 liter soft drink bottles, any heat resistant glass cookware, coffee decanters, coffee filters, solvent cans, plastic or rubber hoses, electric blenders and kitchen baking funnels.

WHAT TYPE OF CHEMICALS ARE FOUND AT A CLAN LAB?

You might see all or only some of these normal household chemicals that are used to manufacture illicit drugs such as

Muriatic Acid, Caustic Soda, Red Devil Lye, Rock or table salt, camping fuel, paint thinners, Toluene, automobile or diesel starting fluid, denatured or rubbing alcohol, Iodine tincture or crystals, numerous (more than a normal household would use normally) pseudoephedrine, Sudafed or cold tablets that contain the chemical ephedrine.

THREE BASIC TYPES OF CLAN LABS

1. OPERATIONAL LABORATORY

This is a clan lab that is in the process of "cooking" (synthesis or blending of chemical ingredients). This is the most dangerous stage because some of the chemicals used can be unstable and highly reactive with other elements. During the "cook" blending or synthesis toxic gasses are released, a fire or an explosion could occur.

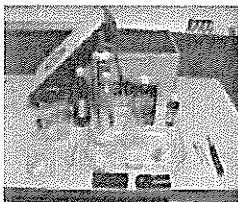
2. NON-OPERATIONAL LABORATORY

This clan lab has been just set up to begin a cook but has not started the process yet. It can also be a clan lab that has just completed a cook and has not been dismantled. A clan lab in this stage should not be considered less dangerous than an operational laboratory.

You may find chemicals not stored or out of their original containers, contaminated glassware, chemical/acid spills and chemical residue that might ignite from friction/ heat, exposure to air or water.

3. BOXED LABORATORY

The boxed laboratory is one that has been dismantled and put away. Again, this is still a dangerous situation. You may find chemicals not stored or out of their original containers, contaminated glassware, chemical/acid spills and chemical residue that might ignite from friction/ heat, exposure to air or water.



"Boxed Laboratory"
CLAN LABS ARE HIGHLY MOBILE

Clan labs are usually very mobile in nature. The "Cook" or chemist will manufacture the illicit drugs and then immediately "Box" the lab for storage, shipment or hiding. The constant

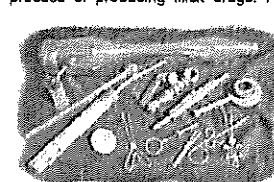
moving of a laboratory helps avoid the loss of laboratory equipment due to seizure. Boxed labs are often kept in storage lockers, garages, trailers, vehicles, etc.

DANGERS AND HAZARDS OF A CLAN LAB

FIRE - Heating elements are used in some synthesis. Heat can also be generated by two or more chemicals or elements reacting with each other.

EXPLOSIONS - A violent chemical reaction between chemicals, water and/or air could result in an explosion.

CHEMICAL BURNS - Acids are used in some synthesis process of producing illicit drugs. Physical contact with a contaminated item or area could result in a chemical burn.



TOXIC GASES - Lethal phosphine and phosgene gases, and other non-lethal but irritant or obnoxious odor gases.

WHAT CAN I DO IF I SUSPECT I FOUND A CLAN LAB?

- ☐ Leave everything as you have found it. Do not touch anything! Leave the area immediately and call Police.
- ☐ Do not turn on or off, disconnect any electrical or water service to the suspected clan lab location. This also means any electrical appliance, lights, lamps, pumps and etc. Water is used to cool off the chemical reaction of the synthesis, do not turn off any flowing water source. Failure to heed any of the above mentioned "do not" warnings might result in fire, explosion or other difficulties.
- ☐ Stay up wind and up hill of the location.

INDICATORS

- ☐ Unusually large amount of traffic coming to the building in cars, taxis or walking. This often occurs at strange hours. Visitors may sometimes pound on doors or shout to be let in. This traffic is usually quick with people staying only for a short time. Sometimes they don't go into the building at all but someone comes out to meet them.
- ☐ Finding drugs or drug paraphernalia (syringes, pipes, empty vials, plastic, glassine, aluminum or paper packets, etc.) in the area.
- ☐ Repeated, observable exchanges of items, especially where money is visible.
- ☐ Offers to sell you drugs or conversations about drugs that you overhear.
- ☐ Groups of individuals frequently congregating in the same area.
- ☐ Buildings where extreme security measures seem to be taken.
- ☐ Buildings where no owner or primary renter is apparent and no home activities, yard work, etc., seem to go on

Be careful. If you stop at an accident scene or are looking at an abandoned vehicle, unusual chemical odors or visible laboratory type equipment may be the only warning you get.

Be suspicious. Discarded chemicals and equipment are hazardous. Cookers often dump toxic waste or lab equipment anywhere. They don't care about the extreme danger and hazards to people, property or the environment.

How Clan Labs Are Booby-Trapped

Booby traps are used by the cookers for warning and protection. These traps can be triggered by any normal movement, such as opening a door or flipping on a switch. Unfortunately, any unsuspecting person who stumbles onto a clan lab site can lose an arm, a leg or a life.

Common booby traps include:

- Trip wires designed to set off alarms, explosive or toxic chemical devices.
- Hidden pungee sticks. These are buried wooden planks with large nails or spikes protruding upward.
- Light switches, refrigerators, VCRs or other electrical appliances wired to explosive devices.

How You Can Help

Know what to look for, and be alert. Your knowledge and quick action can help close down a lab and prevent serious injury or death to yourself and others. But remember, clan labs are toxic time bombs, frequently booby-trapped, and often have heavily armed persons inside or nearby.

Don't investigate – call the police or sheriff.

This brochure was produced in conjunction with the Bureau of Narcotic Enforcement California Department of Justice

For more information on this program and other crime prevention material, write to:

Crime and Violence Prevention Center
California Attorney General's Office
P.O. Box 944255
Sacramento, CA 94244-2550
www.safestate.org

www.stopdrugs.org

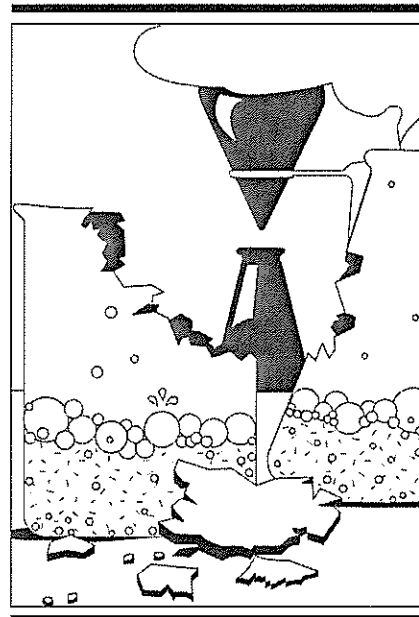
This publication can be downloaded from
www.safestate.org



E12 - 9014
10/99



Clandestine Drug Labs



Crime and Violence Prevention Center
California Attorney General's Office

Bill Lockyer
Attorney General

What Is A Clandestine Drug Laboratory?

The clandestine drug laboratory or *clan lab* is a mini-chemical lab designed for one purpose: to make deadly, illegal drugs quickly and cheaply.

Clan lab chemists can produce LSD, synthetic heroin and other drugs, but their drug of choice is methamphetamine, commonly called *speed* or *crank*. A smokeable form of methamphetamine called *ice*, *glass* or *crystal* is also produced.

These homemade drugs are dangerous, but the labs are equally dangerous and can be located in any neighborhood. Toxic chemicals, explosions, fires, booby traps, armed criminals – any of these can mean disaster for the people who inadvertently stumble onto the labs.

If You Spot A Clan Lab

LEAVE THE AREA AT ONCE. Anyone without proper training and protective gear should stay away from any suspected clandestine laboratory.

IMMEDIATELY CONTACT your police or sheriff to notify them of your suspicions. *CALL 911 if you think you've been exposed to toxic chemicals.*

DON'T INVESTIGATE because of the danger to you and anyone else in the area. Most law enforcement agencies have narcotics teams. Busting clan labs is their job, let them do it.

Why Clan Labs Are Dangerous

Explosion and fire are probably the most common hazards. Usually the lab has a mixture of volatile chemicals, carelessly handled by a

criminal-chemist who works in a poorly ventilated room.

These high concentrations of toxic fumes and explosive chemicals create a dangerous situation. Actions such as knocking over a container, having a lit cigarette, or switching on electrical equipment that makes a spark is enough to cause an explosion.

Contact with the chemicals is extremely hazardous. Whether in their raw form or after they've been "cooked" into finished drugs, touching these chemicals or just breathing their fumes can cause fainting, sickness or permanent injury. Some law enforcement officers have suffered serious injuries such as a collapsed lung, pneumonia and chemical bronchitis from exposure to fumes.

Unfortunately, victims don't always realize that they have been exposed because the symptoms may not surface for many days or weeks.

How To Detect A Clan Lab

In both rural or urban areas, anyone can unexpectedly come across a clandestine laboratory.

Signs of a possible lab include:

- Strong or unusual chemical odors.
- Laboratory equipment (glass tubes, beakers, bunsen burners, funnels).
- Fortifications on houses or outbuildings, such as heavily barred windows or doors, etc.
- Chemical cans or drums in the front or back yard (these containers often have the labels marked or painted over).
- Automobile or foot traffic at all hours.

-
- People going outside the building only long enough to smoke, especially at motels or during bad weather.
 - New high fences with no visible livestock or animals.

Where Clan Labs Are Located

Clan labs are found in:

- Rural rentals with absentee landlords (homes, barns, mobile homes or outbuildings).
- Urban home or apartment rentals with absentee landlords.
- Trailers and motor homes.
- Motel rooms.
- Houseboats.
- Mini-storage units. These are used to store chemicals, drugs, lab equipment and weapons.

How Clan Labs Are Transported

Clan labs are usually portable and can be quickly disassembled and moved to a new location.

Be alert. "Cookers" or criminal-chemists move labs frequently to escape detection, using freeways as well as rural and urban roads.

Any type of size of vehicle may be used for transport. This includes pick-up trucks, motor homes, cars and tractor-trailer rigs.

Be aware. A vehicle carrying chemicals can be just as explosive and toxic as a working lab. Drug cookers are often in a hurry and very careless when they load up chemicals and lab equipment.



**DEPARTMENT OF HOMELAND SECURITY
SUICIDE BOMBER WARNING INDICATORS
REFERENCE CARD**

This card provides general indicators suggesting preparation for a suicide bombing attack and immediate action considerations. A complete list of indicators by national infrastructure and private sectors are presented in the DHS-sponsored *Prevention and Response to Suicide Bombing Incidents Course* at New Mexico Tech.

For more information contact respondf@emrtc.nmt.edu

Attack phases that provide opportunities to ID terrorist activity

- ☐ Identification of operational personnel
- ☐ Recruitment & training
- ☐ Target selection & reconnaissance
- ☐ Procurement of operational items
- ☐ Device construction & final preparations
- ☐ Moving to target & device(s) detonation
- ☐ Post-attack regarding associates or handlers

Pre-Imminent Attack Phases (Sample Indicators)

- Recruitment efforts for potential bombers
- Pre-operational surveillance of potential targets
- Procurement of items/materials required for devices
- Unusual/unexplainable behavior
- Atypical/unusual use of rented housing/storage/transport

Imminent Attack Phase (Indicators A.L.E.R.T)

- Alone and nervous (emotional state doesn't fit situation)
- Loose and/or bulky clothing (may not fit weather conditions)
- Exposed wires (possibly through sleeve)
- Rigid mid-section (explosive device or may be carrying a weapon)
- Tightened hands (may hold detonation device)

Immediate Action Considerations

- Situational - consider indicators and the total environment
- Establish reasonable suspicion or probable cause and report
- Take immediate actions under established policies and procedures
- Don't close reactionary gaps or approach - take cover
- Mitigate/eliminate the immediate threat(s) to your life & the public's
- Conduct rescue operations under law enforcement protection*



**DEPARTMENT OF HOMELAND SECURITY
SUICIDE BOMBER WARNING INDICATORS
REFERENCE CARD**

This card provides general indicators suggesting preparation for a suicide bombing attack and immediate action considerations. A complete list of indicators by national infrastructure and private sectors are presented in the DHS-sponsored *Prevention and Response to Suicide Bombing Incidents Course* at New Mexico Tech.

For more information contact respondf@emrtc.nmt.edu

Attack phases that provide opportunities to ID terrorist activity

- ☐ Identification of operational personnel
- ☐ Recruitment & training
- ☐ Target selection & reconnaissance
- ☐ Procurement of operational items
- ☐ Device construction & final preparations
- ☐ Moving to target & device(s) detonation
- ☐ Post-attack regarding associates or handlers

Pre-Imminent Attack Phases (Sample Indicators)

- Recruitment efforts for potential bombers
- Pre-operational surveillance of potential targets
- Procurement of items/materials required for devices
- Unusual/unexplainable behavior
- Atypical/unusual use of rented housing/storage/transport

Imminent Attack Phase (Indicators A.L.E.R.T)

- Alone and nervous (emotional state doesn't fit situation)
- Loose and/or bulky clothing (may not fit weather conditions)
- Exposed wires (possibly through sleeve)
- Rigid mid-section (explosive device or may be carrying a weapon)
- Tightened hands (may hold detonation device)

Immediate Action Considerations

- Situational - consider indicators and the total environment
- Establish reasonable suspicion or probable cause and report
- Take immediate actions under established policies and procedures
- Don't close reactionary gaps or approach - take cover
- Mitigate/eliminate the immediate threat(s) to your life & the public's
- Conduct rescue operations under law enforcement protection*



**DEPARTMENT OF HOMELAND SECURITY
SUICIDE BOMBER WARNING INDICATORS
REFERENCE CARD**

This card provides general indicators suggesting preparation for a suicide bombing attack and immediate action considerations. A complete list of indicators by national infrastructure and private sectors are presented in the DHS-sponsored *Prevention and Response to Suicide Bombing Incidents Course* at New Mexico Tech.

For more information contact respondf@emrtc.nmt.edu

Attack phases that provide opportunities to ID terrorist activity

- ☐ Identification of operational personnel
- ☐ Recruitment & training
- ☐ Target selection & reconnaissance
- ☐ Procurement of operational items
- ☐ Device construction & final preparations
- ☐ Moving to target & device(s) detonation
- ☐ Post-attack regarding associates or handlers

Pre-Imminent Attack Phases (Sample Indicators)

- Recruitment efforts for potential bombers
- Pre-operational surveillance of potential targets
- Procurement of items/materials required for devices
- Unusual/unexplainable behavior
- Atypical/unusual use of rented housing/storage/transport

Imminent Attack Phase (Indicators A.L.E.R.T)

- Alone and nervous (emotional state doesn't fit situation)
- Loose and/or bulky clothing (may not fit weather conditions)
- Exposed wires (possibly through sleeve)
- Rigid mid-section (explosive device or may be carrying a weapon)
- Tightened hands (may hold detonation device)

Immediate Action Considerations

- Situational - consider indicators and the total environment
- Establish reasonable suspicion or probable cause and report
- Take immediate actions under established policies and procedures
- Don't close reactionary gaps or approach - take cover
- Mitigate/eliminate the immediate threat(s) to your life & the public's
- Conduct rescue operations under law enforcement protection*



**DEPARTMENT OF HOMELAND SECURITY
SUICIDE BOMBER WARNING INDICATORS
REFERENCE CARD**

This card provides general indicators suggesting preparation for a suicide bombing attack and immediate action considerations. A complete list of indicators by national infrastructure and private sectors are presented in the DHS-sponsored *Prevention and Response to Suicide Bombing Incidents Course* at New Mexico Tech.

For more information contact respondf@emrtc.nmt.edu

Attack phases that provide opportunities to ID terrorist activity

- ☐ Identification of operational personnel
- ☐ Recruitment & training
- ☐ Target selection & reconnaissance
- ☐ Procurement of operational items
- ☐ Device construction & final preparations
- ☐ Moving to target & device(s) detonation
- ☐ Post-attack regarding associates or handlers

Pre-Imminent Attack Phases (Sample Indicators)

- Recruitment efforts for potential bombers
- Pre-operational surveillance of potential targets
- Procurement of items/materials required for devices
- Unusual/unexplainable behavior
- Atypical/unusual use of rented housing/storage/transport

Imminent Attack Phase (Indicators A.L.E.R.T)

- Alone and nervous (emotional state doesn't fit situation)
- Loose and/or bulky clothing (may not fit weather conditions)
- Exposed wires (possibly through sleeve)
- Rigid mid-section (explosive device or may be carrying a weapon)
- Tightened hands (may hold detonation device)

Immediate Action Considerations

- Situational - consider indicators and the total environment
- Establish reasonable suspicion or probable cause and report
- Take immediate actions under established policies and procedures
- Don't close reactionary gaps or approach - take cover
- Mitigate/eliminate the immediate threat(s) to your life & the public's
- Conduct rescue operations under law enforcement protection*

INCIDENT	HAZARDS	2004 ERG GUIDE PAGE	PERSONAL SAFETY
Incendiary	thermal, mechanical, chemical, asphyxiating, ambush	Guide #'s 118, 127, 134, 136 & 139. Improvised materials may be extremely sensitive, reactive & unpredictable	For incendiary and explosive: remove people from potential threat, do not touch suspect items, do not
Explosive	mechanical, thermal, chemical, etiological, radiological, ambush	Guide #'s 112, 114. Improvised materials may be extremely sensitive, reactive & unpredictable	disturb or change environment, do not use two-way radios, beware of
Biological	etiological / biological	Guide #158.	For biological and chemical: evacuate upwind, use PPE & respiratory protection if possible, if incident is outside then seal doors and windows and turn off air conditioners, when clear of contaminated area start decon by removing all apparel and
Chemical	chemical, thermal, asphyxiating, mechanical	Guide #'s 123, 153. Improvised materials may be sensitive, reactive & unpredictable	All of the above apply
Nuclear	radiological, thermal, chemical, mechanical, ambush	Guide #163. Improvised materials may be extremely sensitive, reactive & unpredictable	

SCENE MANAGEMENT

<p>Park vehicles and position responders upwind / updrift and not too close.</p> <p>Immediately notify your agency dispatcher that you are involved in a possible terrorist incident and establish the incident command system.</p> <p>Provide your dispatcher with the following information:</p> <ul style="list-style-type: none"> a) incident description b) exact location of incident c) location of command, i.e., Main Street Federal Building command d) type or types of structures involved e) type or types of vehicles involved f) type of substance(s) released or involved g) presence of fire, spilled liquids, vapor leaks h) known injuries or casualties i) alert hospitals to imminent mass injuries (many may arrive in their own car) j) public evacuations?, how much public exposure? k) request necessary resources immediately: <p>DEP / bomb squad / hazmat unit / urban search & rescue / medical teams / etc.</p> <p>1) route of approach for other responders, i.e., wind direction</p>	<p>Establish an isolation distance (hot zone) and prohibit traffic from passing through incident. This distance will depend on the types of hazards and the location of the incident. In explosive incidents, emphasize the possibility of secondary devices.</p> <p>Do not remain in the path of a vapor cloud or leaking materials. Be alert to signs of escaping materials or agents. Note sounds of escaping gas, odd smells, etc.</p> <p>The incident is a crime scene. Preserve suspected evidence wherever possible.</p> <p><u>Use the D.E.C.I.D.E. process.</u></p> <ul style="list-style-type: none"> D detect the presence of a terroristic incident E estimate likely harm without intervention C choose the response objectives (terroristic incidents require assistance from other agencies) I identify the action options (based on your training and personal protective equipment) D do the best option E evaluate your progress
--	---

CHEMICAL EMERGENCY SELF-DECONTAMINATION

- | | |
|--------------------------------|---|
| (1) Blot off the agent | (3) Flush the affected area with large amounts of water |
| (2) Strip off all the clothing | (4) Cover the affected area |

INFORMATION TO BE REPORTED

REPORTED BY: / PHONE NUMBER / AGENCY OR HOME ADDRESS
DATE AND TIME OF INCIDENT

INCIDENT LOCATION & DESCRIPTION

Neighborhood & occupancy Topography (describe) Urban
Rural
Suburban
Population sensitive areas (i.e., nursing homes, schools, hospitals, etc.)

REASON FOR REPORT

Unusual liquid droplets People becoming sick People dying
Unusual odors Dead/dischored vegetation Dead/dying or sick animals
Unusual cloud or vapor Unusual metal debris Other (describe)

WEATHER

Clear Cloudy Misty Rain Snow Temperature Relative humidity

WIND

Direction (to/from) Speed (none, mild, gusts, high winds) Other (describe)

ODOR

None Irritating Garlic/Horseradish Sweet Pepper Fruity
Forest Flower Almond/Peach Fresh Hay Rotten Eggs Changing
Other (describe)

VISIBLE EMISSION

Cloud or Vapor Mist Smoke Liquid Other (describe)

SIGNS & SYMPTOMS

<input type="checkbox"/> None	<input type="checkbox"/> Tightness in chest	<input type="checkbox"/> Stinging of skin	<input type="checkbox"/> Reddening of skin	<input type="checkbox"/> Welts/Blisters
<input type="checkbox"/> Dizziness	<input type="checkbox"/> Blurred vision	<input type="checkbox"/> Runny nose	<input type="checkbox"/> Difficulty breathing	<input type="checkbox"/> Choking
<input type="checkbox"/> Fever	<input type="checkbox"/> Nausea/vomiting	<input type="checkbox"/> Diarrhea		<input type="checkbox"/> Other (describe)

Date & Time of Onset Duration of Symptom(s) Number of Casualties

EXPLOSION/FIRES

None Air Ground Structure Describe device
Describe container/condition/size Describe location where device was found
Describe structures involved/estimated damage

NJ DEP HOTLINE: 1-877 WARNDP (1-877-927-6337)

NJSP DIVISION HDQTRS.: (609) 882-2000 X6311

FEDERAL CHEM/BIO HOTLINE (800) 424-8802

NJSP HMRU Office 732-721-4040 (After Hrs call NJSP Div. HQ's)

POCKET RESPONSE GUIDE TO TERRORIST INCIDENTS

TYPES OF THREATS

- 1.) Chemical compounds which, through their chemical properties, produce lethal or damaging effects to people, animals plants or materials.
- 2.) Biological living organisms, or the materials derived from them, that cause disease and sickness in humans.
- 3.) Radiological
- 4.) Nuclear application of a conventional nuclear device or the inclusion of radioactive materials as part of a dispersal type device
- 5.) Explosive any substance, mixture, item or device designed to function by the instantaneous release of gas and heat usually accompanied by light, loud report, and possible a shock wave.
- 6.) Incendiary any mechanical, electrical or chemical device used to intentionally initiate combustion

BASIC RESPONSE METHODOLOGY

- 1) Protect Yourself / Use a Safe Approach
- 2) Identify & Recognize the Hazard
- 3) Isolate the Area / Secure the Scene
- 4) Set Up Command/ Request Additional

REMEMBER: UNSUBSTANTIATED RUMORS CAN GENERATE PANIC

KEY TO SELF-PRESERVATION

- 1) Time - minimize any exposure time.
- 2) Distance - maximize the distance between you and the item that is likely to harm you
- 3) Shielding - use cover as protection. Wear appropriate personal protective equipment and respiratory protection if possible.

CRIME SCENE PROCEDURE

- 1.) Be aware of people arriving or departing the scene. Note license numbers and other descriptive information.
- 2) Advise witnesses and bystanders to remain at the scene in a safe location until law enforcement personnel can interview them
- 3) Be alert to physical evidence, such as footprints, wrapper, matches etc., and notify authorities of such findings.
- 4) If possible, sketch, photograph or video tape the scene.
- 5) Document victim's statements and any other evidence they may possess.
- 6) Use evidence saving techniques when possible (fog spray, containment, etc.,)

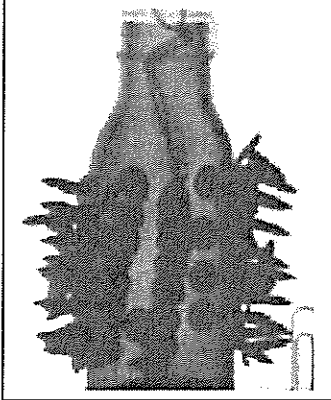
GOLDEN RULE - do not touch, disturb or remove anything unless done with the knowledge and approval of law enforcement.

London bombs

The Times
July 28, 2005

Deadly device image leaked to US

BY SEAN O'NEILL AND STEWART TENDLER



THE picture of the nail bomb (right) is fuzzy and indistinct but no less chilling for that. It is an X-ray image of the type of nail bomb that Britain's suicide bombers intended to use. The bomb is packed into a small plastic bottle similar to the kind found in any supermarket.

Inside is an improvised detonator with cable leading out to an electrical device that would provide the charge to set off the bomb. The nails, probably felt-roofing tacks, were attached to the outside of the bottle and encased in layers of clingfilm.

Attaching them to the outside of the bottle is thought to be a quirk of a bombmaker who is now feared to have made dozens of devices.

The bombs were likely to have been "bulked up", explosives experts say, with cakes of high explosive similar to discs shown in another photograph.

The pictures were leaked to ABC News in America by US law enforcement sources. The items shown were left by the July 7 bombers in a car at Luton railway station.

According to ABC's report, 16 bombs were found in the boot of a hire car that had been rented by Shehzad Tanweer, 22, who killed himself and six passengers when he set off his bomb on a train near Aldgate station. The American report contradicts information provided by Scotland Yard. They dismissed the idea that a cache of bombs had been found in the Luton car park.

Senior police sources continued to dispute the US reports yesterday, saying that a number of components for bombs were found in the car. *The Times* has been told that up to 16 of the devices were recovered with nine discs of the TATP-type explosive.

Two cars were examined at the station after the first big breakthrough in the inquiry on July 12. Bomb disposal experts carried out nine explosions on the hire car, a Nissan Micra, before it was taken away.

Scotland Yard is known to be concerned that the images have emerged in the media but the leak is an almost inevitable result of the international cooperation required in such an inquiry. Police and security agencies exchange information daily and some agencies, including the FBI, have agents working full time at Scotland Yard.

There is constant cross-referencing of material to see whether, for example, a type of bomb has been seen before. The result is that information gets less confidential the further it travels. The concern over the pictures in the US is the latest in a series of media management problems to beset the inquiry.

There has been a series of incorrect statements made by the authorities. The July 7 bombs were initially said to have exploded over almost an hour. The timing of the Tube train attacks was later narrowed to a matter of seconds. Incorrect information was also given about the directions in which the trains were travelling.

The July 7 bombers were described as "clean skins" who had not crossed the intelligence radar. But one had been linked to another investigation a year ago and two travelled to Pakistan, where they had contact with al-Qaeda radicals.

The description of the explosive material recovered in Luton and Leeds varied, but sources have admitted that they cannot definitively identify it.

Preparedness Resources

In the aftermath of the Sept. 11th terrorist attacks, many comm centers were seeking sources of information they could use to improve their emergency preparedness. This page attempts to provide links to the key sources of information that are now available. updated 10/19/05

- The Two Tigers Radiological site has an excellent collection of Homeland Security-related links
 - The Reference Desk Web site has another collection of terrorism preparedness links
 - The federal Department of Homeland Security has a Web site of resources and information.
 - Procedures & contact telephone for to ask persons calling from aircraft & reporting an emergency
 - The Centers for Disease Control and Prevention (CDC) has a page on preparedness issues
-
- | | |
|--|---|
| <ul style="list-style-type: none"> • State of California expanded Guidelines for handling sus packages, Weapons of Mass Destruction (WMD) assessment guide, and WMD training manual (Austin, Tex.) [e-mail us with agency e-mail address, we'll send you the link and password] • State of California <u>Information Bulletin</u> on handling suspicious envelopes/packages • ATF's definitive advice on bomb threats, searching, handling, etc., and their <u>Bomb Threat Checklist</u>, illustrations, etc. • Suspicious mail <u>questionnaire</u> for law enforcement officers [pdf] • National Safety Council (NSC) info on <u>emergency preparedness</u> • <u>Final report</u> of Wireless Emergency Response Team [pdf, 372k] • <u>Calltaking guide</u> when handling wireless callers, from WERT report • <u>Decision tree explanation and diagram</u> for biological weapons incidents--excellent resource for comm centers and incident commanders. • <u>Guidelines for responding</u> to a chemical weapons incident--includes excellent, | <ul style="list-style-type: none"> • <u>Explanation</u> of how the terrorist threat expands an existing emergency plan, from DOT material. [pdf, 69k] [see the previous listing for more DOT material] • Arlington County (Virg.) has published their <u>after-action report</u> for the Pentagon incident. [pdf, 7.9 Mb] • Consultants McKinsey & Co. have published two reports on police and fire department operations at the World Trade Center, including comm issues. Surf the <u>FDNY report</u>, and download the NYPD report. [pdf, 475k] • <u>CALEA report</u> on revisions to standards for crisis management • Office of Domestic Preparedness, <u>Guidelines for First Responders</u> - more for law enforcement, fire and EMS agencies, but provides insights into the communications support function. [pdf, 478k] • The industry's <u>Network Reliability & Interoperability Council</u> published "Essential Communications During Emergencies," which analyzes the availability of different technologies to provide telecommunications services |
|--|---|

dispatch-specific advice for the initial call and actions to take.

- [Guidance for Protecting Building Environments](#) from Airborne Chemical, Biological, or Radiological Attacks
- Excellent trio of pocket cards on handling [biological](#), [chemical](#) or [radiological](#) incidents from the DoD. [pdf
- [Security assessment material](#) by MitreTek; also a very comprehensive NIST [self-assessment guide](#) on IT security [df, 449k]
- FBI's [National Domestic Preparedness Office](#), info on all aspects
- Disaster preparedness, [hazard assessment guide](#)
- [Training materials](#) from NTIS on terrorism threats
- [Disaster & Recovery Planning book](#), from the Disaster Center Bookstore
- [White House Office of Homeland Security](#)
- FEMA [factsheet](#) on terrorism preparedness
- Weapons of mass destruction video training, Video Techniques Inc., (941) 758-3077 [no active Web site]
- Assessment & Strategy Development Toolkit, prep document for DOJ funding; very comprehensive terrorist attack and WMD assessment check-list. [pdf 750k]
- FEMA "Guide for All-Hazard Emergency Operations Planning," to aid State and local emergency managers in developing and maintaining emergency operations plans. [pdf 617k]
- National League of Cities, Domestic Terrorist Resources for Local Governments [pdf 190k]
- Wireless Emergency Response Team (WERT) final report [pdf, 372k]
- DOJ's [Office for Domestic Preparedness Office](#) - law enforcement resources on the subject
- [Center for Strategic & International Studies](#) - many reports on threat assessment and preparedness
- [WMD First Responders](#) - a private Web

during emergencies, including an extensive review of 911 systems.

- A **Macintosh** [program](#) that will display the current national threat level on-screen. [Mac OSX only, bin format]
- "National Strategy to Secure Cyberspace," draft for public comment [pdf, 2.3 Mb]
- The U.S. Commission on National Security was convened in 1999 to study security issues, and issued several reports--the so-called Hart-Rudman Reports. You can download the [most recent \(Feb. 2001\) report](#) in Acrobat [pdf, 763k] format.
- Former Senators Hart and Rudman also chaired a 2002 panel sponsored by the Council on Foreign Affairs, and published another [report on homeland security](#). [pdf, 215k]
- The Council on Foreign Relations published a [report](#) on terrorism preparations--or the lack of it. The report covers radio interoperability and other topics.
- [CBS News](#) has a very long list of disaster preparedness links.
- The [American Institute of Architects](#) bookstore has several publications related to building design and security.
- FEMA has created a one-stop [Web page](#) with information on disaster preparedness.
- [Chart of biological agents](#), their symptoms and treatments, from the University of North Carolina. [pdf, 161k]
- [National Conference of State Legislatures](#) keeps track of legislation on radio interoperability.
- FEMA guide for citizen preparedness: "[Are You Ready](#)", but which also has good info on general preparedness.
- The [Infectious Disease Society of America](#) has a Web page with lots of information on chemical and biological agents, and preparedness.
- APCO issues suspicious calls alert.
- The Department of Homeland Security issued information on 2003 grants,

site with resources for law enforcement and fire agencies who arrive first at WMD incidents.

- National Institute of Justice: [collection of links](#) on domestic terrorism preparedness
- List of Emergency Response Team [resources](#) available from federal and state level
- [An Introduction to Biological Agent Detection Equipment for Emergency First Responders](#); by federal National Institute of Justice. [pdf, 1.7 Mb]
- Legislation and other [federal action on domestic terrorism preparedness](#) - Center for Nonproliferation Studies excellent!
- [Report on Pentagon site communications](#) from the Public Safety Wireless Network (PSWN) [pdf, 4.1 Mb]
- The "911 Cares" program is offering [commemorative T-shirts](#), and proceeds help the involved dispatchers.
- Office of Homeland Defense unveils terrorism [threat level reporting system](#)
- Third annual "Gilmore Commission" report, the [Advisory Panel to Assess Domestic Response Capabilities for Terrorism Involving Weapons of Mass Destruction](#), 270 pages. [pdf version for printing 3.9 Mb] [Acrobat version for on-screen 1.9 Mb]
- Advice on [securing buildings](#) against chemical and biological attacks.
- The Belfer Center for Science and International Affairs wrote a paper on obstacles to radio interoperability, and another with [recommendations on public safety communications](#).
- Collection of [emergency preparedness publications](#) from the Government Printing Office (GPO).
- Collection of [terrorism preparedness publications](#) from the Technical Support Working Group, a multi-agency federal government group [ordering some materials requires TSWG approval].
- A [Guide To Strengthen Emergency Management Of High-Rise And High-Risk Buildings](#), prepared by the city of

including for interoperable law enforcement communications gear. [pdf]

- FCC posts [Web page](#) to encourage PSAPs to join the Telecommunications Priority Service (TSP)
- The National Fire Service's Incident Management Consortium has published a draft of a joint fire, law enforcement, EMS, tow agency incident management system, which ties together all the agencies that might handle a highway-related incident. Very complete! [pdf, 2 Mb]
- [Collection](#) of police and fire radio audio during the Sept. 11th terrorist attacks.
- The [Media Security and Reliability Council](#) (MSRC) focuses on protecting TV and radio stations, and other media outlets from terrorist attacks and other dangers, and extending their reach to provide public warnings and information. The group's Public Communications and Safety Committee has issued an interim report with recommendations. [Word, .doc]
- The Council on Foreign Relations published a [report](#) "First Responders: Drastically Underfunded, Dangerously Unprepared," that include a recommendation on funding 911. [pdf]
- The National Clearinghouse for Educational Facilities has posted [disaster resources](#) for schools.
- The federal Department of Veterans Affairs has produced an excellent [pocketcard](#) on the symptoms and effects of radiation. [pdf]
- A General Accounting Office (GAO) report on information sharing, and how it could be improved among law enforcement agencies. [pdf]
- The [Center for State Homeland Security](#) has posted a Web site with lots of links and resources.
- The Rand institute has published an excellent 35-page [quick guide](#) to individual preparedness for chemical, radiological and biological attack. [pdf]

- Ontario (Canada)
- [National Homeland Security Database](#), a huge collection of links to other sites and resources.
- The Metro Washington (DC) Council of Governments has posted a framework for a [Regional Emergency Coordination Plan](#).
- Guide for [radiation emergency accidents](#)
- The Department of Energy has prepared an excellent guide on "[Hazardous Materials Response Procedures](#)." [pdf, 824k]
- The Federal Emergency Management Agency (FEMA) has a number of CD-ROM-based courses, including "[Special Events Contingency Planning](#)." You can register on-line, they'll send you the CD, and send back a printed test results page to complete the course. You could also download the [printed support materials](#) (pdf, 1.9 Mb) for the course, which does **not** include all of the lessons, but is still very informative.
- Report by the [U.S. Army Soldier & Biological Chemical Command](#) on personal protective equipment for law enforcement officers at the scene of a chemical/biological terrorist incident--we've excerpted the "[Operational Considerations](#)" section and [Appendix](#) for some excellent dispatch-related information. [pdf, 1 Mb]
- An on-line [quick-reference table](#) of chemical and biological agents.
- A [discussion](#) of vehicle bomb preparation and aftermath operations
- In June, 2002 there was talk of "dirty bombs," or conventional explosives laced with radiological materials. Check this general article on [Preventing Nuclear Terrorism](#), and this specific article on [Radiological Dispersion Devices](#).
- This [PBS Web site](#) lets you type in an address and see if you'd be vaporized by a 1-megaton atomic bomb, while this Web site lets you map [nuclear waste transportation routes](#).
- The National Academy of Sciences has an
- The [Pocket Partner](#) was first published in 1998, but is more relevant today, with 576 pages of vital emergency information in a -- what else? -- pocket-sized book.
- South Carolina Dept. of Labor [handbook](#) on developing a workplace security plan. [pdf, 1.5 Mb]
- List of [OSHA resources](#) on fire and explosion assessment and planning.
- Office of Domestic Preparedness, "[Emergency Responder Guidelines](#)," good basics for law enforcement, fire, EMS and public works agencies. [pdf, 395k]
- Frontier Systems Integrators LLC has published a White Paper on interoperability that provides a plain-talk view of the needs and requirements. [pdf]
- Hazardous Materials Response Special Teams Capabilities and Contact [Handbook](#), compiled by the U.S. Coast Guard. Excellent 191-page listing of contacts and agency capabilities.[pdf]
- FEMA's "[Fire And Emergency Services Preparedness Guide For The Homeland Security Advisory System](#)" [pdf]
- NENA [draft standard](#) on PSAPs notifying NORAD about aircraft incidents [Acrobat]
- Rand Corp. [guide](#) to personal preparedness for WMD incidents
- 9-11 Commission timeline on communications at both terrorist attack sites [[Chapter 9](#), pdf] [[list of all chapters](#)]
- Personal preparedness [guide](#) issued to all households in the UK
- Military [handbook](#) on building protection, including technical "stand-off" distance requirements for explosive devices (pdf)
- State of Illinois, EOC Vulnerability Survey [[.doc](#)]
- New York State Police - bomb information-taking [card](#) (pdf)
- Public Transportation Emergency Mobilization and Emergency Operations [Guide](#) (pdf, 3.9Mb)
- [Evacuation plan](#) and suggested kit (pdf)
- Department of Homeland Security's

extensive list of transportation-related security resources.

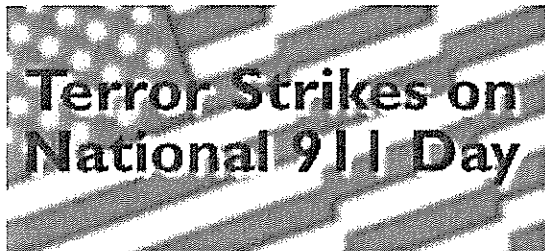
general business preparedness information page

- [Lessons of Hurricane Katrina \(2005\)](#)
- On-line [guide](#) to disaster communications NEW!

It was expected to be a quiet day to celebrate, or at least acknowledge, National 911 Day in the United States. Some public safety comm centers arranged tours of their center, others held events during baseball games, and the National Emergency Number Association (NENA) had prepared a press conference to introduce their long-awaited "Report Card To The Nation" on the status of the 911 systems across America.

But that quiet and routineness disappeared at 8:45 a.m. when a hijacked airliner struck and damaged the World Trade Center tower #2. A second hijacked aircraft struck shortly after, followed by an attack on the Pentagon Arlington (Virg.). A fourth airliner mysteriously crashed in rural Pennsylvania, probably as the result of the intervention of heroic passengers.

No on-duty FDNY dispatchers were killed in the collisions or subsequent collapse of both Trade Center towers. Sadly, however, Jersey City (NJ) fire dispatcher Joe Lovero was killed in the tower collapse while at the World Trade Center site.





[The material below was written and posted in the days following the Sept. 11 attacks, and has been only slightly edited since then for historical reasons.]

The collapse of the 110-story #1 and #2 towers also damaged 7 World Trade Center, which housed the Office of Emergency Management's Emergency Operations Center (EOC), which is addressed off of Barclay Street, across Vesey St. north of the complex. [Surf this photo of the OEM command bus in front of the WTC before the incident.]

Mayor Rudi Giuliani and his emergency operations staff were inside the EOC complex when the second WTC tower collapsed and were briefly trapped by debris, dust and smoke. They were able to escape and relocated the EOC to site. About eight hours after the first crash on Tuesday, the 47-story 7 WTC building collapsed from the damage and resulting fires. The 5 WTC building collapsed on Wednesday. [The red buildings in the diagram are those that have collapsed.]

Tower #2 was struck and hit first by a plane at about 8:45 a.m. that approached from the south (bottom in this diagram), striking about three-quarters of the way up the tower. Then the Tower #1 was hit by a plane at 9:03 a.m. that approached from the north, hitting about two-thirds up the tower.

Both impacts ignited fires that burned for some 45 minutes before the steel columns of the towers at the bottom of the fire floors collapsed, sending the top 20-30 floors of each tower plummeting straight down onto the floors below. The weight of that collapse pancaked the rest of the buildings floors to the ground.

The collapse of both towers killed firefighters and police officers who were inside the buildings attempting to fight the fires and rescue occupants, and outside the building on the ground level.

As of Thursday evening, Sept. 13th, 1 Liberty Plaza (east across Church St. from 4 WTC) and the American Express building (west across West St. from 6 WTC) were believed to be unstable, and could possibly collapse.

Donations

NENA is asking its members to donate money to a fund being set up by NENA that will be sent to the International Association of Fire Firefighters (IAFF) and the New York Fraternal Order of Police. Make donations payable to: NENA Emergency Service Relief Fund, c/o National Emergency Number Association, P.O. Box 360960, Columbus, OH 43236

Staffing Assistance

On Friday, NENA forwarded the following reply from FEMA on the need for scheduling or donating trained PSAP personnel to assist with the New York City tragedy. "We realize that many of you are eager to assist our fellow emergency workers, but many of those scheduling decisions are being coordinated by agencies directly," NENA e-mailed its members.

MESSAGE TO VOLUNTEERS
September 13, 2001

To: All Those Who Offered Volunteer Time or Donated Items
From: FEMA Director Joe M. Allbaugh

We have received literally hundreds - nearly a thousand - of e-mails from people interested in volunteering their time or donating goods and services in support of the rescue efforts in New York City and the Pentagon. At this very busy time, we are, unfortunately, unable to respond individually to each message regarding this topic.

We are very gratified by your outpouring of generosity throughout America. However, the state of New York has reported that there is no additional need for volunteers or donated goods for the World Trade Center response. In addition to the federal, state and local government resources being deployed to the scene, there are a considerable number of goods and services already in the pipeline. The same situation exists at the Pentagon and no volunteers or donations are needed there at this time.

However, the public is encouraged to make financial contributions. You can call the New York state donations coordination hotline at 1-800-801-8092. To make contributions to help the federal victims at the Pentagon or the World Trade Center, send your checks to: FEEA; World Trade Center/Pentagon Fund, 8441 West Bowles Avenue, Suite 200, Littleton, Colorado, 80123.

For further information about blood donation needs, call 1-800-GIVE LIFE or visit www.redcross.org. Again, thank you so much for your concern and support for those affected by the disaster and for those working to rescue victims.



No FDNY dispatchers were injured or killed in the incident--although it was a close call. The Fire Department's Field Communications Unit, staffed by civilian dispatchers, was dispatched to the incident when the "10-76" signal was sounded for the high-rise fire that erupted after the first airliner attack. The FCU vehicle was heavily damaged by falling debris when Tower #1 collapsed. Several fire personnel perished in the collapse, including FDNY Fire Chief Peter Ganci. FDNY's Field Communications Unit [[photo #2](#), [#3](#), [#4](#), [patch](#), housed at [Engine 207](#)] provides additional communications services when a "10-76" signal for a high-rise fire is transmitted.

On Saturday, the FDNY press office reported that veteran Jersey City (NJ) fire dispatcher **Joe Lovero** died in the collapse of the World Trade Center towers. Joe was a member of the Jersey City Fire Department Gong Club, former EMT and freelance photographer. His Mass will be Wednesday morning (Sept. 19) in that city. Donations in lieu of flowers to the Burn Center at St Barnabas Hospital at the address below.

Department Of Fire & Emergency Services
465 Luis Munoz Marin Blvd., Jersey City, NJ 07302

St. Barnabas Hospital
Burn Center
Old Short Hills Rd., Livingston, NJ 07039

Thanks to Mark Milliron of the Indian Hill (Ohio) Police Department for a quick reference "Ways To Help" list to print out and post next to your console, to help answer those inevitable questions from citizens. It's available in either [Acrobat](#) (pdf) or [Word](#) format.

[We received the following e-mail:]

What horrible news from the USA last Tuesday. I cannot imagine how anyone can have so much hatred in their hearts to do what those terrorists did and mass-murder without compunction. And I feel so sad for all the brave emergency workers killed as a result. I can only imagine how awful it must have been...not least for those working in the comm centers as well as those in the field.

It is good that our Prime Minister has pledged to stand shoulder to shoulder with the USA, for rarely has there been such an outpouring of grief and sympathy (as well as bare anger) in the UK...which itself is no stranger to terrorism.

My profound sympathies to everyone over there.

Simon Morris, our UK Special Correspondent

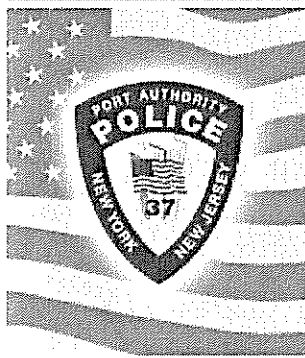
On Monday the 17 th, the Arlington (Virg.) police released a very short snippet of logging recorder tape, from the radio transmissions made shortly after the terrorist dove their plane into the Pentagon:

Motor 11: There is visible smoke coming from that area...high, visible smoke.

Dispatcher: Motor 11 direct.

Motor 14: Motor 14, it was an American Airlines plane, uh, headed eastbound over the Pike (Columbia Pike highway), possibly toward the Pentagon.

Dispatcher: 10-4. Cruiser 50 direct.



Up until three months ago, the World Trade Center complex was owned and operated by the Port Authority of New York/New Jersey--it was leased to a private company recently. The Port Authority's Police Department handles security for the an area within 25 miles of the Statue of Liberty including both the states New York and New Jersey. Their territory includes tunnels, airports (including JFK), bridges, buildings, docks, heliports, parks and shipping terminals. [radio system info] The Police Department had its comm center in the basement of World Trade Center tower #1. "911 Magazine" Editor Randall Larson reports that up to 40 Port Authority police officers are reported missing, including a desk officer at the comm center. It's unknown if any civilian dispatchers were on-duty at the time of the building collapse and are now missing.

On Tuesday, the FCC issued the notice: "In connection with the recent terrorist attacks, and in order to avoid potential public confusion or fear, the Federal Emergency Management Agency (FEMA), has requested that broadcast stations suspend their routine weekly and monthly tests of the **Emergency Alert System** (EAS). In light of FEMA's request, and after input from the FCC's EAS National Advisory Committee, we confirm that broadcast stations may suspend their routine weekly and monthly testing until October 2, 2001. Additionally, during this period, cable systems need not comply with the rules regarding the handling of the routine weekly and monthly EAS tests. The FCC will not take enforcement action against broadcast stations or cable systems for not complying with the rules relating to these routine EAS tests during this period. Should an extension be required, an additional FCC public notice will be issued. All other EAS rules must be complied with."

The World Trade Center Disaster Relief Communications Web site recruited Amateur radio operators to support the on-going rescue efforts at the site. You had to arrange your own travel to New York City and there were certain technical and licensing requirements, which you can learn from their Web site.

Motorola wasn't been idle in the aftermath of the terrorist attacks. They delivered four, huge mobile radio systems (an 800 MHz and 900 MHz system to NYC for rescue operations, an 800 MHz system to the Pennsylvania crash site, an 800 MHz system to NYC as backup for public safety communications). Motorola workers produced the latter system, which typically takes about three weeks to assemble, in just 30 hours for shipment. The company dispatched 86 truckloads and seven planeloads of radio equipment that includes: 9,500 portable radios, 16,000 batteries, 3,000 chargers, 120 base stations, 5,000 accessories, 700 Iridium satellite phones, 1,000 cellular phones (to insurance company policyholders), and some 10,000 iDEN wireless phones useable on the Nextel system and 88,000 batteries to local government agencies (Nextel is donating the airtime). And not really lastly, Motorola has donated \$1 million to relief agencies serving the survivors.

- | | |
|--|--|
| <ul style="list-style-type: none">• CNN stories, CNN chronology, diagram• New York Times diagram• Statements of APCO and NENA on the incident• Tennessee APCO Memorial page | <ul style="list-style-type: none">• New York City Fire Dept• Department of Defense news• Contact list from CNN• ABC News graphics, slideshows• DC command post article |
|--|--|

Comm Center Contact Addresses

NYPD-911
11 Metrotech
Brooklyn, NY 11201-3820
[police department comm center]

Arlington County
Public Safety Emergency Comm
Center
1400 N. Uhle St., 5 th Floor
Arlington, VA 22201-9998
[handling the Pentagon crash]

Somerset County 911/EMA
111 E. Union St., Ste. 15
Somerset, PA 15501
[handling the Penn. crash]

Fire Alarm Dispatchers' Benevolent
Association
204 East 23 St., 3rd Flr
New York, NY 10010
[fire dept. dispatchers union office]

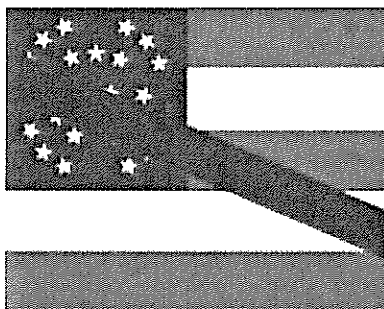
DC-Communications Center
310 McMillan Dr.
Washington, DC 20009
[security issues in DC]

State Police Somerset PA
142 Sagamore St.
Somerset, PA 15501
[Penn. crash]

Port Authority Police Department

#1 Police Plaza/JSTC
Path Plaza
Jersey City, New Jersey 07063
[comm center was inside the WTC #1]

PSTC - 911 Cares
P.O. Box 5508
Redwood City, CA 94063
[training provider is collecting cards, money for these agencies]



[this is the official NYPD flag]

Sept. 11th Information

- [Diagram](#) of World Trade Center complex
- [CNN interactive timeline](#) of WTC & Pentagon attacks
- [View Thoughts & Feelings](#) posted by Web visitors
- [Exclusive Look: Skyjacked Passengers Dial 911](#)
- [Memorial Poem](#) by Laura Lamore
- ["Ways To Help" list](#)
- [Message](#) from Our UK Special Correspondent
- [Interactive photos](#) of WTC scene
- [FDNY Dispatcher Frank Raffa's Story](#)
- [Amateur Radio Operators Utilized](#)
- [Motorola Provides Communications Gear](#)
- [PSTC Coordinates Relief Efforts](#) for Dispatcher/Comm Centers
- [Wireless Week](#) magazine article: Finding wireless phones at WTC
- [FCC's photos](#) of damage to telephone gear at WTC site
- [PSTC's "911 Cares" Donation Information](#)
- [CAD print-outs](#) from FDNY's EMS dispatchers during the WTC incident
- [Newspaper posts radio audio](#) from WTC attacks
- [NBC's "Dateline"](#) spotlights FDNY dispatcher--video clip
- [Collection of anthrax exposure procedures](#)
- [California dispatcher is profiled](#) on TV for handling call of skyjacked airliner.
- [HOT! Security Assessment for Comm Centers](#) [\[send us an agency e-mail address and we'll send you the link and password.\]](#)

[Home](#)

SAFETY ALERT

INTRODUCTION: *Readers of this bulletin should consult the law of their individual jurisdictions for codes, standards and legal requirements applicable to them. This bulletin merely suggests methods which the reader may find useful in implementing applicable codes, standards and legal requirements. This material is not intended nor should it be construed (1) to set forth procedures which are the general custom or practice in the propane industry; (2) to establish the legal standards of care owed by propane distributors to their customers; or (3) to prevent the reader from using different methods to implement applicable codes, standards or legal requirements. The National Propane Gas Association assumes no liability for reliance on the contents of this bulletin. It is offered as a guide only to assist expert and experienced teachers and managers in training in service personnel in their organizations.*

Caution

The brass valve in a propane cylinder will be damaged if it comes in contact with anhydrous ammonia. This deterioration will lead to cracking of the valve body or its components and can ultimately result in a violent, unexpected expulsion of the valve from the cylinder, causing personal injury or death.

Background and Recommended Action

It has come to the attention of the National Propane Gas Association that propane cylinders are being used in the manufacturing of **Methamphetamines**. This drug is commonly referred to as "crank". Manufacturers of this illegal substance are using propane cylinders for the storage and the use of anhydrous ammonia. These cylinders have been found in many states at cylinder exchange and refilling locations as well as in hotel rooms and mobile laboratories, where the manufacturing of this illegal substance takes place.

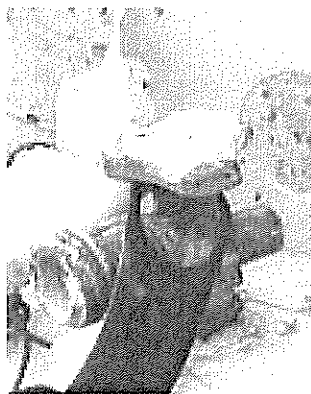
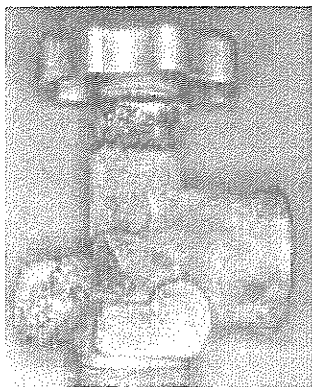
As observed in the illustrations, a blue-green stain on any brass portion of a service valve is evidence that it may have been in contact with anhydrous ammonia*. The pungent odor of ammonia on or near the cylinder is also an indication. If you suspect that a propane cylinder contains or has contained anhydrous ammonia, exercise extreme caution and restrict access to the area.

It can be dangerous to move the cylinder due to the unknown integrity of the cylinder's service valve. If you determine that it must be moved, keep in mind that hazards due to valve expulsion can be reduced by pointing the end of the container in which the valve is placed away from yourself and others and towards the most safe direction.

Immediately contact your Fire Department, Hazardous Materials Emergency Response Unit or the nearest office of the United States Department of Justice's Drug Enforcement Administration (DEA) for information on properly disposing of the cylinder. If these respondents are not sure what to do, for assistance call 1-800-728-2482, which is the contact number for PERS, an independent hazardous materials information resource.

*Note: Sherwood valves contain a green coated valve stem. Additionally, a green thread sealing compound is used on some valves. These valves should not be confused with those that have been exposed to anhydrous ammonia.

The following pictures are to serve as informational aids in identifying cylinders that have been exposed to anhydrous ammonia.

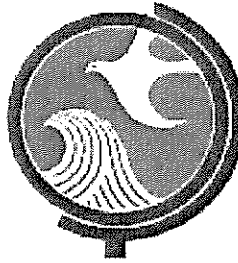


Prepared by
National Propane Gas Association
1600 Eisenhower Lane, Suite 100
Lisle, Illinois 60532
Telephone 630-515-0600
Printed in U.S.A.

The purpose of this document is to set forth general safety practices for the installation, operation and/or maintenance of LP-gas equipment. It is not intended to be an exhaustive treatment of the subject, and should not be interpreted as precluding other procedures which would enhance safe LP-gas operations. Issuance of this document is not intended to nor should it be construed as an undertaking to perform services on behalf of any party either for their protection or for the protection of third parties. The National Propane Gas association assumes no liability for reliance on the contents of this document.

Radiation Measurement Units - International (SI) System

<p>The curie (Ci) is replaced by the becquerel (Bq)*</p> <p>1 kilocurie (kCi) = 37 terabecquerel (TBq)</p> <p>1 curie (Ci) = 37 gigabecquerel (GBq)</p> <p>1 millicurie (mCi) = 37 megabecquerel (MBq)</p> <p>1 microcurie (uCi) = 37 kilobecquerel (kBq)</p> <p>1 nanocurie (nCi) = 37 becquerel (Bq)</p> <p>1 picocurie (pCi) = 37 millibecquerel (mBq)</p>	<p>Becquerel (Bq)* replaces the curie (Ci)</p> <p>1 tera becquerel (TBq) - 27 curie (Ci)</p> <p>1 gigabecquerel (GBq)- 27 millicurie (mCi)</p> <p>1 megabecquerel (MBq) - 27 microcurie (uCi)</p> <p>1 kilobecquerel (kBq) - 27 nanocurie (nCi)</p> <p>1 becquerel (Bq) - 27 picocurie (pCi)</p> <p>* 1 Bq = 1s⁻¹</p>
<p>The rad (rad) is replaced by the gray (Gy)</p> <p>1 kilorad (krad) = 10 gray (Gy)</p> <p>1 rad (rad) = 10 milligray (mGy)</p> <p>1 millirad (mrad) = 10 microgray (uGy)</p> <p>1 microrad (urad) = 10 nanogray (nGy)</p>	<p>The gray (Gy) replaces the rad (rad)</p> <p>1 gray (Gy) = 100 rad (rad)</p> <p>1 milligray (mGy) = 100 millirad (mrad)</p> <p>1 microgray (uGy) = 100 microrad (urad)</p> <p>1 nanogray (nGy) = 100 nanorad (nrad)</p>
<p>The rem (rem) is replaced by the sievert (Sv)</p> <p>1 kilorem (krem) = 10 sievert (Sv)</p> <p>1 rem (rem) = 10 millisievert (mSv)</p> <p>1 millirem (mrem) = 10 microsievert (uSv)</p> <p>1 microrem (urem) = 10 nanosievert (nSv)</p>	<p>The sievert (Sv) replaces the rem (rem)</p> <p>1 sievert (Sv) = 100 rem (rem)</p> <p>1 millisievert (mSv) = 100 millirem (mrem)</p> <p>1 microsievert (uSv) = 100 microrem (urem)</p> <p>1 nanosievert (nSv) = 100 nanorem (nrem)</p>



DRAFT

NEW JERSEY RADIOLOGICAL RESPONSE PROTOCOL

January 2008
SECURITY WARNING

All individuals handling this information are required to protect it from unauthorized disclosure. This information should be disseminated on a need-to-know basis. It is not for public use, but is intended for use by local, state, and federal government agencies as a reference for security personnel in preparing for and responding to domestic nuclear/radiological terrorism.

Restricted for Interagency Use Only.

RADIOLOGICAL RESPONSE QUICK GUIDE

UNIDENTIFIED/UNVERIFIED SOURCE:

- A. Notify the New Jersey Department of Environmental Protection (NJDEP) Hotline at 1-877-927-6337 (1-877-WARNDEP)
- B. NJDEP will ask for the following information:
 - 1. Call back information;
 - 2. Description of the incident;
 - 3. Location of the source;
 - 4. Type of emission (pager alert or other detection);
 - 5. Radiation Detector readings;
 - 6. Manifest/Placard information;
 - 7. Impact upon people (injuries, contamination);
 - 8. Presence of fire, physical hazards or hazardous material; and
 - 9. Responses to Radioactive Material Incident Report Form (Appendix 5).
- C. NJDEP will immediately notify NJSP Regional Operations Intelligence Center (ROIC)
- D. Based on the information provided, the NJDEP will make an assessment of whether the radiation source is legitimate (i.e., medical isotope, naturally occurring radioactive materials (NORM), etc.) and may initiate a response from the designated HAZMAT/CBRNE team.

IF YOU ENCOUNTER A READING GREATER THAN 2mR/hour:

- A. Separate the occupants from the vehicle or package
 - Re-survey
 - Question
 - B. Establish a hot zone boundary out to a reading of less than 2 mR/hour
 - C. Notify NJDEP Hotline at 1-877-927-6337 (1-877-WARNDEP)

NJDEP will immediately notify NJSP Regional Operations Intelligence Center (ROIC) and the designated HAZMAT/CBRNE team.
 - D. Begin recording the dose reading every 30 minutes
- § Refer to the protocol for additional information and reporting chain

RADIOLOGICAL RESPONSE PROTOCOL

LEGAL PRACTICE

This Generic Statewide Protocol provides a template for the use of Personal Radiation Detector (PRD) and Radiological Isotopic Identification Device (RIID) equipment to detect, identify and classify radioactive substances and to ascertain their legitimacy.

This document has been established by the New Jersey State Police (NJSP), New Jersey Department of Environmental Protection (NJDEP), the New Jersey Office of Homeland Security and Preparedness (OHSP) and the New Jersey Office of the Attorney General (NJOAG). This protocol has been developed in tandem with an equipment, hazard/safety and response training program and is intended to be the state's radiological response protocol. It requires a personal radiological detector (PRD), the availability of survey equipment, an isotope identifier and real-time dosimetry capability.

It is recommended that State and Local responder protocols be in accordance with existing Standard Operating Procedures (SOP) for hazardous materials, suspicious device/packages, and unknown hazards. All responses to Nuclear/Radiological incidents should be treated as suspect until proven otherwise.

This tiered identification response includes three levels: **Tier III** involves the initial detection of a radiation source with a PRD. **Tier II** involves response from the designated response entity with isotope identification capability. **Tier I:** Generally federal or state assets that have the ability to perform advanced isotope identification and hazard analysis with reach back capability to the Domestic Nuclear Detection Office (DNDO) Joint Analysis Center (JAC).

If it is determined that criminal activity is suspected or involved, the New Jersey State Police (NJSP) will, as warranted, contact the Department of Energy and / or the Federal Bureau of Investigation (FBI). If it is determined that no criminal activity is involved, NJDEP will provide further technical response and supervise the safe disposition of the discovered source, if appropriate.

PRD's are only one tool in the law enforcement officer's toolbox. The PRD must be used in conjunction with the law enforcement officers training, departmental SOP's, Attorney General's and Prosecutor's guidance, and other training. In some circumstances, the PRD reading alone may constitute probable cause or reasonable suspicion, while in other circumstances, the PRD reading will not provide sufficient suspicion to detain an individual.

TABLE OF CONTENTS

Section		page
1.0	PURPOSE	5
2.0	IMPLEMENTATION REQUIREMENTS	5
3.0	APPLICATIONS	5
4.0	DEFINITIONS.....	6
5.0	EQUIPMENT VERIFICATION AND PREPARATION	6
6.0	TIER III RESPONSE PROCEDURES (INITIAL DETECTION LOCATION) ..	7
7.0	TIER II RESPONSE PROCEDURES	9
8.0	TIER I RESPONSE PROCEDURES	11
9.0	TELEPHONE / FAX CONTACT INFORMATION.....	12
10.0	INCIDENT DOCUMENTATION	12
11.0	APPENDIX 1 – RADIOLOGICAL HEALTH AND EXPOSURE GUIDELINES.....	13
12.0	APPENDIX 2, - RESPONSE FLOW CHART- NO VEHICLE.....	19
	APPENDIX 2A - RESPONSE FLOW CHART- PASSENGER VEHICLE.....	20
	APPENDIX 2B - RESPONSE FLOW CHART- NON-PASSENGER VEHICLE..	21
13.0	APPENDIX 3 – RADIOLOGICAL EXPOSURE RECORD.....	22
14.0	APPENDIX 4 – LEGITIMATE RADIATION SOURCES AND MAJOR ISOTOPES OF CONCERN	23
15.0	APPENDIX 5 – RADIOACTIVE MATERIAL INCIDENT REPORT FORM ...	25
16.0	APPENDIX 6 – RADIATION ACCIDENT ACTION PLAN	26
17.0	APPENDIX 7 – CALIBRATION, TRAINING, RETURN, REPAIR, AND REPLACEMENT.	27
18.0	APPENDIX 8 – GLOSSARY.....	28
19.0	APPENDIX 9 – RADIOLOGICAL SHIPPING LABELS and PACKAGE LIMITS.....	34
20.0	APPENDIX 10 -SHIPPING PAPER INFORMATION.....	36

RADIOLOGICAL RESPONSE PROTOCOL

1.0 PURPOSE

This Protocol provides a generic template for the use of radiation detection and isotope identification equipment to classify radioactive substances and to ascertain their legitimacy. There are many legitimate sources of radiation including naturally occurring radioactive material (NORM) and legitimate radioactive materials that may be encountered. The activation of a PRD alarm does not automatically imply a hazard or a violation. Unidentified radioactive materials or those deemed not in compliance with all applicable laws will be processed in accordance with this Protocol.

2.0 IMPLEMENTATION REQUIREMENTS

- 2.1 This Protocol is designed to work in tandem with an equipment, hazard/safety and response training program.
- 2.2 It is incumbent on the user of this Protocol to establish safety zones in conformance with equipment detection capabilities and applicable health and safety requirements.
- 2.3 The exposure limits provided in this Protocol serve as guidance and should be used only after confirming their applicability to a given circumstance.
- 2.4 Implementing this Protocol will require a PRD; the availability of survey equipment, an isotope identifier; and real-time dosimetry capability.
- 2.5 It is recommended that State and Local responders' actions be conducted in accordance with existing SOPs for hazardous materials, suspicious device/packages, and unknown hazards. All responses to Nuclear / Radiological incidents should be treated as suspect until proven otherwise.

3.0 APPLICATIONS

- 3.1 This generic template provides the basic elements necessary to establish radiological detection for State and Local operational vectors such as: roadways, maritime, rail, and air.
- 3.2 Special events
- 3.3 State and Local venues

4.0 DEFINITIONS

- 4.1 **Tier III** will designate the initial point of radiation detection and includes the first contact with a conveyance, individual, or shipment.
- 4.2 **Tier II** response is conducted, when possible, in a secure area where the source is identified and analyzed utilizing isotope identification detection equipment and/or other search techniques. Additional terms of reference related to nuclear/ radiological issues are available in Appendix 8 Glossary.
- 4.3 **Tier I** response involves federal or state assets that have the ability to perform advanced isotope identification and hazard analysis with reach back capability to the Domestic Nuclear Detection Office (DNDO) Joint Analysis Center (JAC).

5.0 EQUIPMENT VERIFICATION AND PREPARATION

- 5.1 Prior to use, verify that the detection equipment is within calibration and functioning properly using manufacturers' procedures
- 5.2 If the unit is not calibrated or is not operating properly, do not use the equipment (see Appendix 7 for replacement or repair).
- 5.3 Review Radiological Response Quick Guide (at beginning of document) and first responder turn-back values (**see below**).

First Responder Turn-Back Values

- Do not remain in areas greater than 100 mR/hr any longer than required for activities.
- Do not proceed into areas with dose rates greater than 1 R/hr (1,000 mR/hr) unless directed to do so by the Incident Commander.
- Do not enter areas exceeding 10 R/hr (10,000 mR/hr).
- Radiological Healthy & Safety Guidelines (found in Appendix 1).

6.0 TIER III PROCEDURES

- 6.1 When the detector alarms, escort the person or vehicle to a safe location nearby the area in which the alarm occurred for further investigation.
- 6.2 Determine the location and source of the radiation using one of the following flow charts:

Appendix 2 Response flow chart no vehicle

Appendix 2A Response flow chart passenger vehicle

Appendix 2B Response flow chart non-passenger vehicle

- 6.3 Once the radiation location and source have been determined contact the supervisor and advise that gamma radiation was detected. If the appropriate flow chart leads to a request for examination with an isotope identifier, advise the supervisor that a Tier II Response will be needed.
- 6.4 Supervisor will contact NJDEP Hotline at 1-877-927-6337 (1-877-WARNDEP). NJDEP will notify the designated HAZMAT/CBRNE response entity for inspection. (See section 7, Tier Response, of this protocol.)

- **If possible, establish a single subject focus**

A. Separate the driver from the vehicle or the person from their belongings.

- **Identify the Safety Zone**

A. Monitor the PRD to determine a safe distance from the source. A safety zone is a radiation field of 2 millirem/hour (2 mrem/hr) or less, if utilizing the Ultra-Radiac, Rad-Eye, or similar type PRD device. If the Radiological Pager S is used, back away from the source until the Radiological Pager S reads an "8" (equivalent to 2 millirem/hr (2 mrem/hr) a documented safe distance. Refer to Appendix 1 for additional health and safety guidelines.

B. If the determined safe distance is ten feet or less from the source - an approximate three-minute investigation may be conducted.

C. If the determined safe distance is beyond ten feet from the source - contact NJDEP Hotline at 1-877-927-6337 (1-877-WARNDEP). NJDEP will notify the designated HAZMAT/CBRNE response entity for inspection.

- **Radiation Source Identification**

- A. If the source identified is consistent with the list of Legitimate Radiation Sources (Appendix 4), and appears to be legitimate with no inherent danger, document the incident (Radioactive Material Incident Report Form Appendix 5). End the Source Identification effort.

NOTE:

Question the individual (recent medical treatments, professions, etc.) to identify the possible cause of the alarm; however,

Always be cognizant of your safety - refer to Appendix 1
Emergency worker dose limits and time, distance and shielding method.

- B. Conveyance - If the source is on the conveyance, conduct a complete radiation survey of the conveyance to locate and determine the type of radiation. If the reading is consistent with the Legitimate Radiation Sources (Appendix 4), and the level and distribution of the radioactivity correlates with the materials described in the manifest for the conveyance, document the incident (Radioactive Material Incident Report Form Appendix 5). End the Source Identification effort.
- C. If the source is not consistent with the list of Legitimate Radiation Sources (Appendix 4), or the level and distribution of the radioactivity does not correlate with the materials described in the manifest for the conveyance, document (Radioactive Material Incident Report Form Appendix 5) and contact NJDEP Hotline at 1-877-927-6337 (1-877-WARNDEP). NJDEP will notify the designated HAZMAT/CBRNE response entity for inspection.

7.0 TIER II RESPONSE

7.1. Radiation Source Identification

- A. If the determined safe distance is ten feet or less from the source - an approximate five-minute physical examination may be conducted and Isotope Identification Equipment may be used.
- B. If the determined safe distance is beyond ten feet from the source - use the Isotope Identification Equipment at this distance.

7.2 Specific Source Identification

- A. If the existence of the suspected source is not confirmed by the Isotope Identification or survey equipment, and a cause of the alarm is not found and no inherent danger is discovered, document the incident on the Radioactive Material Incident Report Form (Appendix 5). End the Source Identification effort.
- B. If the source identified is not consistent with the list of Legitimate Radiation Sources (Appendix 4), no other isotopes are identified, and no apparent danger or threat is determined, document the incident (Radioactive Material Incident Report Form Appendix 5). End the Source Identification effort.
 - 1. Occupant(s) / Traveler(s) - If the source is an occupant(s) or pedestrian(s), isolate the traveler(s) and question them with regards to recent medical treatments, professions, etc., to identify the possible cause of the alarm. If the individual's answer correlates with the reading from the Isotope Identifier and the Legitimate Radiation Sources (Appendix 4), document the incident on the Radioactive Material Incident Report Form (Appendix 5). End the Source Identification effort.
 - 2. Conveyance - If the source is on the conveyance, conduct a complete radiation survey of the conveyance to locate and determine the type of radiation. If the Isotope Identification is consistent with the Legitimate Radiation Sources (Appendix 4), and the level and distribution of the radioactivity correlates with the materials described in the manifest for the conveyance, document the incident (Radioactive Material Incident Report Form Appendix 5). End the Source Identification effort.

- C. If the source identified is not consistent with the list of Legitimate Radiation Sources (Appendix 4), or the level and distribution of the radioactivity does not correlate with the materials described in the manifest for the conveyance, document (Radioactive Material Incident Report Form Appendix 5) and contact NJDEP Hotline at 1-877-927-6337 (1-877-WARNDEP) and request Tier I Response.
1. Occupant(s) / Traveler(s) - If the Isotope Identifier reading is not consistent with the Legitimate Radiation Sources (Appendix 4), or the readings do not match the verbal account given by the individual in question, document the incident on the Radioactive Material Incident Report Form (Appendix 5).
 2. Conveyance - If the Isotope Identification is not consistent with Legitimate Radiation Sources (Appendix 4) or the source cannot be identified, document the incident on the Radioactive Material Incident Report Form (Appendix 5).
- D. If the source is unidentified by the Isotope Identification Equipment, document the incident on the Radioactive Material Incident Report Form (Appendix 5) and contact the NJDEP Hotline at 1-877-927-6337 (1-877-WARNDEP) to request a Tier I Response.
1. Reach back – When a spectrum is taken, for the purpose of Isotope identification through the reach back capabilities, the following steps should be taken;
 - a. A 3 to 5 minute spectrum of the unknown isotope will be taken.
 - b. A 3 to 5 minute spectrum of a known isotope will be taken.
 - c. A background spectrum will be taken.
 - d. All three files will be labeled and attached to the message along with a contact name and number and the distance from the source the spectrum was taken.
 - e. A phone call should be placed to alert reach back of the incoming information.
- E. If neutrons are detected contact the NJDEP Hotline at 1-877-927-6337 (1-877-WARNDEP) to request a Tier I Response.

8.0 TIER I RESPONSE

In the event that a radiation source cannot be explained or the official discovering a questionable radiation situation needs further guidance, Tier I technical assistance will be provided through the NJDEP Hotline. The 24-hour number for NJDEP is 1-877-927-6337, (1-877-WARNDEP).

- A. Tier I Involves Federal or state assets that have the ability to perform advanced isotope identification and hazard analysis with reach back capability to the Domestic Nuclear Detection Office (DNDO) Joint Analysis Center (JAC).
- B. If at any point during the response, suspicious or criminal behavior is suspected or evident, or if no resolution of source identification is found, or if some level of suspicion exists and/or the equipment indicates a positive reading for suspected radiological material, request NJSP to call the FBI.
- C. If the Tier I Representative determines the radiation source legitimate, the information will be relayed back to the agency initiating the response.
- D. If the Tier I Representative determines the radiation source warrants further action or is an immediate threat, Tier I representatives will determine how to secure and isolate the radiation source.
- E. The Tier I Representative will request alarm adjudication from the DNDO JAC.
 - 1. Reach back – When a spectrum is taken, for the purpose of Isotope identification through the reach back capabilities, the following steps should be taken;
 - a. A 3 to 5 minute spectrum of the unknown isotope will be taken.
 - b. A 3 to 5 minute spectrum of a known isotope will be taken.
 - c. A background spectrum will be taken.
 - d. All three files will be labeled and attached to the message along with a contact name and number and the distance from the source the spectrum was taken.
 - e. A phone call should be placed to alert reach back of the incoming information.
- F. The Tier I representative will arrange to electronically send the isotope spectra to the DNDO JAC for analysis.
- G. Once the Tier I representative is on-scene, they will work with the initiating organization to assess the situation and coordinate the necessary response.
- H. The Tier I Representative will fully document the incident and place the information in a central database so all radiological inquiries/incidents are recorded.

9.0 TELEPHONE / FAX CONTACT INFORMATION

Agency	Telephone Number
NJDEP Hot Line	1-(877) 927-6337
NJSP ROIC	(609) 963-6900
NJSP ROIC fax	(609) 530-3650
NJSP Radiological Officer fax	(609) 530-4411
OHSP CT Watch	1-(866) 4SAFENJ
NJDEP BERAD fax	(609) 984-5595 or (609) 633-2210
NJDEP BERAD voice	(609) 984-5462
NJSP Calibration Laboratory	(609) 924-5650
DNDO	1-(877) 363-6522

10.0 INCIDENT DOCUMENTATION

- A. Any PRD alarm requires the officer to immediately record the incident on the Radioactive Materials Incident Form (Appendix 5).
- B. The Radioactive Materials Incident Form shall be faxed as soon as possible to NJSP ROIC, NJDEP Bureau of Environmental Radiation (BERAD).
- C. All exposures to actual radiation shall be immediately logged on the Radiological Exposure Record (Appendix 3)
- D. All readings will be taken and recorded every thirty minutes.

RADIOLOGICAL HEALTH AND SAFETY EXPOSURE GUIDELINES**RADIOLOGICAL EXPOSURE GUIDANCE FOR EMERGENCY OPERATIONS**

The primary concern after an alarm is triggered is to protect the public from unnecessary radiation exposure so that the dose received does not exceed the Nuclear Regulatory Commission (NRC) annual limit of 100 millirem, (100 mr). A good rule of thumb for response personnel would be to set an exclusion zone so that the level measured by a radiation detection meter does not exceed two millirem per hour. Under normal operating conditions, emergency response personnel who are monitored for exposure to radiation shall not exceed 5000 millirem, (5000 mr) or 5 rem per year, (5 r). Officers assigned a PRD must complete a Radiological Exposure Record. This form can be found in Appendix 3.

Emergency Worker Dose Limits

Radiation dose limit is 1.25 R (1250 millirem) per incident. If more than one incident per year, use occupational dose limits.

This limit may incrementally be increased to 5 R (5,000 millirem) with concurrence from the Department of Health and Senior Services, (DHSS) and to a maximum of 25 R (25,000 millirem) with authorization by the Governor based upon DHSS recommendation.

Doses > 25 R (25,000 millirem) may be authorized for lifesaving activities or protection of large populations on a voluntary basis. Volunteers must be fully aware of the risks involved.

Radiation dose limit for extremities is 50 R.

Emergency Worker TURN-BACK VALUES

Do not remain in areas greater than 100 mr/hour (gamma or closed window) any longer than required for survey activities. Do not proceed into areas with dose rates greater than 1 R/hour (1000 millirem/hr) (gamma or closed window) unless directed to do so by the Incident Commander or your supervisor.

Do not enter areas exceeding 10 R/hour (10,000 mr/hr) (gamma or closed window).

RADIATION PROTECTION

Sources of radiation are natural background and manufactured.

NATURAL BACKGROUND SOURCES

Natural Background Sources include:

- Cosmic Radiation
- Terrestrial Radiation
- Internal Radiation

Cosmic Radiation

The earth, and all living things on it, is constantly bombarded by radiation from space, similar to a steady drizzle of rain. Charged particles from the sun and stars interact with the earth's atmosphere and magnetic field to produce a shower of radiation, typically beta and gamma radiation. The dose from cosmic radiation varies in time and in different parts of the world due to differences in elevation and the effects of the earth's magnetic field.

Terrestrial Radiation

Radioactive material is found throughout nature. It occurs naturally in the soil, water, and vegetation. The major isotopes of concern for terrestrial radiation are uranium and the decay products of uranium and thorium, such as radium, and radon. Low levels of potassium-40, uranium, thorium, and their decay products are found everywhere. Some of these materials are ingested with food and water, while others, such as radon, are inhaled. The dose from terrestrial sources varies in different parts of the world. Locations with higher concentrations of uranium and thorium in their soil have higher dose levels.

Internal Radiation

In addition to the cosmic and terrestrial sources, all people also have radioactive potassium-40, carbon-14, lead-210, and other isotopes inside their bodies from birth. The variation in dose from one person to another is not as great as the variation in dose from cosmic and terrestrial sources.

APPENDIX 1 (cont)

MAN-MADE RADIATION SOURCES

Two distinct groups are exposed to man-made radiation sources:

- Members of the public
- Occupationally exposed individuals

Members of the Public

Man-made radiation sources that result in an exposure to members of the public:

- Tobacco
- Televisions
- Medical X-rays
- Smoke detectors
- Lantern mantles
- Nuclear medicine
- Building materials

By far, the most significant source of man-made radiation exposure to the public is from medical procedures, such as diagnostic X-rays, nuclear medicine, and radiation therapy. Some of the medical isotopes are Iodine -125, Iodine-131, Technicium-99m, Cobalt-60, Iridium-192, Cesium-137, Fluorine-18, and Palladium -103.

In addition, members of the public are exposed to radiation from consumer products, such as tobacco (polonium-210), building materials, combustible fuels, (gas, coals, etc.), ophthalmic glass, televisions, luminous watches and dials (tritium), airport X-ray systems, smoke detectors (americium), road construction materials, electron tubes, fluorescent lamp starters, lantern mantles (thorium), etc.

The final sources of exposure to the public would be shipment of radioactive materials and residual fallout from nuclear weapons testing and accidents, such as Chernobyl.

Occupationally Exposed Individuals

Occupationally exposed individuals work in the following environments:

- Industrial Radiography
- Radiology Departments (Medical)
- Radiation Oncology Departments
- Nuclear Medicine Departments
- National (government) and University Research Laboratories

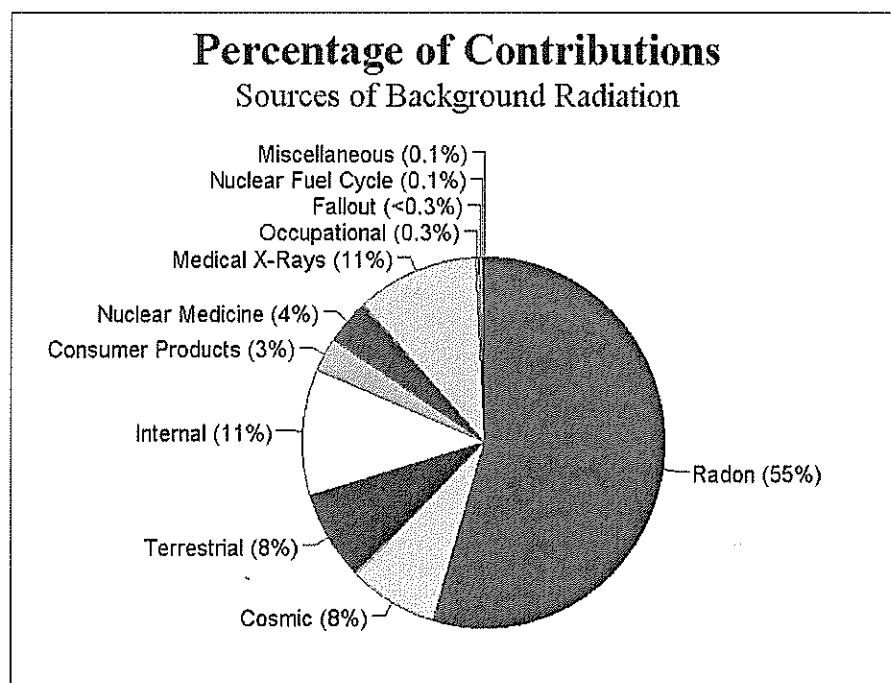
Individuals are exposed according to their occupations and to the sources with which they work. Their exposure to radiation is carefully monitored with the use of tiny instruments called dosimeters. Some typical isotopes are Cobalt-60, Cesium-137, Americium-241.

APPENDIX 1 (cont)

Ionizing Radiation Exposure to the Public

The average radiation dose to a person in the United States is approximately 360 millirem/year; as shown in the figure below, natural sources of radiation account for about 82% of all public exposure, while man-made sources account for the remaining 18%.

The Federal Nuclear Regulatory Commission requires that its licensees limit maximum radiation exposure to individual members of the public to 100 millirem per year, and limit occupational radiation exposure to adults working with radioactive materials to 1250 millirem per calendar quarter. (NRC regulations and radiation exposure limits are contained in Title 10 of the Code of Federal Regulations under Part 20.)



APPENDIX 1 (cont)

Effects of Radiation

Radiation causes ionization within the molecules of living cells. These ionizations result in the removal of electrons from the atoms, forming ions or electrically charged atoms. The ions may go on to react with other atoms in the cell, causing damage. An example of this would be if water molecules near a cell's DNA absorb energy from radiation passing through the cell the ions formed might react with the DNA, causing it to break.

At low doses, such as what we receive every day from background radiation, the cells are believed to repair the damage rapidly. At higher doses (up to 100 rem), the cells might not be able to repair the damage, and the cells may either be changed permanently or die. Most cells that die are of little consequence, the body can just replace them. Cells changed permanently may go on to produce abnormal cells when they divide. Under the right circumstances, these cells may lead to cancer. This mechanism is believed to be the origin of increased risk of cancer, because of radiation exposure.

At even higher doses, the cells cannot be replaced fast enough and tissues fail to function. An example of this would be "radiation sickness." This is a condition that results after high acute doses to the whole body (>200 rem), the body's immune system is damaged and might not be able to fight off infection or disease.

Several hours after such an exposure, nausea and vomiting occur, followed by diarrhea and general weakness. With higher whole body doses, the effects become progressively damaging and immediate. Above 450 rem, if no medical attention is given, about 50% of the people so exposed are expected to die within 30 days.

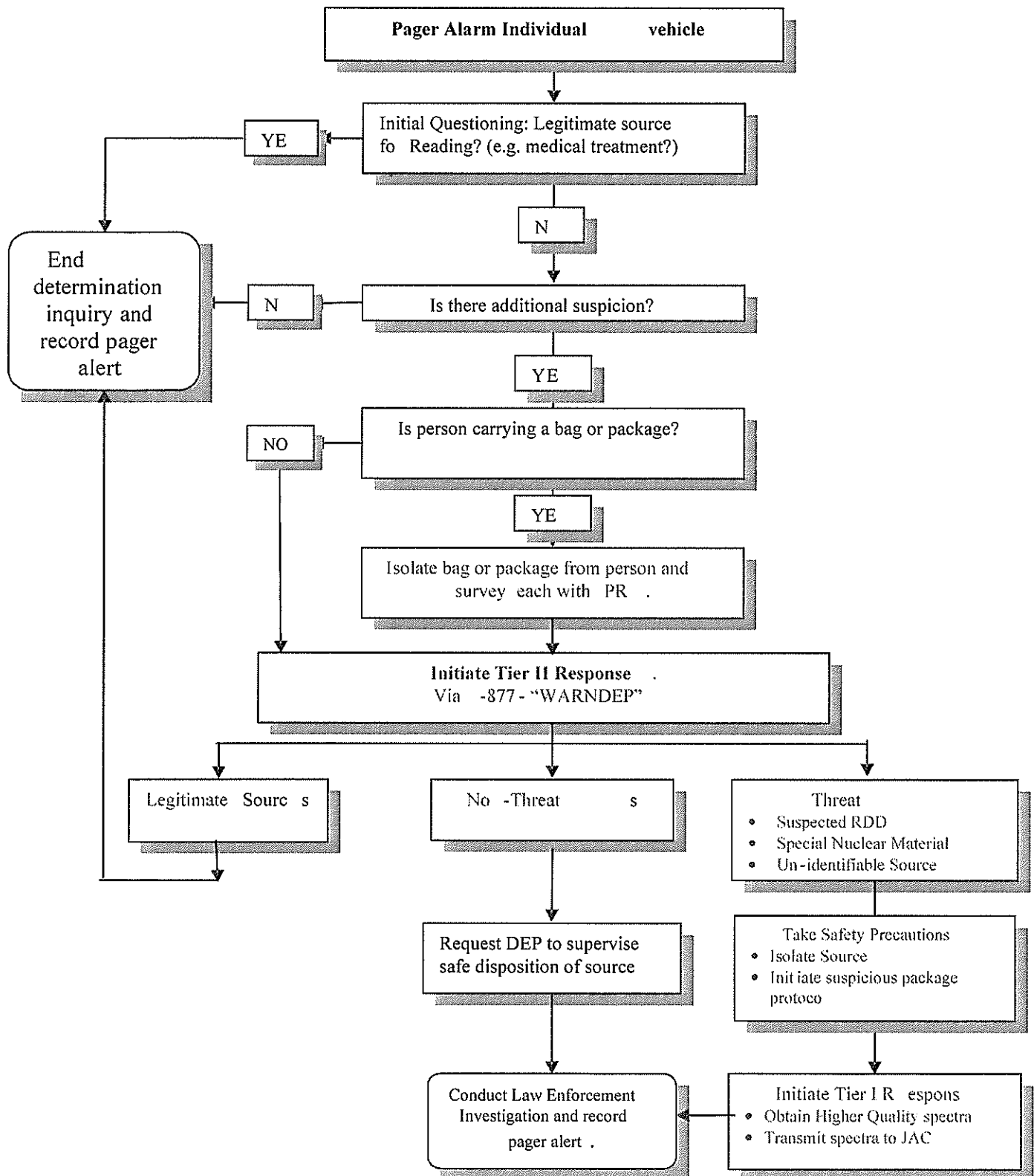
Although exposure to ionizing radiation carries a risk, completely avoiding exposure is impossible. Radiation has always been present in the environment and in our bodies. However, we can, avoid undue exposure. There are a number of simple, sensitive instruments capable of detecting minute amounts of radiation from natural and man-made sources. Radiation is very easily detected.

APPENDIX 1 (cont)

The three principle protection methods are as follows:

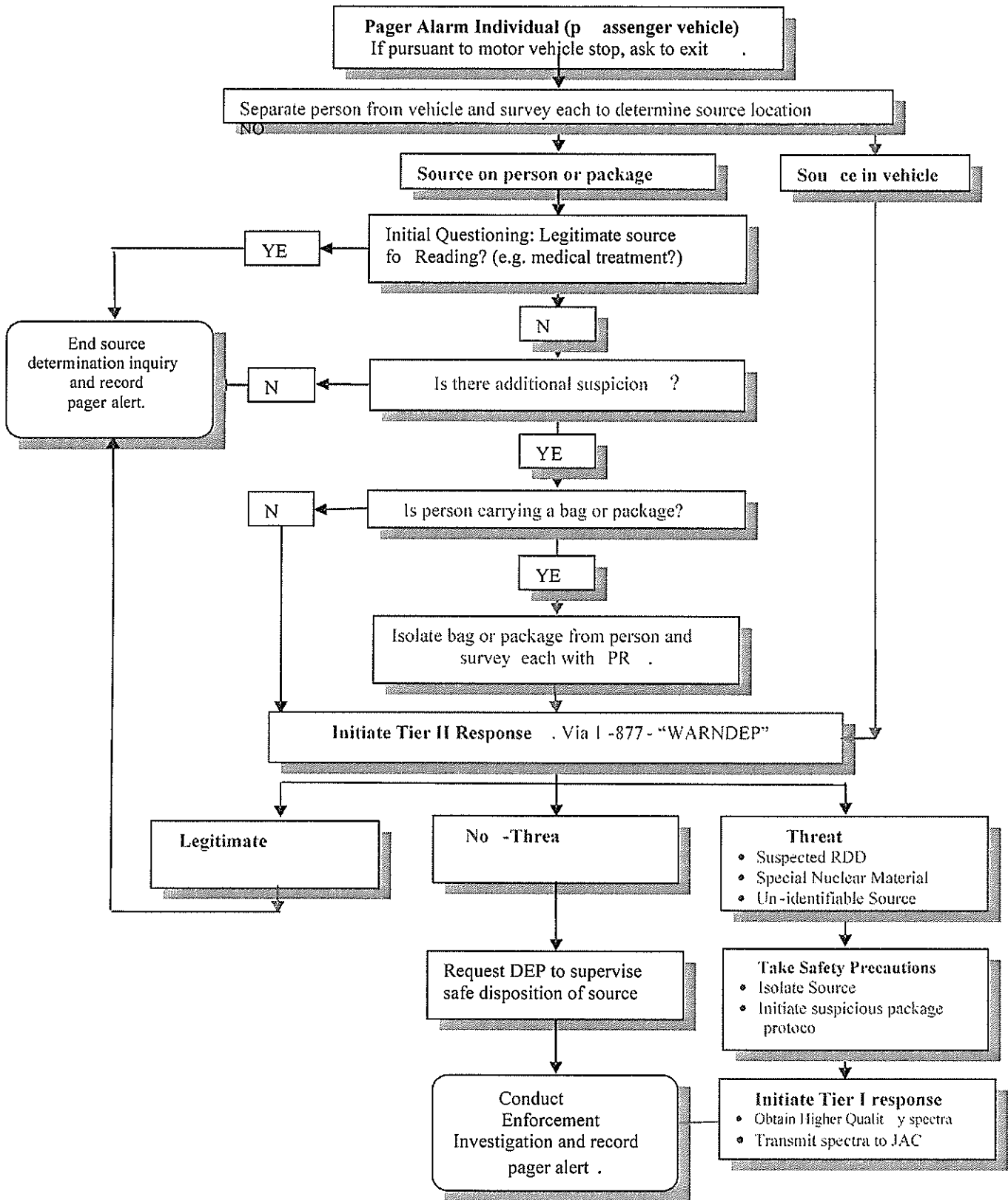
- Time:** Limiting or minimizing the exposure time will reduce the dose from a radiation source.
- Distance:** In the same way that the heat from a fire is less intense the further away you are, so the intensity of the radiation decreases the further you are from the source of radiation. The dose decreases dramatically as you increase your distance from the source.
- Shielding:** Barriers of lead, concrete, or water give good protection from penetrating radiation, such as gamma rays and neutrons. This is why certain radioactive materials are stored or handled under water or by remote control in rooms constructed of thick concrete or lined with lead. There are special plastic shields, which stop beta particles, and a few inches air will stop alpha particles. Inserting the proper shield between you and the radiation source will greatly reduce or eliminate the extra radiation dose.

FLOW CHART - NO VEHICLE



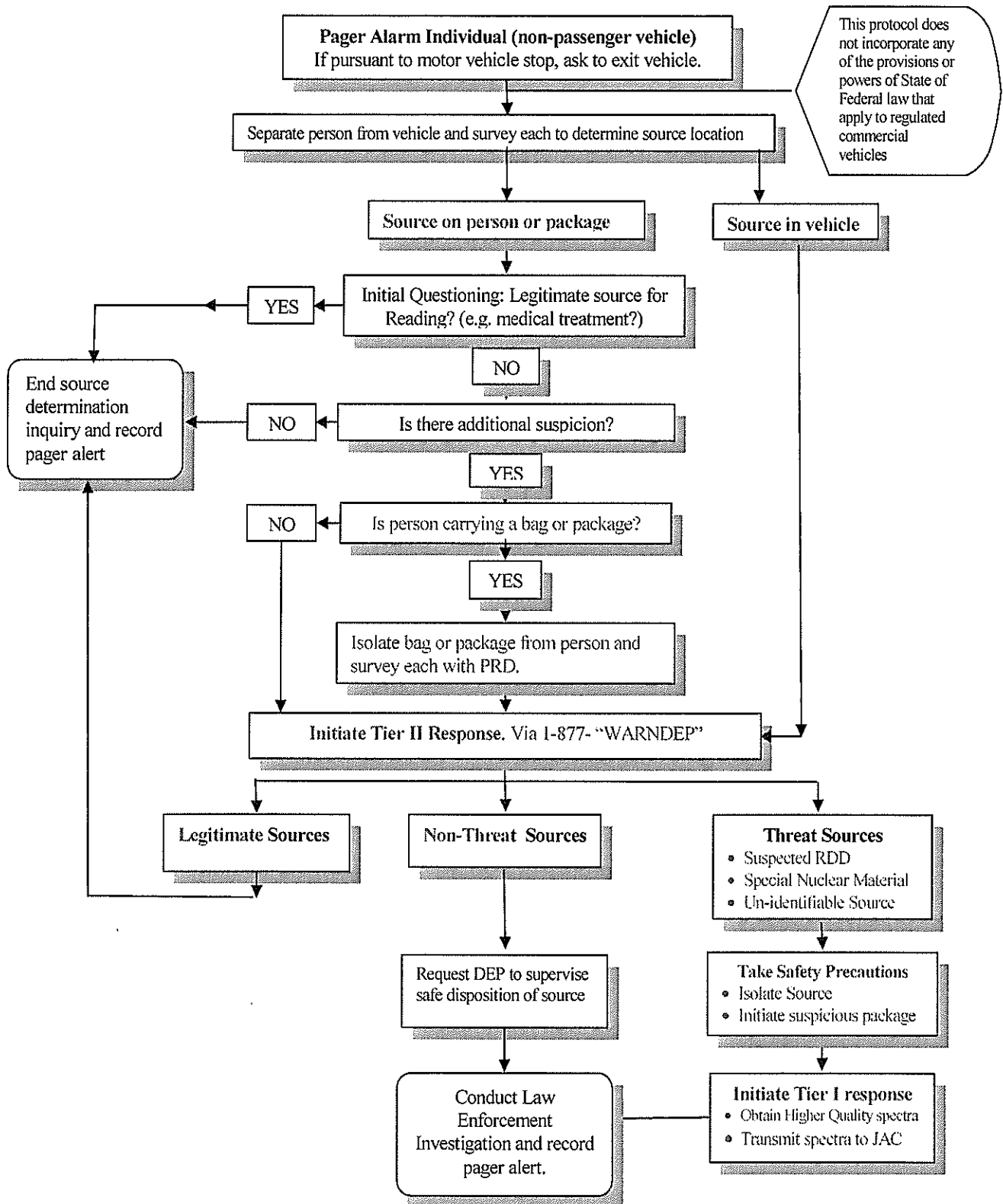
APPENDIX 2A

RESPONSE FLOW CHART PASSENGER VEHICLE



APPENDIX 2B

RESPONSE FLOW CHART NON-PASSENGER VEHICLE



APPENDIX 3 RADIOLOGICAL EXPOSURE RECORD

NAME _____ SS# _____

ADDRESS _____

CITY _____ STATE _____

TELEPHONE _____
(Home) (Work)

PRD Serial # _____ PRD Manufacturer/ Make _____

PAGER READINGS

	Time	Date	Approx. Distance From Source
_____ μ R or mR**	at _____	_____	_____
_____ μ R or mR**	at _____	_____	_____
_____ μ R or mR**	at _____	_____	_____
_____ μ R or mR**	at _____	_____	_____
_____ μ R or mR**	at _____	_____	_____
_____ μ R or mR**	at _____	_____	_____
_____ μ R or mR**	at _____	_____	_____
_____ μ R or mR**	at _____	_____	_____
_____ μ R or mR**	at _____	_____	_____

* NOTE: To be taken at maximum one-half hour intervals.

** NOTE: Circle μ R or mR as appropriate.

Page ____ of ____

**LEGITIMATE RADIATION SOURCES
AND
MAJOR ISOTOPES OF CONCERN
COMMON NATURAL AND COMMERCIAL SOURCES OF GAMMA RADIATION**

Medical Isotopes - These might be in a person's bloodstream or implanted as pellets. Someone who has received a nuclear medical treatment within the past couple of weeks might trigger your radiation alarm. Common Medical Isotopes are:

Isotope	Symbol	Half-Life	Isotope	Symbol	Half-Life	Isotope	Symbol	Half- Life
Flourine-18	F ¹⁸	109.7 mins	Iridium-192	Ir ¹⁹²	73.8 days	Thallium-201	Tl ²⁰¹	72.5 hrs
Gallium-67	Ga ⁶⁷	78.3 hrs.	Molybdenum-99	Mo ⁹⁹	66 hrs.	Technetium-99m	Tc ^{99m}	6.01 hrs
Germanium-68	Ge ⁶⁸	270.8 days	Palladium -103	Pd ¹⁰³	17 days	Xeon-133	Xe ¹³³	5.25 days
Indium-111	In ¹¹¹	67.2 hrs	Samarium-153	Sm ¹⁵³	46.3 hrs.	Yttrium-90 (Pure Beta)	Y ⁹⁰	64.1 hrs.
Iodine-123	I ¹²³	13.6 hrs	Strontium-82	Sr ⁸²	25.5 days	Zinc-65	Zn ⁶⁵	245 days
Iodine-125	I ¹²⁵	60.1 days.	Strontium-85	Sr ⁸⁵	64.8 days			
Iodine-131	I ¹³¹	8.01 days	Strontium-90 (Pure Beta)	Sr ⁹⁰	28.8 yrs			

ITEMS & PRODUCTS THAT MAY CONTAIN SUFFICIENT RADIOACTIVE MATERIALS TO PRODUCE A READING ON A PAGER OR PORTAL

Agricultural products e.g., fruits & leafy vegetables; tobacco, bananas (large quantities), because bananas contain Potassium-40; etc.

Antique Items including: Ceramic-glaze products in orange, red, or yellow; e.g. antique cups & plates, decorative floor tiles, jewelry, pottery, and Vaseline glass (emerald green glass used in some antique cups, plates, etc.)

Some Camera lenses and any high quality optical lens system

Radio-Luminescent Products: Watches, clocks & instrument gauges.

Dental Ceramics

Irradiated gemstones

Some Lantern mantles (natural Thorium)

Abrasive and Polishing powders

Propane tanker trucks (from radon decay products deposits on tanker's interior walls)

Smoke detectors (Am-241)

Thoriated aluminum (an alloy containing Th-232)

Thoriated tungsten arc-welding electrodes (Thoriated welding rods)

Geological samples including certain ores (Marble, Feldspar, Slate & granite, Concrete, Sandstone, Monazite sand, Fertilizers; etc.)

APPENDIX 4 (continue)

LEGITIMATE RADIATION SOURCES AND MAJOR ISOTOPES OF CONCERN

COMMON NATURALLY OCCURRING RADIOACTIVE ISOTOPES (NORM)

Potassium (K-40)	Thorium (Th-232)
Radium (Ra-226)	Uranium (U-238)

RADIOACTIVE SOURCES COMMONLY USED IN INDUSTRY (MAY BE OF CONCERN IF MISUSED)

Americium (Am-241)	Cobalt (Co-57)	Radium (Ra-226)
Barium (Ba-133)	Cobalt (Co-60)	Thorium (Th-232)
Cesium (Cs-137)	Iridium (Ir-192)	

ISOTOPES ASSOCIATED WITH NUCLEAR WEAPONS OR SPECIAL NUCLEAR MATERIAL

Plutonium	(Pu-239)
Enriched Uranium	(U-235)
Uranium	(U-233)
Neptunium	(Np-237)

COMMON COMMERCIAL NEUTRON SOURCES AND ISOTOPES

Example Neutron Sources: Soil Density Gauges & Well Logging Sources.

Californium 252	(Cf-252)
Americium/Beryllium	(Am/Be)
Polonium/Beryllium	(Po/Be)
Plutonium/Beryllium	(Pu/Be)
Radium/Beryllium	(Ra/Be)

**APPENDIX 5
RADIOACTIVE MATERIAL INCIDENT REPORT FORM**

Name of Officer	Date:	Time:
Incident Location:		
Equipment Used: (Circle all that apply) Pager Device Identifinder Survey Meter Portal Monitor Mobile		
Manufacturer	Serial Number	
Passenger or Pedestrian Information:		
Last Name _____, First Name _____ MI. _____		
Conveyance Type: Vehicle Type _____ Model _____ License # _____ Registration State _____		
1). Has the location of the source been identified? (Circle One) Yes or No		
2). Have the passengers been isolated from the vehicle? (Circle One) Yes or No		
Radioactive Source (Circle One): Occupant Vehicle Truck Package Other		
Description: _____		
3). Is the integrity of the container breached? (Circle One) Yes or No If yes, what form, Solid ____ Liquid ____ Gas ____ Unknown ____		
4). Has the radiation source been isolated in secondary inspection? Yes or No		
5). Radiation level: Gamma Alarm Reading at contact: _____ Units (circle one) : uR/hr mR/hr R/hr		
6). Has an isotope identification been performed? (Circle One) Yes or No Isotope(s) Identified: _____ Distance from Source _____		
7). Is the isotope identification consistent with a medical or industrial source that is listed in the innocent radiation checklist? (Circle One) Yes or No		
8). Is the vehicle/person authorized to transport radioactive material? Yes or No		
9). Does the radiation source detected match the declaration/ placarding /shipping manifest? Yes or No If "No" what is the discrepancy? _____		
10). Request technical assistance? Yes or No		
11). Made the following notifications: NJ DEP Hotline (877) 927-6337 Name: _____ NJSP ROIC (609) 963-6900 Name: _____		
12). Technical Representative Recommendations		
13). Additional Remarks:		
14). Total Personal Dose Exposure: (Circle one) uR, mR R		
(Signature)	Faxed to NJ DEP (609) 984-5595	Yes No
Date:	Faxed to NJSP ROIC (609) 530-3650	Yes No

Time:	Faxed to OHS&P (609) 341-5006	Yes	No
-------	----------------------------------	-----	----

RADIATION ACCIDENT ACTION PLAN

Accidents Involving Manifested or Placarded Sources

- Refer to the DOT Emergency Response Guidebook
- Contact the NJDEP Hotline at **877-927-6337** (877-WARNDEP)
- Remember that a legal shipment of a RAD III package could possibly read up to 10 millirem (mR) /hour at 1 meter away

Accidents Involving Man-Manifested Sources

Contact the NJDEP Hotline at **877-927-6337** (877-WARNDEP)

Follow the guidelines below:

- Establish security and safety perimeters by isolating the radioactive source and setting up a restricted area surrounding the source based on the pager reading of 8 or less than 2 mR/hr. A security perimeter can be established at some distance beyond the restricted area. Deny entry to all but qualified and essential personnel.
- Check for the presence of radiation and injury to involved individuals.
- **LIFE SAVING ACTIONS SHOULD NOT BE DELAYED DUE TO THE PRESENCE OF RADIOLOGICAL CONTAMINATION.**
- Notify EMS responders and alert the nearest hospital capable of handling casualties from a radiation incident.
- Keep uninjured and potentially contaminated individuals in a separate area until they can be monitored for radiological contamination.
- Pregnant women, or women who suspect that they may be pregnant, may not be used in the securing, isolation or examination of radioactive sources. This is especially important during the first trimester of the pregnancy.

Chain of Custody - The Incident Commander will ensure that:

- Pertinent documents, identification, manifest, and other appropriate information is collected.
- A proper chain of custody of evidence is maintained.
- The identity of personnel exposed to radiation is recorded. Provide this information to health officers.

DISPOSAL OF RADIOACTIVE MATERIAL

State and Federal authorities are responsible for the decontamination, clean-up, and the proper disposal of the radioactive materials. The NJDEP will supervise the removal.

CALIBRATION, TRAINING, RETURN, REPAIR, & REPLACEMENT**INSTRUMENT CALIBRATION**

Portable instruments used for detection and measurement radioactive materials should be calibrated annually. Annual calibration is necessary to determine if an instrument is capable of accurately detecting radiation within a given range against a known radioactive source. It is important to remember to check the calibration date of every instrument prior to use.

All calibrations will be performed by the New Jersey State Police Laboratory located in Princeton, New Jersey and is a part of the Radiological Emergency Response Planning and Technical Unit. The RERP&T Unit will maintain a schedule for annual calibration of all radiological instruments and will make that schedule available at the beginning of each calendar year. It is incumbent upon the organization issued the instrument to exchange them with Laboratory when scheduled. Contact the Laboratory at (609) 924-5650 during work hours two days prior to delivery.

TRAINING CYCLE

The effectiveness with which individuals respond in emergency or accident situations is dependent upon their past experience and training. A training program will be established by the State to prepare the responsible agencies for radiological emergency response operations. Provisions for periodic re-training (at least once annually) will be central to the training program. Training schedules will be publicized in order to develop and maintain responder confidence in the efficiency and completeness of the Protocol.

This training program will be required of those responders who could become exposed to any radiation hazard and, in the course of their duties, could be required to make decisions related to radiological health.

RETURN, REPAIR, & REPLACEMENT

Malfunctioning portable instruments used for detection and measurement radioactive materials should be returned to the New Jersey State Police Calibration Laboratory located in Princeton, New Jersey. Contact the Laboratory at (609) 924-5650 during working hours and advise them of the specific nature of the malfunction and arrange a date when the equipment may be returned for repair or exchange.

GLOSSARY

Agreement State

A state that has signed an agreement with the Nuclear Regulatory Commission under which the state regulates the use of by-product, source and small quantities of special nuclear material within that state.

Alpha particle

A positively charged particle ejected spontaneously from the nuclei of some radioactive elements. It has low penetrating power and a short range (a few centimeters in air). The most energetic alpha particle will generally fail to penetrate the dead layers of cells covering the skin and can be easily stopped by sheet of paper. Alpha particles represent much more of a health risk when emitted by radionuclides deposited inside the body.

Background radiation

Radiation from cosmic sources; naturally occurring radioactive materials, including radon (except as a decay product of source or special nuclear material) and global fallout. The typical average individual exposure from background radiation is 360 millirem per year.

Becquerel (Bq)

The unit of radioactive decay equal to 1 disintegration per second. The Becquerel is the basic unit of radioactivity used in the international system of radiation units, referred to as the "SI" units. 37 billion (3.7×10^{10}) Becquerels = 1 Curie (Ci).

Beta particle

A charged particle emitted from a nucleus during radioactive decay. Exposure to large amounts of beta radiation from external sources may cause skin burns (erythema). Beta emitters can also be harmful if they enter the body. Beta particles may be stopped by thin sheets of metal or plastic.

Byproduct

Byproduct material is (1) any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or using special nuclear material (as in a reactor); and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from ore. Byproduct material does not include accelerator produced material (e.g., Cobalt-57).

Contamination

Undesired radioactive material that is located on the surface of or inside structures, areas, objects or people.

APPENDIX 8 (cont.)

Curie (Ci)

The Curie is a unit of radioactivity used in the system of traditional units. The curie is equal to that quantity of radioactive materials in which the number of atoms decaying per second is equal to 37 billion (3.7×10^{10}).

Decay products (also called “Daughter products”)

Nuclides formed by the radioactive decay of parent radionuclides. For example, for Radium-226 nine successive different radioactive decay products are formed in what is called a “decay chain”. The chain ends with the formation of Lead-206, which is a stable nuclide.

Decontamination

The reduction or removal of contaminating radioactive material from a structure, area, object, or person.

Depleted uranium

Uranium having a percentage of uranium-235 smaller than the 0.7 percent found in natural uranium. It is commonly used as shielding in packages used to transport radioactive material.

Dose

A general term used to refer to the effect on a material which is exposed to radiation. It is used to refer either to the amount of energy absorbed by a material exposed to radiation (see Dose, absorbed below) or to the potential biological effect in tissue exposed to radiation (see Dose, equivalent below).

Dose, absorbed

The amount of energy deposited in any substance by ionizing radiation per unit mass of the substance. It is expressed numerically in Rads (traditional units) or Grays (SI units).

Dose, equivalent

The product of absorbed dose in tissue multiplied by a quality factor, and then sometimes multiplied by other necessary modifying factors, to account for the potential for a biological effect resulting from the absorbed dose. (See Quality Factor below.) It is expressed numerically in Rem (traditional units) or Sieverts (SI units).

Dosimeter

A small portable instrument (such as a film badge, thermo luminescent or pocket dosimeter) for measuring and recording an individual's total accumulated dose.

Dose rate

The radiation dose delivered per unit time.

APPENDIX 8 (cont.)

Element

One of the known chemical substances that cannot be broken down further without changing its chemical properties (e.g., hydrogen, nitrogen, gold, lead, and uranium).

Gamma radiation

High-energy, short wavelength, electromagnetic radiation emitted from the nucleus of an atom. Gamma rays are very penetrating and are best stopped or shielded by dense materials, such as lead or uranium. Gamma rays are similar to x-rays.

Gray (Gy)

The international system (SI) unit of radiation dose expressed in terms of absorbed energy per unit mass of tissue. The Gray is the unit of absorbed dose and has replaced the Rad. 1 Gray = 1 Joule/kg = 100 Rad.

Half-life

The time in which one half of the activity of a particular radioactive substance is lost due to radioactive decay. Measured half-lives vary from millionths of a second to billions of years. Also called physical or radiological half-life.

Half-life, biological

The time required for the body to eliminate, by biological processes, one half of the material originally taken in. The biological half-life can be longer or shorter than the radiological half-life.

Half-life, effective

The time required for a radionuclide contained in a biological system, such as a human or an animal, to reduce its activity by one-half as a combined result of radioactive decay and biological elimination.

HAZMAT

HAZMAT is an acronym for hazardous material. HAZMAT can be radiological, chemical, or biological.

Health physics

The science concerned with the recognition, evaluation, and control of health hazards to permit the safe use and application of ionizing radiation.

Isotope

One of two or more atoms with the same number of protons, but different numbers of neutrons in their nuclei. Thus, carbon-12, carbon-13, and carbon-14 are isotopes of the element carbon. Isotopes have very nearly the same chemical properties, but often have different physical properties.

APPENDIX 8 (cont.)

Isotope Identifier

Equipment that is used to identify the specific radionuclide(s) present in a person or shipment undergoing radiation source identification. The isotope identifier should also be capable of transferring the radionuclide information to offsite technical experts.

Kilo

A prefix that multiplies a basic unit by 1,000 or 10^3 .

Mega

A prefix that multiplies a basic unit by 1,000,000 or 10^6 .

Micro

A prefix that divides a basic unit into one million parts (10^{-6}).

Milli

A prefix that divides a basic unit by 1,000, (10^{-3})

Nano

A prefix that divides a basic unit by one billion (10^{-9}).

Natural uranium

Uranium as found in nature. It contains about 0.7 percent uranium-235, 99.3 percent uranium-238, and a trace of uranium-234.

Neutron

An unchanged elementary particle with a mass slightly greater than that of the proton, and found in the nucleus of every atom heavier than hydrogen.

Nuclide

A general term that refers to any known isotope, either stable or unstable, of any element. Whereas a single element can have isotopes, when referring to the isotopes of more than one element, the proper term is nuclide. A radionuclide is an unstable nuclide.

Pico

A prefix that divides a basic unit by one trillion (10^{-12}).

Plutonium (Pu)

A heavy, radioactive, man-made metallic element with atomic number 94. Its most important isotope is fissile plutonium-239. It exists in only trace amounts in nature.

Personal radiation detector

A small detection instrument worn by an individual that directly measures the ionizing radiation exposure.

APPENDIX 8 (cont.)

Quality Factor (QF)

The multiplication factor to convert from absorbed dose (Rad or Gray) to effective dose (Rem or Sievert). The quality factors for different types of radiation are found in 10 CFR Part 20.1004

Rad

The unit for absorbed dose. (Radiation Absorbed Dose) The Rad has been replaced by the Gray in the SI system of units (100 Rad = 1 Gray).

Radiation Source

Usually a sealed source of radiation used in medical or industrial applications.

Radiation standards

Dose and dose rate limits, permissible concentrations, rules for handling, regulations for transportation, regulations for industrial control of radiation, and control of radioactive material established by legislative or regulatory means for the safe use and application of ionizing radiation.

Radiological Dispersal Device (RDD)

An RDD uses ordinary chemical explosives and radioactive material to disperse the radioactive material and cause contamination and radiation exposure. An RDD is not a nuclear weapon.

Radium (Ra)

A radioactive metallic element with atomic number 88. As found in nature, the most common isotope has a mass number of 226. It occurs in minute quantities associated with uranium in pitchblende, camotite, and other minerals.

Radon (Rn)

A radioactive element that is one of the heaviest gases known. Its atomic number is 86. It is a daughter of radium and thorium.

Rem (Roentgen Equivalent Man)

A unit in the traditional system that measures the effects of ionizing radiation on humans.

Safety zone

A safety zone is a perimeter established around a radiation source (actual or suspect) to minimize dose to workers and members of the public (during secondary procedures).

Shielding

Any material or obstruction that absorbs radiation and thus tends to protect personnel or materials from the effects of ionizing radiation.

APPENDIX 8 (cont.)

Sievert (Sv)

The international system (SI) unit for dose equivalent. The Sievert has replaced the Rem. One Sv = 100 Rem.

Source material

Typically uranium or thorium ores. Source material does not include special nuclear material.

Special Nuclear Material (SNM)

Includes plutonium, uranium-233, or uranium enriched in the isotopes uranium-233 or uranium-235.

Survey meter

Any portable radiation detection instrument for inspecting an area or individual to establish the amount of radioactive material present.

Uranium

A radioactive element with the atomic number 92. The two principal natural isotopes are uranium-235 (0.7 percent of natural uranium), and uranium-238 (99.3 percent of natural uranium)

Weapons of Mass Destruction (WMD)

A nuclear, chemical, or biological weapon capable of causing significant death, destruction, and terror.

Whole-body counter

A device used to identify and measure radioactivity within the body of human beings.

Radiological Shipping Labels And Radiation Package Limits



Radioactive White I
Maximum Radiation Limits
Surface – 0.5 mr/hr
No Transport Index (T.I.)
associated with this label.



Radioactive Yellow II
Maximum Radiation Limits
From >0.5 mr/hr up to 50 mr/hr
at surface of package.

Maximum Transport Index (T.I.) is 1 or
1mr/hr at 1 meter from the package



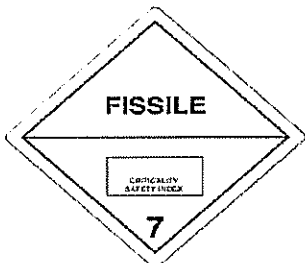
Radioactive Yellow III
Maximum Radiation Limits
From >50 mr/hr up to 200 mr/hr
at surface of package.

Maximum Transport Index (T.I.) is 10 or
10 mr/hr at 1 meter from the package

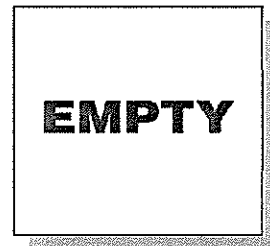


Radioactive Yellow III*
Maximum Radiation Limits
Exclusive Use*
From > 200 mr/hr up to 1000 mr/hr
at surface of package and up to 10mr/hr at 2
meters from vehicle.

Shipping Papers will denote " Exclusive Use"



Fissile Label
For Packages containing fissile material. This
label will appear with on of the other three
Rad Labels . Criticality Safety Index on the
label is used by shippers to limit the number
of packages on a conveyance.



Empty Label
For packages that previously contained
radioactive material. Package still may
contain internal radioactive contamination.

APPENDIX 9 (cont)

VEHICLE PLACARDS

Standard Placard



Vehicles placarding is required when transporting:

- Packages with Yellow III labels
- Exclusive Use LSA/SCO shipments
- Highway Route Controlled Quantity Shipments

Highway Route Controlled Quantity (HRCQ) Placard



HRCQ is a high activity shipment transported in a Type B package. The package will always have a Yellow-III label regardless of radiation level. HRCQ shipments by highway will require the standard placard on a white square background with a black border.

SHIPPING PAPER INFORMATION**Information to look for on shipping papers for radioactive material:**

- Emergency contact telephone number
- Proper Shipping Name and United Nations (UN) ID
- Name of radionuclides (e.g. Co-60, I-125, etc.)
- Radioactivity level per package in MBq, GBq, etc. (will be listed as “activity”).
- Category of label applied (i.e., White –I, Yellow-II, and Yellow-III).
- Transport Index (T.I.) (for Yellow-II and Yellow –III labels)
- The letters “RQ” if material is a Reportable Quantity of hazardous material.
- Package Type (e.g. Type A, Type B, etc.)
- Physical & Chemical form of material (if not special form)
- “Fissile Excepted” or Criticality Safety Index (for fissile materials only).
- “Exclusive Use” if shipment is being made under exclusive use provisions
- Highway Route Controlled Quantity or “HRCQ” (if shipment is HRCQ).

FOR OFFICIAL USE ONLY



Information Bulletin Title: POTENTIAL TERRORIST USE OF PRESSURE COOKERS

ATTENTION: Federal Departments and Agencies, Homeland Security Advisors, State Emergency Managers, First Responders and Security Managers

DHS intends to update this information bulletin should it receive additional relevant information, including information provided to it by the user community. Based on this notification, no change to the Homeland Security Advisory System (HSAS) level is anticipated; the current HSAS level is YELLOW.

OVERVIEW

The Department of Homeland Security is issuing this information bulletin to alert frontline border inspectors and agents, state and local officers, and other first responders that there is continued interest by terrorist organizations to use innocuous items to package improvised explosive devices (IEDs.) A technique commonly taught in Afghan terrorist training camps is the use/conversion of pressure cookers into IEDs.

DETAILS

In September 2003, India's security forces in Jammu foiled a major terrorist attack during the Navratra celebrations by seizing 40 kg of an explosive, RDX, which was put in two large pressure cookers.

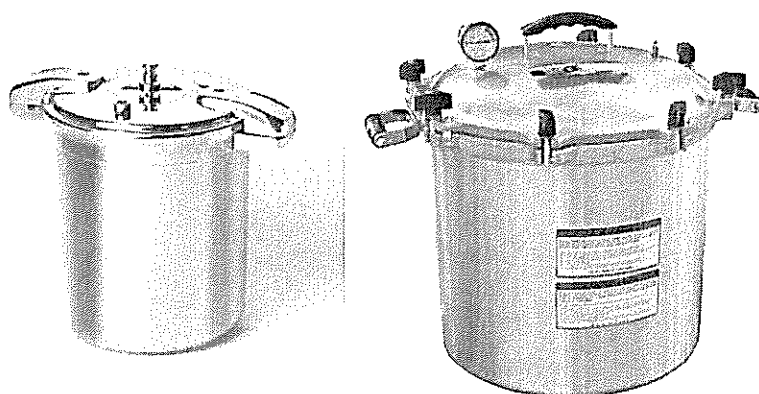
In March 2003, four Algerians, three of whom admitted training in Afghan terror camps, were convicted of plotting to bomb a French Christmas market using pressure cookers packed with explosives.

In February 2002, two pressure cooker bombs were used in an attack on the old tower of Lukla Airport, shattering windows and blowing off the tin roof. Lukla Airport is located in the gateway to Solokhumbu at the foot of Mount Everest.

February 2001, Maoist Rebels used two pressure cooker bombs in an attack on a convoy containing judicial officials. Four policemen on the escort team died instantly.

Typically, these bombs are made by placing TNT or other explosives in a pressure cooker and attaching a blasting cap at the top of the pressure cooker. The size of the blast depends on the size of the pressure cooker and the amount of explosive placed inside. Pressure cooker bombs are made with readily available materials and can be as simple or as complex as the builder decides. These types of devices can be initiated using simple electronic components including, but not limited to, digital watches, garage door openers, cell phones or pagers. As a common cooking utensil, the pressure cooker is often overlooked when searching vehicles, residences or merchandise crossing the U.S. Borders.

FOR OFFICIAL USE ONLY



TYPICAL PRESSURE COOKERS

“A **pressure cooker** ... is an airtight utensil for quick cooking or preserving of foods by means of high-temperature steam under pressure”¹ “There are few fundamental differences among pressure cookers as they all work on the same basic principle. Most pressure cookers bear the following components at a minimum:”²

- “Pressure Regulator: Controls and maintains pressure inside the cooker.
- “Vent Pipe: The pressure regulator fits on the vent pipe and allows excess pressure to be released.
- “Sealing Ring: Forms a pressure-tight seal between the cover and the pressure cooker body.”

SUGGESTED PROTECTIVE MEASURES

- Don't move the suspect item. **Note:** Any pressure cooker weighing more than expected may be suspect.
- Don't transmit radio signals within 50 feet of item.
- Persons within 50 feet must turn off cell phones and pagers.
- Evacuate personnel from the immediate area. Minimum evacuation distances, based on the TSWG Bomb Threat Stand-Off Card 11-99, are noted:
 - Suspect item inside building: evacuation distance--150 feet.

Safety Note: Safe distance should be measured from the building and away from windows to avoid being hit with debris, metal fragments, and glass particles produced should the device explode.

- Suspect item outside of building: evacuation distance—1,850 feet

Safety Note: Personnel must remain out of direct line of sight or behind adequate cover after evacuating to the minimum distance to avoid fragments from the improvised explosive device.

¹ Merriam-Webster OnLine, (<http://www.m-w.com/>), on Feb 4, 2004.

² <http://virat.8m.com/howtouse.html>, on Feb 4, 2004.

FOR OFFICIAL USE ONLY

Immediately call the Explosive Ordnance Detachment (EOD)/Bomb Squad and give a detailed description of suspect item, such as size, construction and location. At that point EOD/Bomb Squad might adjust minimum evacuation distance.



Confiscated Malaysian Pressure Cookers

DHS encourages recipients of this Information Bulletin to report information concerning suspicious or criminal activity to local law enforcement, local FBI's Joint Terrorism Task Force or the Homeland Security Operations Center (HSOC). The HSOC may be contacted at: Phone: (202) 282-8101.

http://www.raesystems.com/AppTech_Notes/AP

<http://www.smithsdetection.com>

<http://www.survivalcard.com/>

<http://www.emedicine.com/>

<http://www.afrrr.usuhs.mil/>

<http://www.atsdr.cdc.gov/mhmi.html>

<http://science-education.nih.gov/biodefenseinsert>

<http://personalprotection.dupont.com/protectiveapparel/products/index.html>

<http://www.nbc-med.org/ie40/Default.html>

<http://www.nbcindustrygroup.com/handbook/index08.htm>

<http://www.nti.org/>

<http://www.terrorism.com/>

<http://www.cbaci.org/cbaci/index.html>

<http://www.llnl.gov/nai/technologies/hotspot/>

<http://www.epa.gov/ceppo/cameo/>

<http://narac.llnl.gov/ers.html>

<http://www.nhdiag.com/ricin.shtml>

<http://www.tswg.gov/tswg/home/home.htm>

http://www.dh.gov.uk/PublicationsAndStatistics/PressReleases/PressReleasesNotices/fs/en?CONTENT_ID=4073181&chk=HSkb7S

<http://wiser.nlm.nih.gov/>

<http://www.homelandcommander.com/>

<http://www.twotigersonline.com/resources.htm>

<http://www.dtra.mil/>

<http://www.bt.cdc.gov/training/agentmodules/biological/>



United States
National Library
of Medicine

Wireless Information System for Emergency Responders



[SIS Home](#) [About Us](#) [Site Map & Search](#) [Contact Us](#)
[Home](#) [About](#) [Tutorial](#) [Download](#) [Feedback](#) [Support](#)

Welcome to the Wireless Information System for Emergency Responders (WISER)

WISER is a system designed to assist first responders in hazardous material incidents. WISER provides a wide range of information on hazardous substances, including substance identification support, physical characteristics, human health information, and containment and suppression advice.

NEW! The operational version of WISER for Windows® is now available for free download!

The operational versions of WISER for Palm OS and Pocket PC are also available for download.

Please note that the National Library of Medicine does not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed.

About WISER

Learn about WISER, its goals and features. This page includes Frequently Asked Questions and their answers. You can also see the WISER Fact Sheet.

WISER Tutorial

See the way that WISER is used to assist first responders to hazardous materials incidents. The tutorial presents two scenarios, first a known substance leaked during a cargo tanker overturn and second an unknown substance leaking in a warehouse.

Download WISER

WISER is available for free download! The application provides stand alone information on 400+ substances and performs substance identification.

Feedback / Comments

WISER is designed to assist the First Responder. If you have questions, comments, or suggestions to improve WISER, we would like to hear from you. This page will allow you to provide feedback to us.

Technical Support

This provides instructions for installing WISER and answers common technical questions about WISER and its use.

Copyright, Privacy, Accessibility
U.S. National Library of Medicine, 8600 Rockville Pike, Bethesda, MD 20894
National Institutes of Health, Health & Human Services

WMD and Emergency management Web Sites

1. The following is intended to provide a comprehensive list of internet sites of use for medical emergency planning and in particular Weapons of Mass Destruction (WMD) consequence event planning. To be useful as a working document, the listing is divided into the following categories: organizations, state BT/WMD web sites, periodicals and publications, procedures/protocols/incident command information, references, training/seminars/classes/conferences, and Commercial Sites.

ORGANIZATIONS:

Agency for Toxic Substances and Disease Registry, Public Health Service, US Department of Health and Human Service *

<http://www.atsdr.cdc.gov/>

American Academy on Veterinary Disaster Medicine

<http://www.cvmbs.colostate.edu/clinsci/wing/aavdm/aavdm.htm>

The American Civil Defense Association

<http://www.tacda.org/>

American Red Cross, Disaster Services

<http://www.redcross.org/disaster/>

Armed Forces Institute of Pathology *

<http://www.afip.org/>

Armed Forces Radiobiology Research Institute *

<http://www.afrrri.usuhs.mil/>

American Psychiatric Association, Disaster Psychiatry Page

http://www.psych.org/pract_of_psych/disaster_psych.cfm

Canadian Center for Emergency Preparedness *

<http://www.ccep.ca/>

Center for Civilian Biodefense Studies, Johns Hopkins University *

<http://www.hopkins-biodefense.org/>

Centers for Disease Control and Prevention *

<http://www.cdc.gov/>

CDC, Bioterrorism Preparedness & Response *

<http://www.bt.cdc.gov/>

CDC, Flu Pandemic Site

<http://www.cdc.gov/od/nvpo/pandemics/>

CDC, Health Alert Network homepage

<http://www.phppo.cdc.gov/han/>

CDC, National Center for Infectious Diseases *

<http://www.cdc.gov/ncidod/diseases/index.htm>

CDC, National Pharmaceutical Stockpile Program

<http://www.cdc.gov/nceh/nps/>

Center For Food Safety and Applied Nutrition, US Food and Drug Administration *

<http://vm.cfsan.fda.gov/list.html>

Center for Nonproliferation Studies, Monterey Institute for International Studies *

<http://cns.miis.edu/>

Center for the study of Bioterrorism and Emerging Infections, Saint Louis University School of Public Health

<http://www.bioterrorism.slu.edu/>

<http://www.slu.edu/colleges/sph/bioterrorism/index.htm>

Chemical and Biological Defense Information Analysis Center (CBIAC) *

<http://www.cbiac.apgea.army.mil/>

The Chemical and Biological Arms Control Institute *

<http://www.cbaci.org/>

CHEMTREC, American Chemistry Council Emergency HAZMAT Information

<http://MemberExchange.cmahq.com/chemtrec.nsf>

Consequence Management Interoperability Services, Battelle/DOD

<http://www.cmi-services.org/>

Defense Threat Reduction Agency - Chem-Bio Defense *

<http://www.dtra.mil/chem/chem.html>

Department of Health and Human Services (DHHS), Office of Emergency Preparedness (OEP) *

<http://ndrms.dhhs.gov/index.html>

Department of Defense/ Dpt of the Army, Director of Military Support *

<http://www.dtic.mil/doms/>

Department of Defense, Nuclear, Biological, Chemical Medical reference site *

<http://www.nbc-med.org/others/Default.html>

Department of Defense, Office of Counterproliferation and Chemical/Biological Defense *

<http://www.acq.osd.mil/cp/main.htm>

Department of Energy, Office of Emergency Response

<http://www.dp.doe.gov/emergencyresponse/>

Department of Justice, Office of State and Local Domestic Preparedness Support *

<http://www.ojp.usdoj.gov/osldps/>

Department of Transportation, Office of Hazardous Materials Safety *

<http://hazmat.dot.gov/>

Domestic Preparedness, Commercial Site, Includes Jobs, equipment, news *

<http://www.domesticpreparedness.com/>

The Emergency Information Infrastructure Partnership *

<http://www.emforum.org/>

The Emergency Net, Emergency Response and Research Institute, Misc References *

<http://www.emergency.com/>

Environmental Protection Agency, Chemical Emergency Preparedness and Prevention Office *

<http://www.epa.gov/swercepp/>

<http://www.epa.gov/ceppo>

EPA, Emergency Response Team

<http://www.ert.org/>

Epidemiology and Infectious Diseases Organizations List *

<http://141.236.12.246/contact/qdlinks.asp>

The Executive Session on Domestic Preparedness, Harvard University, JFK School of Government

<http://www.esdp.org/>

Federal Emergency Management Agency

<http://www.fema.gov/>

<http://www.fema.gov/fema/index.htm>

FEMA partners list (state EMAs, local agencies, national agencies) *

<http://www.fema.gov/about/partners.htm>

Global Emerging Infections Surveillance and Response System, Department of Defense *

<http://141.236.12.246/main2.html>

The Harvard Sussex Program on CBW Armament and Arms Limitation.

<http://fas-www.harvard.edu/~hsp/>

Henry L. Stimson Center, Chemical and Biological Weapons Non-proliferation Project (Mostly dealing with international non-proliferation issues) *

<http://www.stimson.org/index.html>

International Association of Emergency Managers *

<http://www.iaem.com/>

Joint Program Office-BioDefense, DOD office for biodefense equipment development *

<http://www.jpobd.net/>

Joint Service Chemical Biological Information System, DOD, Tracking System for Equipment Development *

<http://206.37.238.107/jscbis/jscbis.cfm>

Lawrence Livermore National Laboratory *

<http://www.llnl.gov/nai/rdiv/rdiv.html>

Local Emergency Planning Committee (LEPC) Data Base

<http://www.epa.gov/ceppo/lepclist.htm>

Metropolitan Medical Response System, DHHS, OEP

<http://www.mmrs.hhs.gov/>

Modeling and Simulation Information Analysis Center, DOD

<http://www.msiac.dmsi.mil/wmd/default.asp>

National Academies of Science, Civilian Emergency Response to Chemical or Biological Weapons Incidents Project *

<http://www4.nas.edu/cp.nsf/57b01c7b1b6493c485256555005853cf/a3861123d7632dc4852565690079b6f9?OpenDocument>

National Academies of Science, Institute of Medicine *

<http://www4.nas.edu/IOM/IOMHome.nsf>

National Animal Health Emergency Management System

<http://www.usaha.org/NAHEMS/>

National Association of County and City Health Officials (NACCHO), BT site *

<http://www.naccho.org/project63.htm>

The National Domestic Preparedness Consortium, Academic Consortium *

<http://www.emrtc.nmt.edu/ndpc/main.html>

The National Domestic Preparedness Office, FBI *

<http://www.ndpo.gov/>

The National Emergency Management Association *

<http://www.nemaweb.org/index.cfm>

National Institutes of Health *

<http://www.nih.gov/>

National Institute for Occupational Safety and Health

<http://www.cdc.gov/niosh/homepage.html>

The National Response Center, US Coast Guard

<http://www.nrc.uscg.mil/index.htm>

The National Response Team, HAZMAT & Chemical Spills *

<http://www.nrt.org/>

The National Terrorism Preparedness Institute

<http://terrorism.spjc.edu/index.htm>

National Voluntary Organizations Active in Disasters (NVOAD)

<http://www.nvoad.org/>

The NBC Industry Group

<http://www.nbcindustrygroup.com/>

Occupational Safety and Health Administration *

<http://www.osha.gov/>

Office of Counterproliferation and Chemical and Biological Defense, DOD *

<http://www.acq.osd.mil/cp/welcome.html>

Oklahoma City National Memorial Institute for the Prevention of Terrorism *

<http://www.mipt.org/>

Plum Island, Animal Disease Center

<http://www.ars.usda.gov/plum/>

Program Director for Biological Defense Systems, DOD agency conducting R&D for bio systems. *

<http://www.sbccom.apgea.army.mil/RDA/pdbio/index.htm>

Pub Health Svc (DHHS) Office of Emergency Prep, Manages the National Disaster Medical System *

<http://ndms.dhhs.gov/>

Technical Escort Unit, US Army *

<http://www2.sbccom.army.mil/teu/>

The Terrorism Research Center, Mostly International in nature *

<http://www.terrorism.com/index.shtml>

US Air Force Counterproliferation Center

<http://www.au.af.mil/au/awc/awcgate/awc-cps.htm>

U.S. Army Chemical School *

<http://www.wood.army.mil/usacmls/>

U.S. Army Medical Command *

<http://www.armymedicine.army.mil/armymed/default2.htm>

US Army Medical Research Institute of Chemical Defense *

<http://chemdef.apgea.army.mil/>

US Army Medical Research Institute of Chemical Defense, Chemical Casualty Care Division

<http://ccc.apgea.army.mil/>

US Army Medical Research and Material Cmd *

<http://mrmc-www.army.mil/>

USAID The Office of U.S. Foreign Disaster Assistance (OFDA) *

http://www.usaid.gov/hum_response/ofda/

U.S. Army Center for Health Promotion & Preventive Medicine

<http://chppm-www.apgea.army.mil/>

USAMRIID - US Army Medical Research Institute of Infectious Diseases *

<http://www.usamriid.army.mil/>

US Army National Guard Bureau (Info on Military Support, WMD teams, background studies)

<http://www.ngb.dtic.mil/>

US Army Soldier and Biological Chemical Command (SBCCOM) *

<http://www.sbccom.apgea.army.mil/>

US Army Soldier and Biological Chemical Command (SBCCOM), Program Director for Domestic Preparedness *

<http://dp.sbccom.army.mil/>

US Coast Guard, Command Center

<http://www.uscg.mil/hq/commandcenter/oc.htm>

US Coast Guard, National Response Center

<http://www.nrc.uscg.mil/>

US Marine Corps, Chemical Biological Incident Response Force

<http://www.mcwl.quantico.usmc.mil/openingposter3.jpg>

<http://158.237.108.181/>

US Navy Chem/Bio program *

http://www.chembiodef.navy.mil/o_nav.htm

Veterans Administration, Emergency Management Strategic Health Care Group

<http://www.va.gov/EMSHG/>

Virginia Task Force One Urban Search and Rescue team *

<http://www.vatf1.org/>

Weapons of Mass Destruction Civil Support Teams (Army National Guard)

<http://www.defenselink.mil/specials/destruction/>

World Health Organization (WHO) *

<http://www.who.int/>

STATE BT/WMD WEB SITES:

State Health Department Web Sites

<http://www.cdc.gov/phtn/sites.htm>

State Emergency Management Agencies Web Site

<http://www.ndpo.gov/stateema.htm>

Alaska Department of Health BT Web Site

http://www.chems.alaska.gov/bioterrorism_home.htm

New Mexico Weapons of Mass Destruction Web Site

<http://www.wmd-nm.org/>

New York City Department of Health

<http://www.ci.nyc.ny.us/html/doh/home.html>

Texas Dpt of Health BT web site

<http://www.tdh.texas.gov/bioterrorism/default.htm>

PERIODICALS & PUBLICATIONS:

Agency for Toxic Substances and Disease Newsletter, DHHS *

<http://www.atsdr.cdc.gov/HEC/hsphhome.html>

Air University Index to Military Periodicals *

<http://www.dtic.mil/search97doc/aulimp/main.htm>

The Beacon, National Disaster Preparedness Office, FBI *

<http://www.ndpo.gov/beacon.htm>

Biodefense Quarterly, Center for Civilian Biodefense Studies, Johns Hopkins University *

<http://www.hopkins-biodefense.org/pages/news/quarter.html>

CB Quarterly, US Army Soldiers and Biological Chemical Command

<http://www.sbccom.apgea.army.mil/RDA/quarterly/index.htm>

The Chemical and Biological Information Analysis center Newsletter *

<http://www.cbiac.apgea.army.mil/awareness/newsletter/intro.html>

CHPPM News Bulletins, US Army Center For Health Promotion and Preventive Medicine

<http://chppm-www.apgea.army.mil/imo/ddb/dmd/DMD/NEWS.HTML>

Dispatch, The Chemical and Biological Arms Control Institute

<http://www.cbaci.org/dispatch.htm>

Emerging Infectious Diseases, CDC, National Center for Infectious Diseases *

<http://www.cdc.gov/ncidod/eid/index.htm>

Emergency Information Infrastructure Partnership Newsletter *

<http://www.emforum.org/eiip/news.htm>

FEMA IMPACT newsletter *

<http://www.fema.gov/about/hqnltr/>

FEMA News Listing *

<http://www.fema.gov/fema/news.htm>

Hazardous Technical Information Service Newsletter, Dpt of the Army

<http://www.dscr.dla.mil/htis/>

The Journal of Homeland Defense

<http://www.homelanddefense.org/>

Journal of Terrorism and Political Violence *

<http://www.frankcass.com/jnls/tpv.htm>

Medicine and Global Survival Magazine *

<http://www2.healthnet.org/> (Then choose "MGS")

Military Medical Technology Online

<http://www.mmt-kmi.com/>

Morbidity and Mortality Weekly Report, CDC

<http://www.cdc.gov/mmwr>

National Fire and Rescue Magazine *

<http://www.nfrmag.com/>

The Nonproliferation Review, Center for nonproliferation Studies, Monterey Institute of International Studies *

<http://cns.miis.edu/pubs/npr/index.htm>

Office for State and Local Domestic Preparedness Support Bulletins (DOJ)

http://www.ojp.usdoj.gov/osldps/osldps_ib.htm

OSHA Job Safety and Health Quarterly Magazine

<http://www.osha-slc.gov/html/jshq-index.html>

The Providence Journal – Health *

<http://health.projo.com/>

USA Today, Health

<http://www.usatoday.com/life/health/health.htm>

PROCEDURES/PROTOCOLS/INCIDENT COMMAND INFORMATION/RESPONSE RESOURCES:

Bioterrorism Readiness Plan: A Template for Healthcare Facilities, CDC *

<http://www.cdc.gov/ncidod/hip/Bio/bio.htm>

CDC recommended protocol for BT event notification *

<http://www.bt.cdc.gov/protocols.asp>

Decontamination Fact Sheet, US Army Medical Research Institute of Chemical Defense *

<http://chemdef.apgea.army.mil/chemcasu/Decontam.htm>

Decontamination, Commercial Resources *

<http://www.nbcindustrygroup.com/handbook/decontamination/decontamination.htm>

DHHS, Office of Emergency Preparedness planning documents/guides *

http://ndms.dhhs.gov/CT_Program/Response_Planning/response_planning.html

Department of Justice, Office of State and Local Domestic Preparedness Support, Technical Support Help *

<http://www.ojp.usdoj.gov/osldps/ta.htm>

The Emergency Email Network

<http://208.184.24.125/>

The Emergency Management Assistance Compact, Web Site.

<http://www.nemaweb.org/emacs/index.cfm>

EPA, The National Response Team's Integrated Contingency Plan Guidance (One Plan)(published June 5, 1996, corrected, June 19, 1996) (Planning document for Chemical/HAZMAT response) *

<http://www.epa.gov/swercepp/pubs/one-plan.wp5>

EPA, National Response System

<http://www.epa.gov/superfund/programs/er/nrs/nrsrrt.htm>

FEMA, Federal Response Plan

<http://www.fema.gov/r-n-r/frp/>

FEMA Library of reference documents *

<http://www.fema.gov/library/lib07.htm>

FEMA, State and Local Guide (SLG) 101: Guide for All-Hazard Emergency Operations Planning *

<http://www.fema.gov/pte/gaheop.htm>

Hospital Emergency Incident Command System, California EMS

<http://www.emsa.cahwnet.gov/Dms2/heics3.htm>

Incident Command System, Forms and Guides

<http://www.uscg.mil/pacarea/pm/icsforms/ics.htm>

<http://www.uscg.mil/d11/msosf/links/guides.htm>

Incident Command System, NY State Site

<http://www.nysemo.state.ny.us/ICS/explain.htm>

Incident Command System, US Coast Guard Site

<http://www.uscg.mil/hq/g-m/mor/Articles/ICS.htm>

Investigation of Air-dispersed pulmonary agents work sheet, Texas Dpt of Health

<http://www.tdh.state.tx.us/bioterrorism/btform.pdf>

Joint Information Center Guide, 21 Jan 2000, The National Response Team

[http://www.nrt.org/nrt/home.nsf/Web+Pages/publications.htm/\\$FILE/JIC.pdf](http://www.nrt.org/nrt/home.nsf/Web+Pages/publications.htm/$FILE/JIC.pdf)

Metropolitan Medical Response System Planning/Operational Documents

<http://207.91.118.34/>

The National Response Center, Chemical/HAZMAT spills *

<http://www.nrc.uscg.mil/index.html>

Patient Handling Precautions for BT agents, Walter Reed Army Medical Center (on Texas BT Web site)

<http://www.tdh.state.tx.us/bioterrorism/btmanag.pdf>

Planning Documents, DHHS, OEP, NDMS *

http://ndms.dhhs.gov/CT_Program/Response_Planning/response_planning.html

Rapid Response Information System (RRIS), FEMA *

<http://www.rris.fema.gov/>

US Army Soldier and Biological Chemical Command Hotline *

http://dp.sbccom.army.mil/fs/dp_hotline.html

REFERENCES:

Abbreviations, Acronyms, and Terms, DOD *

<http://ww2.tricare.osd.mil/references/acroterms.html>

<http://www.dtic.mil/doctrine/jel/doddict/>

Acronyms, US Navy Chemical Biological program *

<http://www.chembiodef.navy.mil/acronyms.htm>

American Red Cross Disaster Guide

<http://www.redcross.org/disaster/safety/guide.html>

Armed Forces Radiobiology Research Institute Documents *

<http://www.afrrr.usuhs.mil/www/news/news.htm>

Anthrax, Department of Defense information web site *

<http://www.anthrax.osd.mil/>

Army Medical Department Publications *

<http://www.armymedicine.army.mil/armymed/about/publications.htm>

ATSDR TOXFAQs, Medical Summary Sheets for Hazardous Materials

<http://www.atsdr.cdc.gov/toxfaq.html>

Bibliography of Terrorism, The Disaster Center *

<http://www.disastercenter.com/terror.htm>

Biological Agent Fact Sheets, APIC

<http://www.apic.org/bioterror/agentsheets.cfm>

Biological Agent Information, Centers for Disease Control *

<http://www.bt.cdc.gov/bioagents.asp>

Biological Agent Information, Center for Civilian Biodefense Studies, Johns Hopkins University. *

<http://www.hopkins-biodefense.org/pages/agents/agent.html>

Biological and Chemical Terrorism: Strategic Plan for Preparedness and Response. Recommendations of the CDC Strategic Planning Workgroup. April 21, 2000

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4904a1.htm>

Biological Warfare Antiterrorism Act. S. 993, approved May 22 1990, Public Law No. 101 - 298.

Biosafety in Microbiological and Biomedical Laboratories, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Institutes of Health, Fourth Edition, May 1999

<http://www.cdc.gov/od/ohs/biosfty/bmbl4/bmbl4toc.htm>

Bioterrorism Article Compendium, Maryland Department of Health

<http://www.dhmr.state.md.us/eis6501/biotbiot.htm>

Bioterrorism Readiness Plan, A Template for Health Care Facilities, Association for Professionals in Infection Control and Epidemiology (APIC).

<http://www.apic.org/educ/readinow.html>

Cal Poly Chemical and Biological Warfare Page, 1996, Academic Course Web Page *

<http://www.calpoly.edu/~drjones/chemwarf.html>

CANUTEC's Home Page (HAZMAT Transport, Canadian Government) *

<http://www.tc.gc.ca/canutec/english/main-e.htm>

CBW Events Database, The Harvard Sussex Program on CBW Armament and Arms Limitation.

<http://fas-www.harvard.edu/~hsp/>

Center for Disease Control Travel Advisory page *

<http://www.cdc.gov/travel/index.htm>

CDC, Biological and Chemical Terrorism: Strategic Plan for Preparedness and Response

Recommendations of the CDC Strategic Planning Workgroup

<http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/rr4904a1.htm>

CDC, Disease Information, Selected Prevention and Program Areas (Disease Fact Sheets)

<http://www.cdc.gov/ncidod/diseases/index.htm>

Chemical, Biological, Radiological Incident Handbook, Director of Central Intelligence, Oct 1998

http://www.nrc.gov/NRC/AEOD/ER/HANDBOOK/CBR_hdbk.html

Chemical Contamination Treatment Guidelines. Medical Management Guidelines for Acute Chemical Exposures. Agency for Toxic Substances and Disease Registry

<http://www.atsdr.cdc.gov/mmg.html>

The Chemical and Biological Defense Information Analysis Center, DOD contractor site *

<http://www.cbiac.apgea.army.mil/>

The Chemical Education Foundation, Education and Training References

<http://www.chemed.org/pubs.htm>

CHRIS Manual (Chemical Hazards Response Information System), US Coast Guard

<http://www.chrismanual.com/>

CNS - Chemical and Biological Weapons Resource Page

<http://cns.miis.edu/research/cbw/index.htm>

Defense against Toxin Weapons, Dpt of Defense

<http://www.nbc-med.org/SiteContent/MedRef/OnlineRef/FieldManuals/datw/index.htm>

Department of Defense, Defense Technical Information Center Index of resources

<http://www.dtic.mil/dtic/find.html>

Department of Defense, Tiger Team Report, Study on Military Support for WMD event

<http://www.ngb.dtic.mil/referenc/briefngs/wmd/TigerFrameSet1.html>

Department of Health and Human Services, Health and Medical Services Support Plan for the Federal Response to Acts of Chemical/Biological (C/B) Terrorism. 21 June 1996.

http://ndms.dhhs.gov/CT_Program/Response_Planning/C-BHMPlan.pdf

Department of Transportation, Emergency Response Guidebook (First Responder's Guide for HAZMAT operations)

<http://hazmat.dot.gov/erg2000/erg2000.pdf>

Developing a Hazardous Materials Exercise Program: A Handbook for State and Local Officials, US Department of Transportation

<http://www.bts.gov/smart/cat/254.html>

Disaster Management Central Resource, The Joint Military Medical Centers, San Antonio, TX

<http://206.39.77.2/dmcr/dmrhome.html>

Disaster Response: Principles of Preparation and Coordination. By Erik Auf der Heide. On line version of book.

<http://www.coe-dmha.org/dr/flash.htm>

Emergency Preparedness Information Exchange (EPIX), Simon Fraser University, British Columbia, Canada.

<http://hoshi.cic.sfu.ca/epix/index.html>

Emergency Preparedness Medical Information Center" or "epMedic".

<http://sites.netscape.net/wmdmedicalinfo/>

Emergency Services WWW Site List (Private Canadian Web listing)

<http://www.district.north-van.bc.ca/eswsl/www-911.htm>

EPA, National Compliance Assistance Clearinghouse

<http://134.67.99.39/clearinghouse/>

FBI, Terrorism in the US reports

<http://www.fbi.gov/publish/terror/terroris.htm>

Federal Coordinating Center Guide, NDMS, Dpt of Health and Human Resources, OEP

<http://ndms.dhhs.gov/NDMS/Downloads/downloads.html>

Federal Environmental Hotline Listings (Phone numbers)

<http://www.govinst.com/resourcecenter/resource/envirohotlines.html>

<http://www.epa.gov/epahome/hotline.htm>

FEMA bibliography listing for emergency management

<http://www.fema.gov/EMI/edu/biblo.htm>

Federal Response Plan, Emergency Support Function #8 Health and Medical Services Annex () – basic document for Federal Health support in an emergency.

<http://www.fema.gov/r-n-r/frp/frpesf8.htm>

Federal WMD Contingency Plan, "United States Government Interagency Domestic Terrorism Concept of Operations Plan"
January 2001

<http://www.fema.gov/r-n-r/conplan/conplan.pdf>

FEMA, A Guide To the Disaster Declaration Process

http://www.fema.gov/r-n-r/dec_guid.htm

FEMA Library of reference documents

<http://www.fema.gov/library/lib07.htm>

Field Operations Guide, Office of Foreign Disaster Assistance, USAID *

<http://www.info.usaid.gov/ofda/fog/>

Field Operating Guide, US Coast Guard

<http://www.uscg.mil/hq/g-m/mor/Articles/ICS.htm>

Flu Pandemic Site, CDC (Include mortality/morbidity calculator)

<http://www.cdc.gov/od/nvpo/pandemics/>

Foodborne Pathogenic Microorganisms and Natural Toxins Handbook, US Food & Drug Administration, Center for Food Safety & Applied Nutrition *

<http://vm.cfsan.fda.gov/~mow/intro.html>

Global Emerging Infections Surveillance and Response System, DOD, Reference List *

<http://141.236.12.246/>

Grants, Catalog of Federal Grants for Domestic Preparedness

<http://www.cmi-services.org/grants.asp>

Guidelines for Infection Control in Health Care Personnel, CDC, 1998

<http://www.cdc.gov/ncidod/hip/GUIDE/InfectControl98.pdf>

Guidelines for Isolation Precautions in Hospitals, CDC

<http://www.cdc.gov/ncidod/hip/isolat/isolat.htm>

Guidelines for Protecting the Health and Safety of Health Care Workers: 4/24/98, NIOSH

<http://www.cdc.gov/niosh/hcwold0.html>

Hazardous Materials Employee Resource Book, US Dpt of Transportation,

http://hazmat.dot.gov/pubtrain/hmpe_resourcehandbook.pdf

Hazardous Materials Guide for First Responders, US Fire Academy, FEMA

<http://www.usfa.fema.gov/hazmat/>

Hazardous Materials Information Service, Dpt of Defense

<http://www.dlis.dla.mil/hmis/>

Improving Local and State Agency Response to Terrorist Incidents Involving Biological Weapons Final Draft date 1 Aug 2000.
SBCCOM

http://dp.sbccom.army.mil/fr/bwirp_interim_planning_guide.pdf

International Emergency Management Assistance Memorandum of Understanding (NE states and Canada), 25th Annual Conference of the New England Governors and Eastern Canadian Premiers July 16-18, 2000

http://www.scics.gc.ca/cinfo00/85007918_e.html

JCAHO emergency management standards

<http://www.jcaho.org/standard/ecer.html>

http://www.jcaho.org/standard/s2_hap_ec29.html

Joint Chiefs of Staff, J-3 WMD Handbook (Dpt of Defense)

<http://www.homelanddefense.org/J3WMDHandbook.pdf>

Joint Service Chem Bio Info System (Server 1)

<http://ws236.rdaisa.sarda.army.mil/jscbis/jscbis.cfm>

Kansas City Kansas Bioterrorism Manual

<http://www.kcmo.org/kcmo.nsf/web/home?opendocument>

Learning Resource Center, National Emergency Training Center, FEMA/NFA, Bibliographic Card Catalog system

<http://www.lrc.fema.gov/>

Legal Documents, National Level Laws and PDDs ref WMD, National Security Institute Links

<http://nsi.org/terrorism.html>

Library, Center for Civilian Biodefense Studies, Johns Hopkins University.

<http://www.hopkins-biodefense.org/pages/library/>

Managing Hazardous Materials Incidents, Volume I, Emergency Medical Services: A Planning Guide for the Management of Contaminated Patients, ATSDR, 1 Jan 1992.

<http://aepo-xdv-www.epo.cdc.gov/wonder/prevguid/p0000018/p0000018.asp>

Managing Hazardous Materials Incidents, Volume II, Hospital Emergency Departments: A Planning Guide for the Management of Contaminated Patients, ATSDR, 1 Jan 1992.

<http://aepo-xdv-www.epo.cdc.gov/wonder/prevguid/p0000019/p0000019.asp>

Material Safety Data Sheets,

<http://www.dlis.dla.mil/hmis/>

Cornell University Site

<http://msds.pdc.cornell.edu/msdssrch.asp>

Vermont Site

<http://hazard.com/msds/>

NIOSH Pocket Guide

<http://www.cdc.gov/niosh/npg/pgdstart.html>

Medical Aspects of Chemical and Biological Warfare, Textbook of Military Medicine *

<http://www.nbc-med.org/SiteContent/HomePage/WhatsNew/MedAspects/contents.html>

Medical Management Guidelines for Acute Chemical Exposures U.S. Department of Human Services, Public Health Service, Agency for Toxic Substance and Disease Registry

<http://wonder.cdc.gov/wonder/prevguid/p0000016/entire.htm?>

<http://wonder.cdc.gov/wonder/prevguid/p0000016/entire.htm?>

Medical Management of Biological Casualties Handbook, US Army Medical Research Institute of Infectious Diseases

<http://www.nbc-med.org/SiteContent/HomePage/WhatsNew/MedManual/Feb01/handbook.htm>

Medical Management of Chemical Casualties Handbook, US Army Medical Research Institute of Chemical Defense *

<http://ccc.apgea.army.mil/Documents/Red%20Handbook/001TitlePage.htm>

Medical Management of Radiological Casualties Handbook, US Army

<http://www.afrii.usuhs.mil/www/outreach/pdf/radiologicalhandbooksp99-2.pdf>

The Medical NBC Battlebook, US Army Center for Health Promotion and Preventive Medicine (USACHPPM), Tech Guide 244, May 2000.

<http://chppm-www.apgea.army.mil/imo/ddb/dmd/DMD/TG/TECHGUID/batbooka.PDF>

Medical NBC Defense Information Server News

<http://www.nbc-med.org/SiteContent/medref.asp?mode=internet>

MEDLINE Plus, Disasters and Emergency Preparedness Web Reference, National Library of Medicine.

<http://www.nlm.nih.gov/medlineplus/disastersandemergencypreparedness.html>

Mil Infectious Diseases

<http://mrmc-www.army.mil/researchAreas/infectious/index.htm>

Misc. Terrorism Articles, Emergency Response and Research Institute

<http://www.emergency.com/cntrterr.htm>

Mitigation Practitioner's Handbook, Office of Foreign Disaster Assistance, USAID *

http://www.info.usaid.gov/hum_response/ofda/files/hbkoc18.pdf

National Center for Infectious Diseases electronic publications/documents

<http://www.cdc.gov/ncidod/publicat.htm>

National Institutes of Health Periodical Listing and browser *

<http://www.nih.gov/health/consumer/index.html>

National Institute of Occupational Safety and Health (NIOSH) Publications

<http://www.cdc.gov/niosh/publistd.html>

National Library of Medicine

<http://www.nlm.nih.gov/>

National Library of Medicine Search Service, PUBMED

<http://www.ncbi.nlm.nih.gov/PubMed/>

National Response Team Publications, HAZMAT Tng, Operations, Reports

<http://www.nrt.org/nrt/home.nsf/ba1c0a482258334785256449000567e2/438fdb98f71cffd58525646c004e6691?OpenDocument>

National Technical Information Service Health and Safety Home Page, Links to Government Health Pubs *

<http://www.ntis.gov/products/health.htm>

National Warnings Area

<http://iwin.nws.noaa.gov/iwin/nationalwarnings.html>

NBC Products and Services Handbook, the US joint service material group (JSMG) and the NBC industry group

<http://www.nbcindustrygroup.com/handbook/index08.htm>

Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities. October, 1985 DHHS (NIOSH)
Publication No. 85-115

<http://www.cdc.gov/niosh/85-115.html>

OSHA Publications and Fact Sheets

<http://www.osha-slc.gov/OshDoc/Additional.html>

OSHA Emergency Response References

<http://www.osha-slc.gov/SLTC/emergencyresponse/index.html>

OSHA Regulations (Standards - 29 CFR) Hazardous waste operations and emergency response. - 910.120 (See in particular paragraph q – ref emergency response plans)

http://www.osha-slc.gov/OshStd_data/1910_0120.html

OSHA Standards Interpretation and Compliance Letters 03/10/1999 - Emergency response training necessary for hospital physicians/nurses that may treat contaminated patients.

http://www.osha-slc.gov/OshDoc/Interp_data/I19990310.html

OSHA Standards Interpretation and Compliance Letters 10/27/1992 - Training requirements for hospital personnel involved in an emergency response of a hazardous substance.

http://www.osha-slc.gov/OshDoc/Interp_data/I19921027D.html

OSHA Standards Interpretation and Compliance Letters 03/31/1992 - Medical personnel exposed to patients contaminated with hazardous waste.

http://www.osha-slc.gov/OshDoc/Interp_data/I19920331B.html

OSHA Regulations (Standards - 29 CFR) Training Curriculum Guidelines - (Non-mandatory) - 1910.120 App E

http://www.osha-slc.gov/OshStd_data/1910_0120_APP_E.html

Pandemic Influenza, A Planning Guide for State and Local Officials

<http://www.cdc.gov/od/nvpo/pandemicflu.htm>

Pro-Med Mail. Program for Monitoring Emerging Diseases, International Society for Infectious Diseases

<http://www.promedmail.org/>

Public Health Emergencies: Quick Primer for Clinicians on Detecting Public Health Emergencies. Medical Society of the State of New York.

http://www.mssny.org/pub_health/Emergency_Primer.htm

Public Health Image Library (PHIL), CDC

<http://phil.cdc.gov/Phil/default.asp>

Rare Diseases. National Institutes of Health office.

<http://rarediseases.info.nih.gov/ord/>

Recognition and Management of Pesticide Poisonings, EPA, March 1999

<http://www.epa.gov/cgi-bin/claritgw?op=Display&document=clserv:epa-cin9:1259;&rank=4&template=epa>

State Emergency Response Commission/Local Emergency Planning Committees

Code of Federal Regulations CFR 40. Part PART 355

http://www.access.gpo.gov/nara/cfr/cfrhtml_00/Title_40/40cfr355_00.html

Title III of SARA, Emergency Planning and Community Right-to-Know Act of 1986.

<http://www4.law.cornell.edu/uscode/42/ch116.text.html>

Storage and Handling of Hazardous Materials, DOD publication

<http://www.dscr.dla.mil/htis/i414511.pdf>

Strategic Plan, CDC, National Center for Infectious Diseases

<http://www.cdc.gov/ncidod/emergplan/1toc.htm>

Supercourse, Epidemiology, the Internet, and Global Health, Collection of Public Health Lectures/Classes

<http://www.pitt.edu/~super1/>

TB Med 296, ASSAY TECHNIQUES FOR DETECTION OF EXPOSURE TO SULFUR MUSTARD, CHOLINESTERASE INHIBITORS, SARIN, SOMAN, GF, AND CYANIDE, US Army

<http://chemdef.apgea.army.mil/TBMed296/TBMED296.htm>

Terrorists, Freedom Fighters, Crusaders, Propagandists, and Military Professionals on the Net (Web site links to numerous organizations)

<http://cromwell.50megs.com/security/netusers.html>

TOXNET, Toxicology Data Network, National Library of Medicine

<http://toxnet.nlm.nih.gov/>

US Army Field Manual 8-10-7, Health service support in a nuclear, biological, and chemical environment

<http://155.217.58.58/cgi-bin/atdl.dll/fm/8-10-7/toc.htm>

US Army Field Manual, 8-284, Treatment of Biological Warfare Casualties, 17 Jul 2000.

<http://www.adtdl.army.mil/cgi-bin/atdl.dll/fm/8-284/fm8-284.pdf>

USA Today Health Information/Article Index

<http://www.usatoday.com/life/health/archive.htm>

U.S. Army Medical Department Information Sources

<http://www.armymedicine.army.mil/medcom/medlinet/virtual2.htm>

U.S. Army Surgeon General. Nuclear, Biological, Chemical Reference materials

<http://www.nbc-med.org/others/>

US Law. Library of Congress Search and reference system.

<http://lcweb2.loc.gov/glin/us-code.html>

Virology Web Site, Photo library, etc...

<http://www.virology.net/>

Virology BT Web Site

<http://www.virology.net/garryfavwebbw.html>

Vulnerable Zone Indicator System, EPA (checks local hazards to any given site)

<http://www.epa.gov/ceppo/vzis.htm>

Welcome to Hazmat on the Web

<http://www.hazmat48.wpafb.af.mil/>

World Health Organization Documents

<http://who.int/emc-documents/index.html>

TRAINING/SEMINARS/CLASSES/CONFERENCES:

Armed Forces Institute of Pathology Training Site *

<http://www.afip.org/edu/index.html>

Armed Forces Radiobiology Research Institute. Seminars:

<http://www.afri.usuhs.mil/www/outreach/seminars/schedule.html>

Armed Forces Radiobiology Research Institute. Training

<http://www.afri.usuhs.mil/www/outreach/training.htm>

Center for Civilian Biodefense Studies, Johns Hopkins University, Events List *

<http://www.hopkins-biodefense.org/pages/events/calevents.html>

CDC, Distance Learning Web Sites

<http://www.cdc.gov/phtn/sites.htm>

CDC, Bioterrorism Preparedness and Response Learning Resources

<http://www.bt.cdc.gov/learningresources.asp>

CDC, Bioterrorism Preparedness and Response News and Events

<http://www.bt.cdc.gov/newsandevents.asp>

CDC, Public Health Practice Programs Office (PHPPPO) Training Sites

<http://www.phppo.cdc.gov/training.asp>

Compendium of WMD courses, SBCCOM *

<http://dp.sbccom.army.mil/fr/compendium/index.html>

Department of Health and Human Services, OEP, National Disaster Medical System Annual Conference *

http://ndms.dhhs.gov/NDMS_Conference/ndms_conference.html

DHHS, OEP consolidated training list

http://ndms.dhhs.gov/CT_Program/Training/training.html

Department of Justice, Office of State and Local Domestic Preparedness Support training courses *

<http://www.ojp.usdoj.gov/osldps/training.htm>

Department of Justice, Office of State and Local Domestic Preparedness Support exercise support *

<http://www.ojp.usdoj.gov/osldps/exercises.htm>

Department of Justice, Office of State and Local Domestic Preparedness Support , Center for Domestic Preparedness courses (Fort McClellan, Alabama) *

http://www.ojp.usdoj.gov/osldps/training_cdp.htm

Domestic Preparedness Campus, OSLDPS, Dpt of Justice, Links to commercial sites

<http://www.teex.com/campus/index.cfm>

<http://www.teex.com/campus/campus.cfm>

Domestic Preparedness, Commercial Site, Conference and event Listings

<http://www.domesticpreparedness.com/members/calendar.html>

<http://www.imrnet.com/conference/>

The Emergency Information Infrastructure Partnership Forum

<http://www.emforum.org/>

Emergency Management Institute, FEMA

<http://www.fema.gov/emi/>

EPA HAZMAT Conference Listings *

<http://www.epa.gov/swercepp/events.html>

EPA Annual Response to Event Conference (2000 Conference Notes)

<http://www.epa.gov/reg3hwmd/epacepp/index.htm>

FEMA terrorism consequence courses

<http://www.fema.gov/emi/termng.htm>

Global Emerging Infections Surveillance and Response System, Conference and training List,

Department of Defense *

<http://141.236.12.246/contact/upcoming.asp>

International Society for Infectious Diseases Event Calendar

http://www.promedmail.org:8080/promed/promed.folder.home?p_cornerid=374

The National Emergency Rescue and Response Training Center, Texas A&M University *

<http://teexweb.tamu.edu/nerrtc/>

National Fire Academy, FEMA, courses, compendium of WMD courses

http://www.usfa.fema.gov/nfa/tr_act.htm

National Laboratory Training Network, CDC *

<http://www.phppo.cdc.gov/dls/nltn/>

The National Terrorism Preparedness Institute

<http://terrorism.spjc.cc.fl.us/>

Oklahoma City National Memorial Institute for the Prevention of Terrorism *

<http://www.okcterrorisinstitute.com/2000poster1.htm>

Public Health Training Network, CDC

<http://www.cdc.gov/phtn/>

US Army Center For Health Promotion and Preventive Medicine Training Site

<http://chppm-www.apgea.army.mil/trng/datepage.htm>

US Army Medical Department, links to training sites/conferences *

<http://www.nbc-med.org/others/>

US Army Medical Research Institute of Chemical Defense training list *

<http://chemdef.apgea.army.mil/>

<http://ccc.apgea.army.mil/>

US Army Medical Research Institute of Infectious Diseases training list *

<http://www.usamriid.army.mil/education/index.html>

US Army Medical Research Institute of Infectious Diseases, Sept 2000 training *

<http://www.biomedtraining.org/>

COMMERCIAL SITES

Bioterry.com. The Biological Terrorism Response Manual

<http://bioterry.com/>

Disaster-resource.com, online guide

<http://www.disaster-resource.com/>

DP Sim Labs, Exercises, Training

<http://www.dpsimlab.com/>

First Responders.com (Private Web site for first responders)

<http://wmdfirstresponders.com/>

Infowar.com WMD Site. Misc resources, articles, etc...

<http://www.infowar.com/wmd/wmd.shtml>

PREEMT, Medical Counterterrorism, Inc., Non-profit organization for Emergency Medical Tng for WMD issues *

<http://home.eznet.net/~Kenberry/>