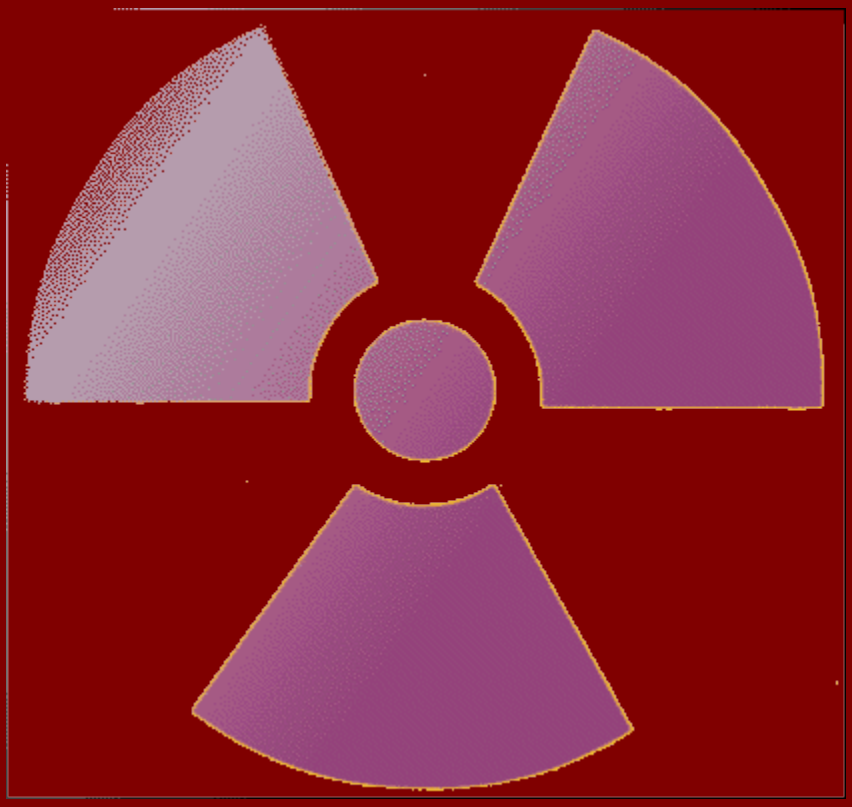
CTRS KOS Project

Thesaurus: Radiological Terrorism

Version 2



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Thesaurus: Radiological Terrorism

Version 2

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to Information Architecture Knowledge Management II
IAKM 60002
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Changes in this Edition

A number of changes have been made in this revision. Changes to scope notes, terms, and related terms are highlighted throughout this document. These changes should clarify the precise meaning and use. Sturctural changes to broader and narrower term relationships are explained below.

One of the major structural changes is the removal of "radiological terrorism" as a root word for the entire thesaurus. Putting everything under one term was not my initial idea, but the use of the hierarchical display for both input and output lead me to think that was the preferred structure. I have removed "combating radiological terrorism," "environmental effects," "radiation protection," "radioactive isotopes," "radioactive material sources," and "radiological injuries" from under "radiological terrorism."

Still, I think "radiological terrorism goals," "radiological terrorism scenarios," and "radiological terrorism requirements" are necessary *parts of* "radiological terrorism," so I have kept the first two in the hierarchy and added the third. This leads to multiple inheritance for "radiological terrorism requirements," which is both a necessary part of "radiological terrorism" and "intelligence."

Introduction

The CTRS Radiological Terrorism Thesaurus contains descriptive terms used throughout radiological terrorism literature. The terms, their relationships, and their use were culled from several documents, including:
http://en.wikipedia.org/wiki/Radiological_warfare
http://en.wikipedia.org/wiki/Radiological_weapon
http://www.phppo.cdc.gov/PHTN/webcast/radiation-04/default.asp
http://www1.va.gov/emshg/
http://www.bt.cdc.gov/radiation/
http://www.state.gov/s/ct/rls/rm/2003/24658.htm

The thesaurus is presented in three forms: first, an alphabetical display of all included terms, including scope notes, preferred terms and synonyms, broader, narrower and related terms, and any scope notes; second, a hierarchical display of preferred terms only; and third, a rotated display of all terms.

Several relationships may be defined for any term in the thesaurus. Scope Notes (SN) are more detailed

descriptions of a term's use when necessary. A preferred term (USE) is a synonym for the term that has been selected for most uses—non-preferred terms do not show up in the hierarchical view. A non-preferred term (UF) is a synonym that may be found in the literature but is not used in the hierarchy. Broader terms (BT) are terms that represent more general classes of the current term. Narrower terms (NT) represent more specific instances or parts of the current term. Finally, related terms (RT) are related to the current term but not in any of the ways already noted.

Alphabetical Display

A
acute radiation syndrome
    BT radiological injuries
    NT bone marrow syndrome
       gastrointestinal syndrome
       cardiovascular / central nervous system syndrome

air-borne effects
    BT natural environment effects
    NT weather conditions
    RT crop dusting

Am-241
    USE Americium-241

Americium-241
    UF Am-241
    BT radioactive isotopes

Andrews lymphocyte nomogram
    BT triage

antiterrorism
    BT combatting radiological terrorism

area-denial method
    BT built environment effects

assassination
    BT radiological terrorism goals

availability of radioactive material
    BT radiological terrorism requirements
    RT radioactive material sources

B
biodosimetry assessment tool
    BT triage
    RT radioactive material sources

body fluid contamination
    BT external contamination

bone marrow syndrome
    BT acute radiation syndrome

built environment effects
    BT environmental effects
    NT area-denial method

C
Ca-DTPA
    BT Diethylenetriaminepentaacetate

cardiovascular / central nervous system syndrome
    UF CV / CNS syndrome

BT acute radiation syndrome

Cesium-137
UF Cs-137
BT radioactive isotopes

clothing contamination
BT external contamination
RT removing clothing

Co-60
USE Cobalt-60

Cobalt-60
UF Co-60
BT radioactive isotopes

combatting radiological terrorism
NT antiterrorism
counterterrorism
intelligence
consequence management

communicating instructions
BT public response

consequence management
BT combatting radiological terrorism
NT medical response
public response
RT radiation protection

construction sites
SN In their capacity to generate low-level radioactive material sources
BT low-level radioactive material sources

contamination
BT radiological injuries
NT internal contamination
external contamination

contamination by ingestion
BT internal contamination

contamination by inhalation
BT internal contamination

contamination by wounds
BT internal contamination

conventional explosives
USE radiological explosives

counterterrorism
BT combatting radiological terrorism

crop dusting
SN Refers to use of crop dusting techniques to spread radioactive material
BT radiological weapons
RT air-borne effects

Cs-137
USE Cesium-137

cutaneous radiation syndrome
BT radiological injuries
NT inflammation
erythema
desquamation
epilation

CV / CNS syndrome
USE cardiovascular / central nervous system syndrome

D
desquamation
BT cutaneous radiation syndrome

detection
BT intelligence

Diethylenetriaminepentaacetate
UF DTPA
BT treatments
NT Zn-DTPA
Ca-DTPA

dirty bombs
SN Specifically refers to nuclear weapons designed to include an increased radioactive fallout. Is used in popular media to mean any radiological device.
BT explosives
RT nuclear explosives
radiological explosives

dosimeter badges
BT radiation protection

DTPA
USE Diethylenetriaminepentaacetate

E
environmental effects
NT built environment effects
natural environment effects

epilation
BT cutaneous radiation syndrome

erythema
BT cutaneous radiation syndrome

evacuation
BT public response
RT panic

expertise with radiological material
BT radiological terrorism requirements

explosives
BT radiological weapons
NT radiological explosives
dirty bombs
nuclear explosives

external contamination
BT contamination
NT skin contamination
hair contamination
clothing contamination
home contamination
body fluid contamination

F
fear, uncertainty, and doubt
BT radiological terrorism goals
NT panic

fetal effects
BT radiological injuries

Filgrastim
UF Neupogen
BT treatments

food chain effects
BT natural environment effects

food irradiation plants
SN In their capacity to generate low-level radioactive material sources
BT low-level radioactive material sources

G
gastrointestinal syndrome
UF GI syndrome
BT acute radiation syndrome

GI syndrome
USE gastrointestinal syndrome

H
hair contamination
BT external contamination
RT washing

hidden sources
BT radioactive material releases

high-level radioactive material sources
BT radioactive material sources
NT nuclear power plants
nuclear weapons sites

home contamination
BT external contamination

hospitals
SN In their capacity to generate low-level radioactive material sources

BT low-level radioactive material sources

I

I-131

USE Iodine-131

improvised nuclear devices

BT nuclear explosives

inflammation

BT cutaneous radiation syndrome

inspection

BT intelligence

intelligence

BT combatting radiological terrorism

NT radiological terrorism requirements

inspection

detection

intensive industrial infrastructure

SN as a requirement for the generation of radiological materials

BT radiological terrorism requirements

internal contamination

BT contamination

NT contamination by inhalation

contamination by ingestion

contamination by wounds

Iodine-131

UF I-131

BT radioactive isotopes

K

KI

USE Potassium Iodide

L

low-level radioactive material sources

BT radioactive material sources

NT hospitals

construction sites

food irradiation plants

M

mass murder

BT radiological terrorism goals

medical response

BT consequence management

NT patient decontamination

triage

treatments

RT radiological injuries

N

N95 masks

BT radiation protection

natural environment effects
BT environmental effects
NT salting the earth
water supply effects
food chain effects
air-borne effects

necrosis
BT treatments

Neupogen
USE Filgrastim

neutropenia
BT treatments

nuclear bombs
USE nuclear explosives

nuclear explosives
UF nuclear weapons
nuclear bombs
BT explosives
NT improvised nuclear devices
RT dirty bombs

nuclear power plant incidents
BT radioactive material releases
RT nuclear power plants

nuclear power plants
BT high-level radioactive material sources
RT nuclear power plant incidents

nuclear weapons
USE nuclear explosives

nuclear weapons sites
BT high-level radioactive material sources
RT nuclear weapons

P

pain management
BT treatments

panic
BT fear, uncertainty, and doubt
RT psychological casualties
evacuation

patient decontamination
BT medical response

plastic surgery
USE reconstructive surgery

Plutonium-239

UF Pu-239
BT radioactive isotopes

Potassium Iodide
UF KI
BT treatments

Prussian blue
BT treatments

psychological casualties
BT radiological injuries
RT panic

Pu-239
USE Plutonium-239

public response
BT consequence management
NT evacuation
seeking shelter
removing clothing
washing
communicating instructions

R
radiation protection
NT N95 masks
dosimeter badges
RT consequence management

radioactive isotopes
NT Americium-241
Cesium-137
Cobalt-60
Iodine-131
Plutonium-239
Strontium-90
Uranium-235
Uranium-238

radioactive material releases
BT radiological terrorism scenarios
NT nuclear power plant incidents
hidden sources

radioactive material sources
NT high-level radioactive material sources
low-level radioactive material sources
RT availability of radioactive material
biodosimetry assessment tool

radiological dispersal devises
USE radiological weapons

radiological explosives
UF conventional explosives
BT explosives
RT dirty bombs

radiological injuries
NT acute radiation syndrome
cutaneous radiation syndrome
fetal effects
psychological casualties
contamination
RT medical response

radiological terrorism
BT terrorism
NT radiological terrorism goals
radiological terrorism scenarios
radiological terrorism requirements

radiological terrorism goals
BT radiological terrorism
NT fear, uncertainty, and doubt
assassination
mass murder

radiological terrorism requirements
BT intelligence
radiological terrorism
NT intensive industrial infrastructure
expertise with radiological material
availability of radioactive material

radiological terrorism scenarios
BT radiological terrorism
NT radioactive material releases
radiological weapons

radiological weapons
UF radiological dispersal devises
BT radiological terrorism scenarios
NT crop dusting
explosives

RDD
USE radiological dispersal devises

reconstructive surgery
UF plastic surgery
BT treatments

removing clothing
SN Refers to removing clothing that may have been contaminated after a radiological event
BT public response
RT clothing contamination

S

salting the earth
SN Use of radiological weapons to destroy agricultural use of land.
BT natural environment effects

seeking shelter
BT public response

skin contamination
BT external contamination
RT washing

Sr-90
USE Strontium-90

Strontium-90
UF Sr-90
BT radioactive isotopes

T
terrorism
NT radiological terrorism

treatments
BT medical response
NT Potassium Iodide
Diethylenetriaminepentaacetate
Prussian blue
Filgrastim
neutropenia
pain management
necrosis
reconstructive surgery

triage
BT medical response
NT biodosimetry assessment tool
Andrews lymphocyte nomogram

U
U-235
USE Uranium-235

U-238
USE Uranium-238

Uranium-235
UF U-235
BT radioactive isotopes

Uranium-238
UF U-238
BT radioactive isotopes

W
washing
SN Refers to washing in an attempt to remove radioactive particles from the body after a radiological event
BT public response
RT skin contamination
hair contamination

water supply effects
BT natural environment effects
NT water table

water table
    BT water supply effects

weather conditions
    BT air-borne effects

Z

Zn-DTPA
    BT Diethylenetriaminepentaacetate

Hierarchical Display

combatting radiological terrorism
.antiterrorism
.counterterrorism
.intelligence
..radiological terrorism requirements
...intensive industrial infrastructure
...expertise with radiological material
...availability of radioactive material
..inspection
..detection
.consequence management
..medical response
...patient decontamination
...triage
....biodosimetry assessment tool
....Andrews lymphocyte nomogram
...treatments
....Potassium Iodide
....Diethylenetriaminepentaacetate
.....Zn-DTPA
.....Ca-DTPA
....Prussian blue
....Filgrastim
....neutropenia
....pain management
....necrosis
....reconstructive surgery
..public response
...evacuation
...seeking shelter
...removing clothing
...washing
...communicating instructions

environmental effects
.built environment effects
..area-denial method
.natural environment effects
..salting the earth
..water supply effects
...water table
..food chain effects
..air-borne effects
...weather conditions

radiation protection
.N95 masks
.dosimeter badges

radioactive isotopes
.Americium-241
.Cesium-137
.Cobalt-60
.Iodine-131
.Plutonium-239

Rotated Display

A

acute radiation syndrome
air-borne effects
Am-241 *USE Americium-241*
Americium-241
Andrews lymphocyte nomogram
antiterrorism
area-denial method
assassination
biodosimetry assessment tool
availability of radioactive material

B

dosimeter badges
biodosimetry assessment tool
Prussian blue
body fluid contamination
dirty bombs
nuclear bombs *USE nuclear explosives*
bone marrow syndrome
built environment effects

C

Ca-DTPA
cardiovascular / central nervous system syndrome
psychological casualties
cardiovascular / central nervous system syndrome
Cesium-137
food chain effects
removing clothing
clothing contamination
CV / CNS syndrome *USE cardiovascular / central nervous system syndrome*
Co-60 *USE Cobalt-60*
Cobalt-60
combatting radiological terrorism
communicating instructions
weather conditions
consequence management
construction sites
internal contamination
home contamination
body fluid contamination
contamination
external contamination
clothing contamination
hair contamination
skin contamination
contamination by ingestion
contamination by inhalation
contamination by wounds
conventional explosives *USE radiological explosives*
counterterrorism
crop dusting

Thesaurus Design

The design of this thesaurus was a three step process. First was finding source material. I searched through the materials you provided in class, but only found a few documents that were really relevant to my topic. I decided to also look at a general encyclopedia for a starting point and then found a few government agency web sites dealing with radiological terrorism and medical response. The next stage, term collection, was fairly easy, and I actually ended up with many more than the 50 or so required for the assignment. I read through each of the sources and compiled a plain text file of terms with usage notes as needed. If I encountered terms that had a clear relationships (symptoms of a disease, for example) I kept the hierarchy in my term list.

The final step, organizing and building the thesaurus from the terms, was done with a combination of shuffling my term list around and using your thesaurus web application. I played with the web application enough in class to know that the easiest way to do it was to create a text file to import with all the broader/narrower terms already mapped out, then enter in synonyms, related terms, and scope notes using the application. It was during this stage that I read the Z39.19 recommendations and rewrote my terms to better match it. The first thing I did was make plurals and capitalization consistent. I also tried to make the terms stand up better on their own, so, for example, "goals" became "goals of radiological terrorism" so than any searcher coming across the term will not be confused as to who's goals this term refers to. I also tried to remove prepositions and adjective descriptors as well, so "goals of radiological terrorism" became "radiological terrorism goals."

I tried to make the hierarchy sensible and parallel if possible. For example, if there are symptoms as narrower terms for "acute radiation syndrome," there should be symptoms for "cutaneous radiation syndrome" as well. I have not been completely consistent on what broader and narrower mean, with narrower terms sometimes being types, instances, symptoms, etc., but I don't think such a varied field allows me to be more consistent. If I was doing only radiological diseases, I could be more specific, but even a subset of terrorism still covers too much ground to say narrower only means "a part of" or "one instance of."

I also tried to fit all of my terms into essentially one hierarchy. I am not sure if this is the most correct way to organize a thesaurus. In fact, one of the strengths of a thesaurus is that it allows multiple hierarchies—a term can have more than one broader term. All of my terms seemed to fit well into one hierarchy, though, and with the use of related terms I think I have connected everything that should be.

Your thesaurus application was useful, but I did want to mention some usability concerns. For one thing, every time I switched displays or went form viewing to editing the thesaurus, I had to re-choose my thesaurus. This was an extra step between virtually every action I performed. Also, I noticed many people in class were confused by the sue of the pointing finger icon in the editing template and how the thesaurus editor and editing template were related. These do not seem to be very difficult problems to solve, and they would may the tool that much easier.