

CT Update

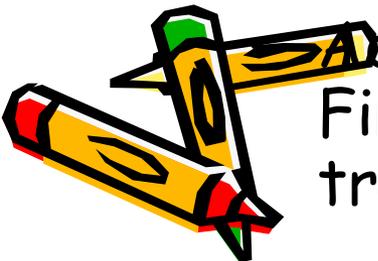
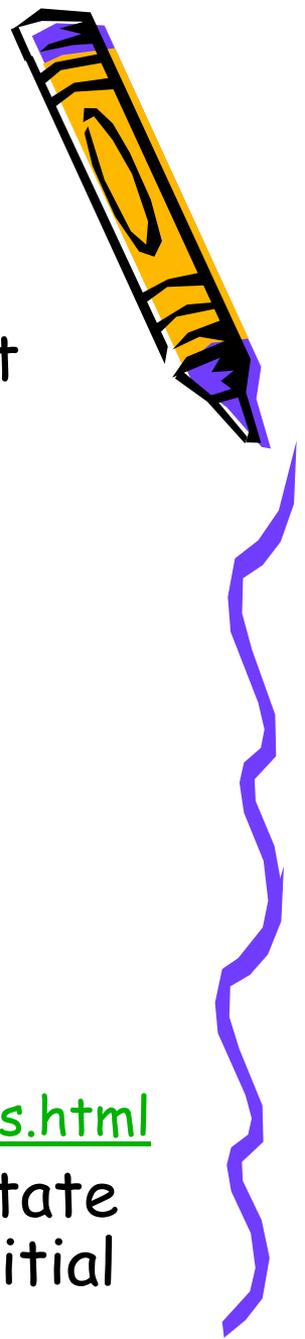
23 June 2011



Clinical Packaging and Shipping Training

- Classroom (teleconference refresher credit only)
 - 22 July 2011 from 0900 - 1500
 - 27 July 2011 from 0900 - 1500
- Hands on evaluation and examination
- Receive certificates and materials back
- Course Material Requests and Questions:
 - Tara.Lydick@state.de.us
 - (302) 223-1520
- Shipping Briefs and Materials:
 - <http://www.dhss.delaware.gov/dhss/dph/lab/labs.html>

Additional courses through the Delaware State Fire School (Fall 2011) for refresher and initial training



Clinical Specimens Shipping and Packaging Changes



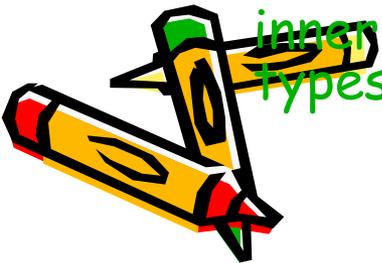
- Packing Instruction Numbers
 - UN2814: Infectious substance, affecting humans: **PI620 (NEW)**
 - UN2900: Infectious substance, affecting animals [only]: **PI620 (NEW)**
 - UN3373: Biological Substance, Category B: **PI650**
 - UN1845: Dry Ice/Carbon Dioxide, Solid: **PI954 (NEW)**
 - UN3245: Genetically modified micro-organisms; genetically modified organisms: **PI959 (NEW)**
- Electronic Shipper's Declarations required by FedEx and other carriers
 - Specific to carrier



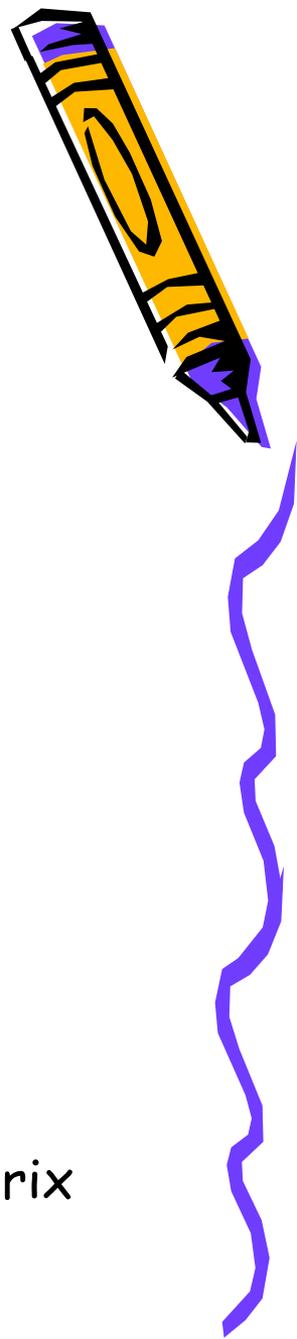
Clinical Specimens Shipping and Packaging Changes



- Cushioning material
 - Secure inner packagings from breakage, puncture, or release of contents into outer packaging
 - Closures oriented upward
 - Leakage cannot impair protective properties of cushioning material
 - Closures of primary containers are required be held securely by secondary means, such as adhesive tape, or friction sleeves.
 - When it is not possible to apply a secondary means of closure a leakproof liner must be used.
- Inner packagings containing infectious substances must not be consolidated with inner packagings containing unrelated types of goods.



CT Testing



- Urine

- Tetramine
- Monofluoroacetate
- Monochloroacetate
- Nerve Agent
Metabolites
- Ricinine
- Atrine
- Multiple Toxic
Elements
- Arsenic and Selenium

- Blood

- Mercury
- Lead
- Cadmium
- Cyanide
- Volatile Organic
Compounds

- Environmental
Samples

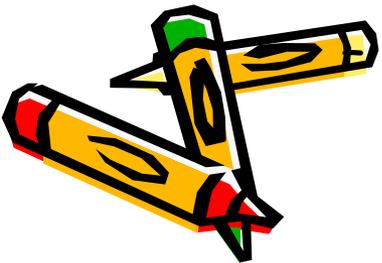
- Soluble in water
- Extractable in matrix



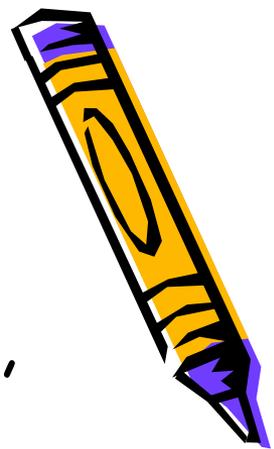
Environmental Specimen Collection & Referral Training



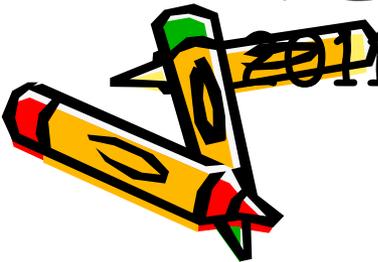
- Classroom
 - 25 August 2011 from 0900 - 1200
 - 26 August 2011 from 0900 - 1200
- Hands on evaluation and examination
- Submit documentation and packages to DPHL for evaluation within 2 weeks of course
- Receive certificates and materials back
- Course Material Requests and Questions:
 - Tara.Lydick@state.de.us
 - (302) 223-1520
- Collection Briefs and Materials Lists:
<http://www.dhss.delaware.gov/dhss/dph/lab/labs.html>



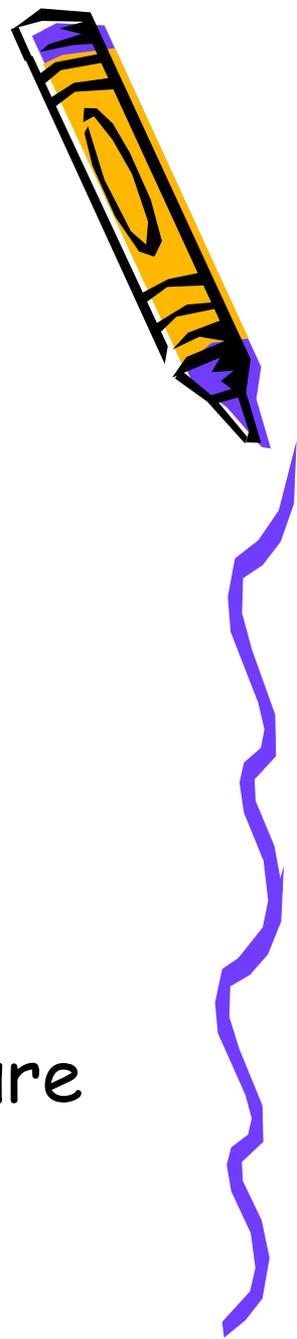
Inspections and Exercises



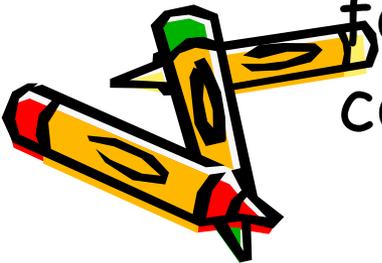
- First Responder Walk-Thru - March 28, 2011
- Select Agent Surprise Inspection - March 29, 2011
- Surprise US DOT HazMat Inspection - June 15, 2011
- CDC First Receiver Exercise - March 30, 2011
- PHEP Project Officer Visit - Jul 11 - 15, 2011 (DE wide)



Findings - Walk-thru

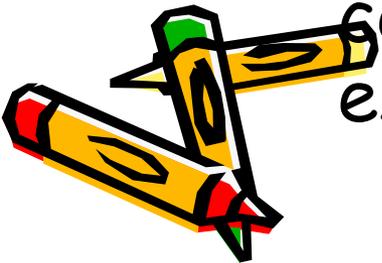


- First Responders nervous about facility
 - "Where can I go?"
 - "What shouldn't I do?"
 - Good recommendations on future facility work
- EMS more comfortable
 - Requested session to review procedure for potential exposure and/or contamination

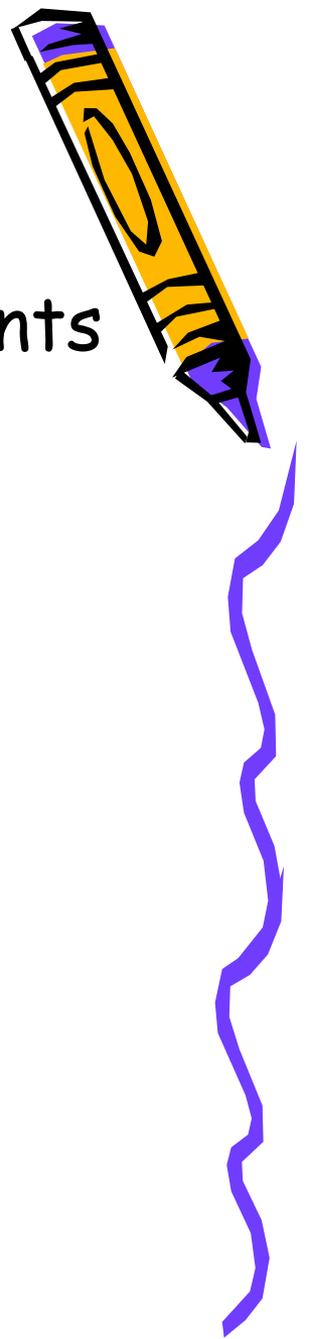


Findings - DSAT

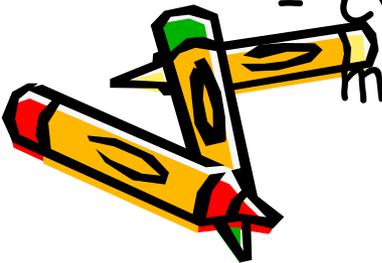
- Security Plan - did not include explicit training provided to Visitors and responders to DPHL or BSL3 areas
- Training records - easily accessible, much improvement, would like to see electronic (US DOT), hardcopy (DSA&T)
 - Federal guidance for any training or certification - requires documented exam and competency evaluation



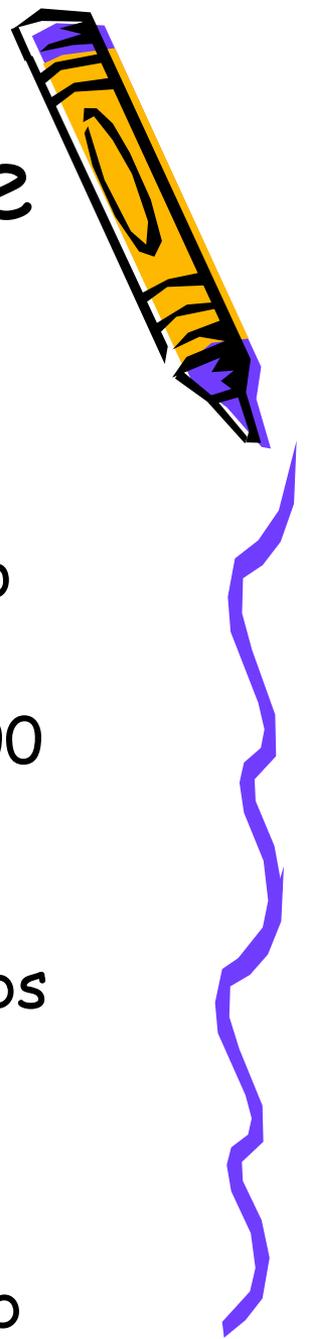
Findings - US DOT



- Security Policy - 100% ID for all entrants to DPHL (excluding DPHL employees)
 - Vendors, routine visitors, etc.
- Packing Directions/Inserts
 - Must have posted and/or immediately accessible
 - Staff asked to demonstrate packaging and packing of sample
- Documentation - high priority
 - Cylinder stamps, facility diagrams, waste manifests, etc.

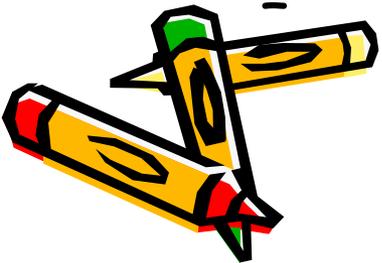


CDC First Receiver Exercise

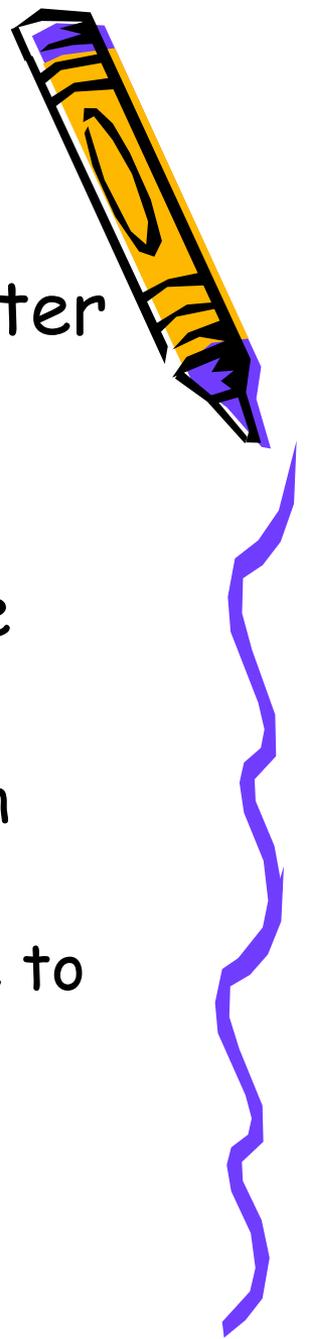


- Objectives

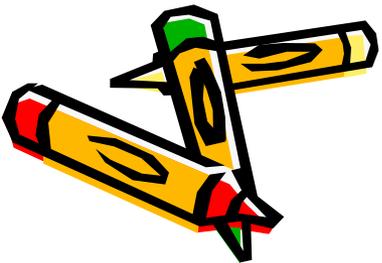
- Apply epi prioritization of initial ~200 samples to identify first 40 high priority samples for CERT team transport back to CDC
- Test prioritization process for first 3,000 samples to be run by CDC Radiological Laboratory
- Test prioritization messaging to surge labs for remaining ~7,000 samples
- Tier 1 (surge) labs receive and analyze remaining ~7,000 samples with assigned prioritization (20% of samples to each lab will be priority)



First Receiver Exercise



- 3/29/2011, rock concert at Bob Carpenter Center, U of D Newark campus
- ~5,000 students in attendance
- ~ 2 AM: large explosion from backstage
 - Casualties initially overwhelms EMS
 - Majority of minor wounded persons head on foot to nearby Newark Emergency Room
 - Many transported for further medical care to Christiana Care Medical Center

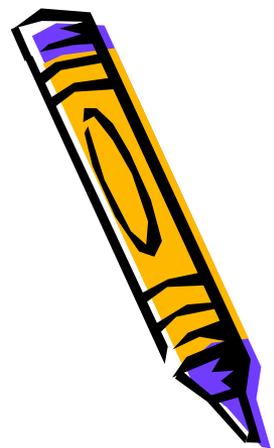


First Receiver Exercise

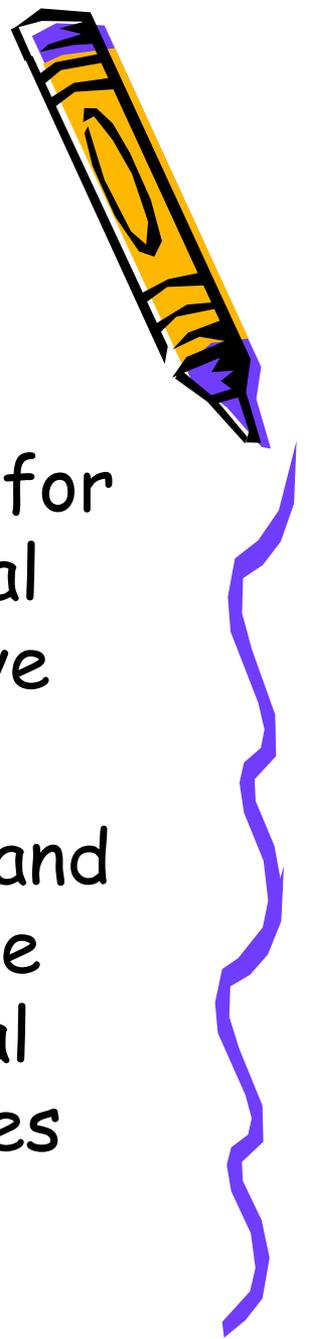
- ~ 3 AM Local Fire/Rescue and law enforcement setup ~1000 ft perimeter

- Initial theory: indoor pyrotechnics and special effects malfunction
- Trace levels suggestive
- Affected surviving blast victims: shortness of breath, profuse sweating, dizziness and low blood pressure

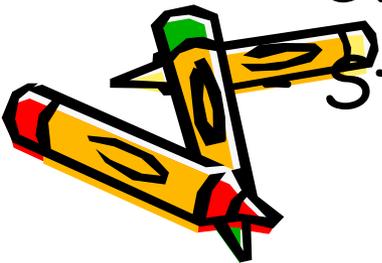
Hazmat team detects gamma signatures consistent with Uranium 238



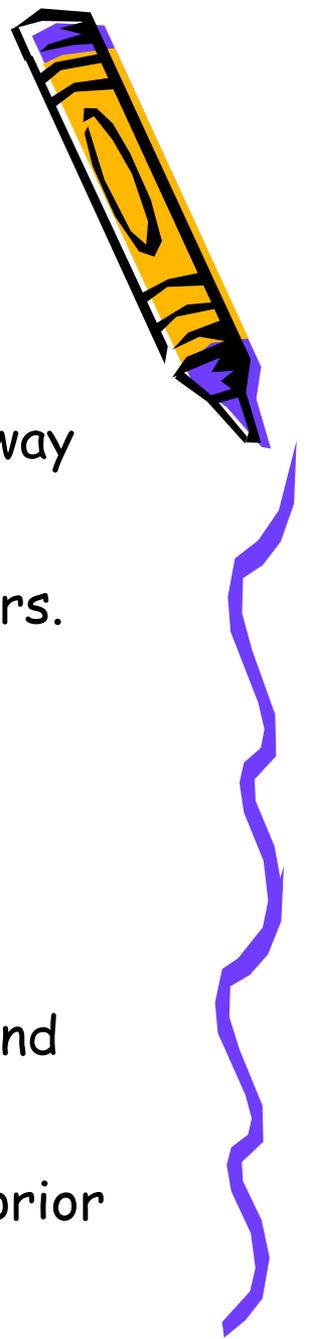
First Receiver Exercise



- ~ 6 AM Terrorist Event
 - Delaware Citizen's Brigade, a local anarchist group claims responsibility for detonation of an explosive radiological dispersal device containing radioactive Uranium
 - Federal law enforcement, CDC, DOE and EPA alerted by the State of Delaware of a possible chemical and radiological event with mass casualties and injuries
 - State requests immediate assistance



First Receiver Exercise



- 3/30/11 06:00
 - DENS alert for "shelter in place"
 - I-95 is shut down, existing traffic rerouted, several hundreds of motorists initially stranded on the highway between 3 AM and 6 AM
 - People within 10 mile radius panic and disregard the order, leaving their residences on foot, buses and cars.
 - Local and state law enforcement attempts to regain crowd control.
- 3/30/11 08:00
 - DE Office of Radiation Control mobilized
 - Checkpoints and community reception centers begin radiation assessment and population monitoring
 - Severely injured or exposed sent to local hospitals and medical facilities
 - New Castle County Industrial Hazmat Response is providing decontamination to contaminated persons prior to EMS transport



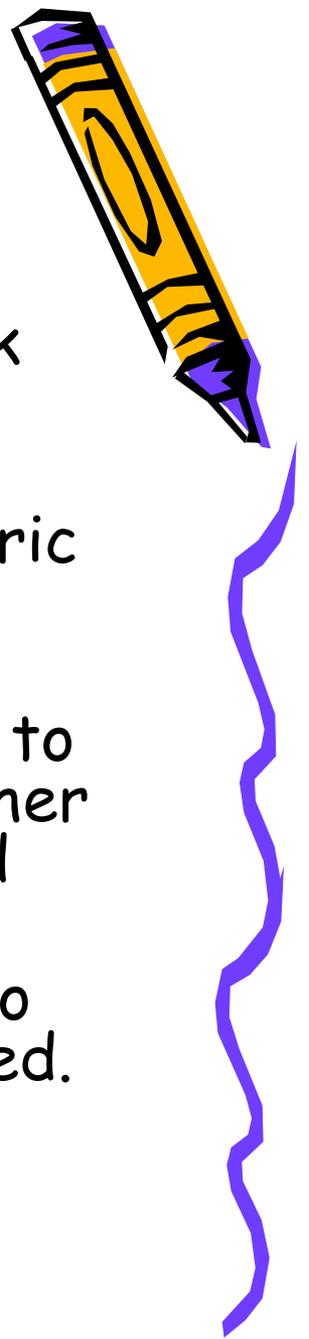
First Receiver Exercise



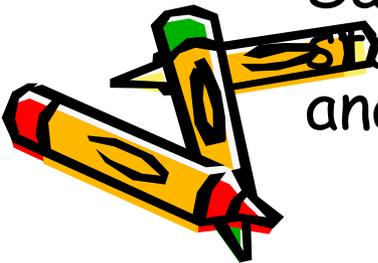
- 3/30/11 10:00
 - CDC deploys CERT team to collect initial 40 urine samples for the rapid toxicological and radiological screens
 - Laboratory and epidemiology personnel to Christiana Care Medical Center
 - Evaluate ~ 200 victims, 40 prioritize 40 samples for lab
 - Remaining samples to DPHL for testing or referral
- 3/30/11 14:00
 - Federal Radiological Monitoring and Assessment Center (FRMAC) per DHS is mobilized
 - Initial environmental radiological sampling to include soil and water samples within a 10 mile radius
 - Potable water source samples taken from the Newark Reservoir (<1 mile away) and nearby Christiana/Red Clay Creek watershed (2 miles away) will be sent to EPA labs



First Receiver Exercise



- 3/31/11-4/5/11
 - 10,000 urine samples collected from Newark including medical facilities, clinics and community reception centers.
 - FRMAC develops models based on atmospheric conditions and wind patterns at the time of release
 - Samples collected from people within 1 mile to several 10 miles away from ground zero, either within or outside of predicted contaminated areas according to these models.
 - Persons also range from severely wounded to asymptomatic and contaminated to unexposed.
 - Samples have been prioritized based on standard criteria and shipped to CDC for analysis



Findings



- Kicked off at 4AM - real world event, exhausted staff and personnel being mobilized
- CDC plane cannot land at DAFB or Summit, but can at New Castle / GWA
- Media relations a nightmare - everyone calls!
- Wi-fi or similar system is really needed at DPHL
 - CDC could not connect to internet or remote systems
 - Utilized blackberries and jump drives
 - "Sneaker net" in use
- Direct barcode linked scanning and electronic chain of custody generation would be awesome!
- Analysis takes time
 - 160 urine samples at 7 minutes per run plus prep consumes personnel and materials
 - MOUs with other laboratories is critical - EMAC does not cut it



CDC Specimen-Collection Protocol for a Chemical-Exposure Event

For detailed instructions see CDC's *Shipping Instructions for Specimens Collected from People Who May Have Been Exposed to Chemical-Terrorism Agents*.

Collect blood and urine samples for each person involved in the chemical-exposure event.

Note: For children, collect only urine samples unless otherwise directed by CDC.

Blood-Sample Collection

For each person, collect blood in glass or plastic tubes in the following order: 1st: collect specimens in three (3) EDTA (purple-top) 4 mL or larger plastic or glass tubes; 2nd: collect another specimen in one (1) gray- or green-top tube. Collect the specimens by following the steps below:

- 1** Collect a minimum of 12 mL of blood in three (3) 4 mL or larger glass or plastic tubes. If using 3 mL tubes, use four tubes.



Do not use gel separators.

- 2** Mix contents of tubes by inverting them 5 or 6 times.



Tube #1 Tube #2 Tube #3

Label tubes in order of collection. #1, #2, #3

- 3** Place bar-coded labels on each tube, so that when the tubes are upright, the barcode looks like a ladder.



Tube #1 Tube #2 Tube #3

Store samples at 1°C to 10°C.
Do not freeze.

- 4** After collecting samples in the purple-top tubes, collect one (1) sample in a gray- or green-top tube (gray-top tube shown). Allow the tube to fill to its stated capacity.



Do not use gel separators.

- 5** Mix contents of the tube by inverting it 5 or 6 times.



- 6** Place bar-coded labels on the tube, so that when the tube is upright, the barcode looks like a ladder.



Store samples at 1°C to 10°C.
Do not freeze.

Urine-Sample Collection

For each person, collect 25 mL- 50 mL of urine in a screw-cap urine cup.



Label the urine cup with the appropriate bar-coded label as shown. Indicate on the cup how the sample was collected if the method was other than "clean catch" (i.e., catheterization).

Freeze samples (optimally at -70°C).



Place bar-coded labels on all cups so that when the cup is upright, the barcode looks like a ladder.

Instructions for Shipping Blood Specimens to CDC after a Chemical-Exposure Event

Guidance in Accordance with Packaging Instructions International Air Transport Authority (IATA) 650 Biological Substance Category B

For detailed instructions see CDC's *Shipping Instructions for Specimens Collected from People Who May Have Been Exposed to Chemical-Terrorism Agents*.



Place purple- and gray- or green top tubes by patient number into gridded-type box lined with an absorbent pad. If using an alternative packaging method, pack all tubes from the same patient together while preventing tube-to-tube contact.



Seal gridded box or alternative secondary container with one continuous piece of evidence tape. The individual making the seal must initial half on the tape and half on the packaging.



Wrap gridded box in absorbent pad and tape to seal. Seal gridded box or alternative container inside a Saf-T-Pak clear inner, leak-proof polybag (or equivalent).



Place the sealed Saf-T-Pak inner leak-proof polybag (or equivalent) inside a white Tyvek® outer envelope (or equivalent). **Note: If primary receptacles do not meet the internal pressure requirement of 95 kPa, use compliant secondary packaging materials.**



Seal the opening of this envelope with a continuous piece of evidence tape. Write initials half on the evidence tape and half on the envelope.



Use polystyrene foam-insulated, corrugated fiberboard shipper to ship boxes to CDC. Place absorbent material in the bottom of the shipper.



Place refrigerator packs in a single layer on top of the absorbent material.



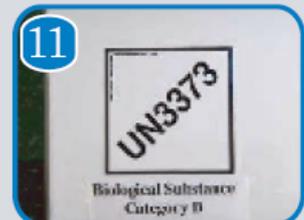
Place the packaged specimens in the shipper. Use cushioning material to minimize shifting while box is in transit. Place additional refrigerator packs on top of samples.



Place the blood shipping manifest in a sealable plastic bag and put on top of the sample boxes inside the shipper. **Keep your chain-of-custody documents for your files.** Place lid on the shipper.



Secure the shipper lid with filamentous shipping tape. Place your return address in the upper left-hand corner of the shipper top and put the CDC Laboratory receiving address in the center.



Add the UN 3373 label and the words "Biological Substance Category B" on the front of the shipper. UN 3373 is the code identifying the shipper's contents as "Biological Substance, Category B."



Send shipment via FedEx to:
Centers for Disease Control and Prevention
Attn: Lt. Ernest McGahee
4770 Buford Hwy.
Building 110 Loading Dock
Atlanta, GA 30341
(770) 488-7579

For questions concerning this process, please contact:

Centers for Disease Control and Prevention
Attn: Cecelia Sanders, Chemical Emergency Response Team Leader
4770 Buford Hwy.
Building 110 Loading Dock
Atlanta, GA 30341

Office: (770) 488-4034
Cell: (770) 294-4124

Instructions for Shipping Urine Specimens to CDC after a Chemical-Exposure Event

Guidance in Accordance with Packaging Instructions International Air Transport Authority (IATA) 650 Biological Substance Category B

For detailed instructions, see CDC's *Shipping Instructions for Specimens Collected from People Who May Have Been Exposed to Chemical-Terrorism Agents*.



Use a gridded box or individually wrapped cups sealed with evidence tape to separate urine cups. Place absorbent material in the bottom of the box and insert the cups.



Use one continuous piece of evidence tape to seal the gridded box or Saf-T-Pak inner leak-proof polybag (or equivalent) containing wrapped urine cup(s). Write initials half on the evidence tape and half on the box or bag.



Wrap the gridded box with absorbent material and secure with tape. Seal the box inside a Saf-T-Pak inner leak-proof polybag (or equivalent).



Place the sealed Saf-T-Pak inner leak-proof polybag (or equivalent) inside a white Tyvek® outer envelope (or equivalent).
Note: If primary receptacles do not meet the internal pressure requirement of 95 kPa, use compliant secondary packaging materials.



Seal the opening of this envelope with a continuous piece of evidence tape. Write initials half on the evidence tape and half on the envelope.



Use polystyrene foam-insulated, corrugated fiberboard shipper to ship boxes to CDC. Place absorbent pad in the bottom of the shipper.



Place a layer of dry ice in the bottom of the shipper on top of the absorbent material. **DO NOT** use large chunks or flakes of dry ice.



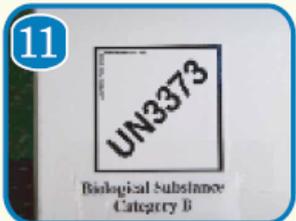
Place the packaged urine cups in the shipper. Use absorbent material or cushioning material to minimize shifting while box is in transit. Place additional dry ice on top of samples.



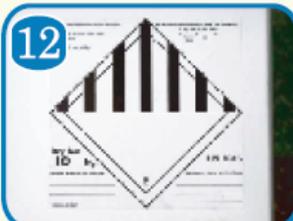
Place the urine shipping manifest in a sealable plastic bag and put on top of the sample boxes inside the shipper. **Keep your chain-of-custody documents for your files.** Place lid on the shipper.



Secure the outer container lid with filamentous shipping tape. Place your return address in the upper left-hand corner of the shipper top and put the CDC Laboratory receiving address in the center.



Add the UN 3373 label and the words "Biological Substance Category B" on the front of the shipper. UN 3373 is the code identifying the shipper's contents as "Biological Substance, Category B."



Place a Class 9/UN 1845 label on the front of the shipper. This label for dry ice **MUST** indicate the weight of dry ice (in kg) in the shipper and the proper name (either dry ice or carbon dioxide, solid).



Send shipment via FedEx to:
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4770 Buford Hwy.
Building 110 Loading Dock
Atlanta, GA 30341
(770) 488-7579

For questions concerning this process, please contact:

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Attn: Cecelia Sanders, Chemical Emergency Response Team Leader
4770 Buford Hwy.
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Atlanta, GA 30341
Office: (770) 488-4034
Cell: (770) 294-4124

Centers for Disease Control and Prevention Specimen-Collection Protocol for a Radiological/Nuclear Incident

For detailed instructions, see the Centers for Disease Control and Prevention's "Shipping Instructions for Specimens Collected from People who may have been contaminated with Radioactive Materials."
For each person, collect 70 mL or more of urine in a screw-cap urine cup by following the steps below:



1. Wash hands with soap and water.



2. Collect 70 mL or more of urine in a screw-cap urine cup.



3. Deliver specimen to clinic personnel.



4. Label the urine cup with the appropriate bar-coded label, indicating the method of collection if other than "clean catch."



5. Place bar-coded label on all cups so that when upright, the barcode looks like a ladder.



6. Freeze samples (optimally at -70° C or use dry ice).

For questions concerning this process, please contact:
Centers for Disease Control and Prevention
Sample Logistics Laboratory (IRAT)
4770 Buford Hwy., NE
Building 110, Loading Dock
Atlanta, GA 30341
Office Phone: 770-488-7227
Email: SampleLogistics@CDC.gov



**U.S. Department of
Health and Human Services**
Centers for Disease
Control and Prevention

10/2010

Instructions for Shipping Urine Specimens to the Centers for Disease Control and Prevention after a Radiological/Nuclear Incident

This guidance is in accordance with the International Air Transport Authority (IATA) Packing Instruction 650 for Biological Substance, Category B.

For detailed instructions, see the Centers for Disease Control and Prevention (CDC)'s "Shipping Instructions for Specimens Collected from People Who May Have Been contaminated with Radioactive Materials."



1. To separate urine cups, use a grid and/or individually wrap the urine cups. Place absorbent material in the bottom of the box and insert the cups.



2. Use one continuous piece of evidence tape to seal the box containing the urine cup(s). Write initials half on the evidence tape and half on the box or bag.



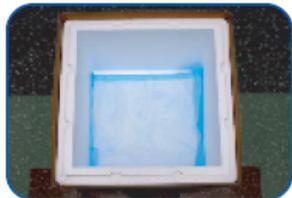
3. Wrap the box with absorbent material and secure with tape. Seal the box inside a Saf-T-Pak inner leak-proof polybag (or equivalent).



4. Place the sealed Saf-T-Pak inner leak-proof polybag (or equivalent) inside a white Tyvek® outer envelope (or equivalent). Note: If primary receptacles do not meet the internal pressure requirement of 95 kPa, use compliant secondary packaging materials.



5. Seal the opening of this outer envelope with a continuous piece of evidence tape. Write initials half on the evidence tape and half on the envelope.



6. Use a polystyrene foam-insulated, corrugated fiberboard shipper to ship boxes to CDC. Place an absorbent pad in the bottom of the shipper.



7. Place a layer of dry ice in the bottom of the shipper on top of the absorbent material. DO NOT use large chunks or flakes of dry ice.



8. Place the packaged urine cups in the shipper. Use absorbent material or cushioning material to minimize shifting while box is in transit. Place additional dry ice on top of samples.



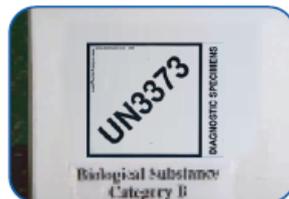
9. Place the urine shipping manifest in a sealable plastic bag and put the bag on top of the packaged samples inside the shipper. Keep chain-of-custody documents for your files. Place lid on the shipper.



10. Secure the outer container lid with filamentous shipping tape. Place your return address in the upper left-hand corner of the shipper top and put the CDC receiving address in the center (see Instruction 13. below for address).

For questions concerning this process, please contact:

Centers for Disease Control and Prevention
 Sample Logistics Laboratory (IRAT)
 4770 Buford Hwy., NE
 Building 110, Loading Dock
 Atlanta, GA 30341
 Phone: 770-488-7227
 Email: SampleLogistics@CDC.gov



11. Add the UN 3373 label and the words "Biological Substance, Category B" on the front of the shipper. UN 3373 is the code identifying the shipper's contents as "Biological Substance, Category B."



12. Place a Class 9/UN 1845 label on the front of the shipper. This label is to indicate the use of dry ice (in kg) in the shipper and the proper name (either dry ice or carbon dioxide, solid)



13. Send shipment to:
 Centers for Disease Control and Prevention
 Attention: Sample Logistics
 4770 Buford Hwy., NE
 Building 110, Loading Dock
 Atlanta, GA 30341
 Phone: 770-488-7227

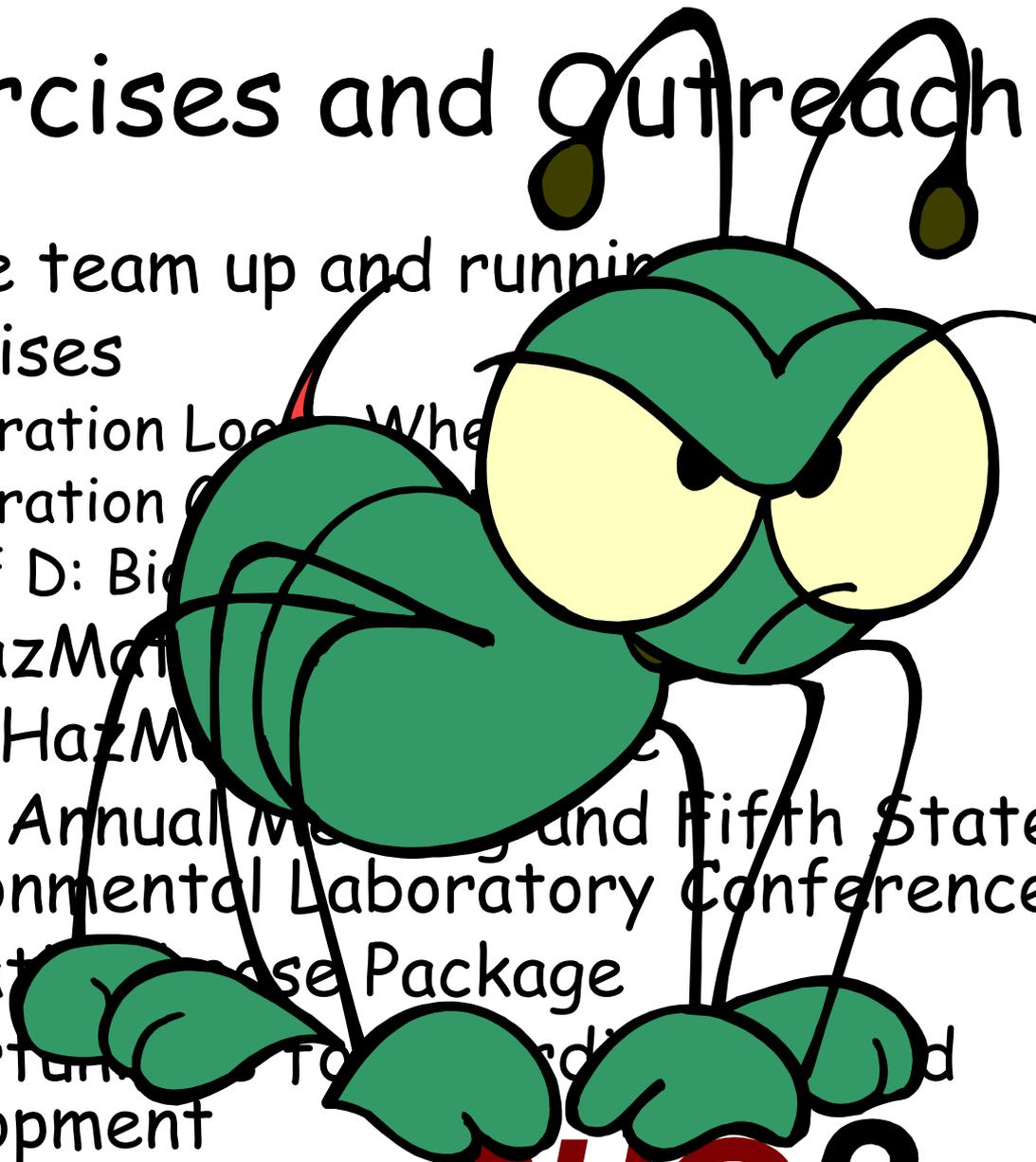
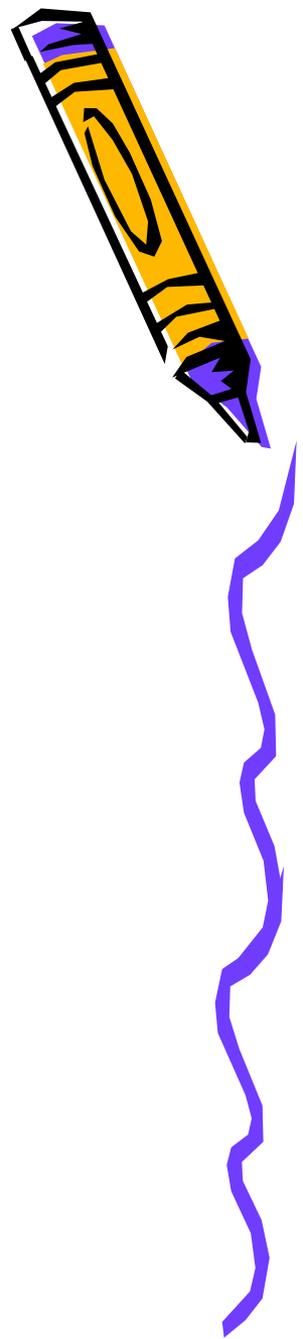


U.S. Department of
 Health and Human Services
 Centers for Disease
 Control and Prevention

Exercises and Outreach

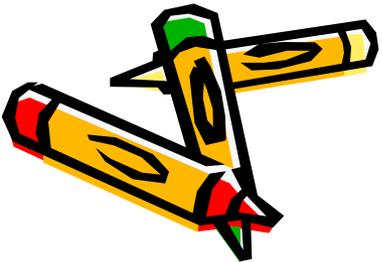
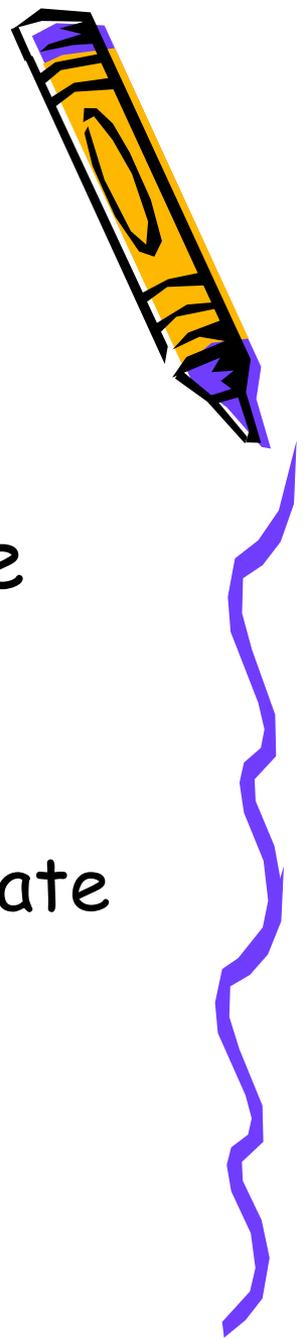
- Triage team up and running
- Exercises
 - Operation Local
 - Operation
 - U of D: Bio
- DE HazMat
- IAFC HazMat
- APHL Annual Meeting and Fifth State Environmental Laboratory Conference
- Operational Case Package
- Opportunities for development

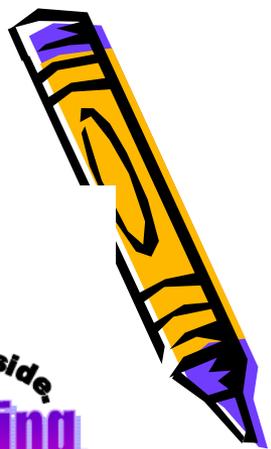
Got a **BUG**?



Triage Team

- Weekly triage training
- Ground-up re-write of protocols
- Continual improvement and practice
 - Simple: letters with powder, liquid
 - Moderate: minute or trace materials
 - Complex: multi-component or multi-state materials

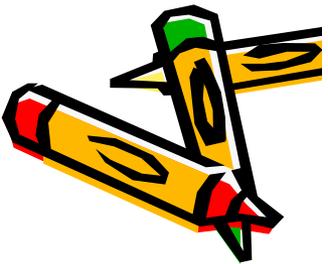


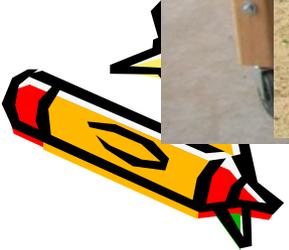


and aside.
ailing.



You were elected
the people of your
tyranny that now en
To come before the Div
Is death. To touch this
The travesty that is our Hea
People from the path of E
You MUST throw off the shackles
TAKE ACTION NOW! JOIN US OR DIE
Delaware Citizens



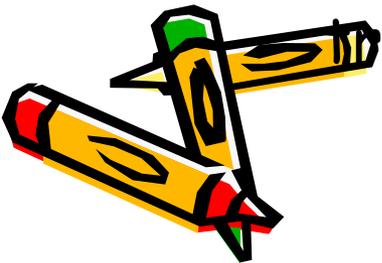


Operation Loose Wheel

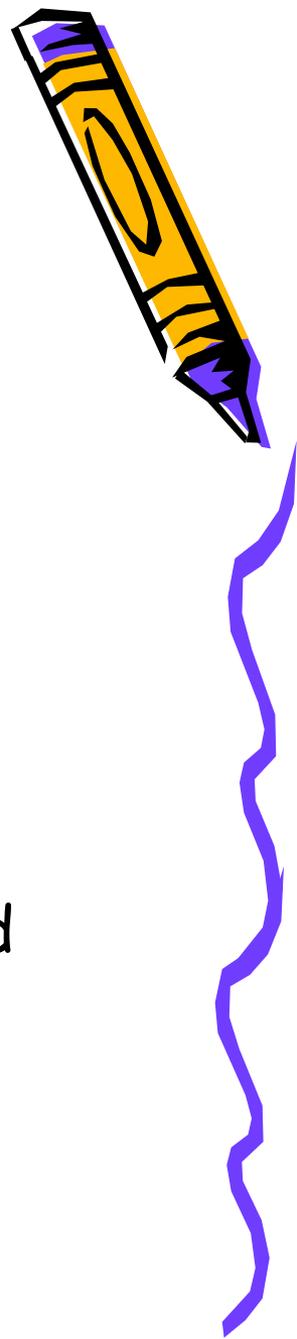


- **Scenario Summary**

- An unknown powder is discovered in the ductwork of the Dover Downs administrative offices the day before a NASCAR race
- Sample is brought from Dover Downs to the lab without authorization and contaminates the dock
- The 31st CST assists DPHL in decontaminating the dock and collection of an evidentiary sample
- Clinical samples from potentially exposed staff are sent to DPHL for confirmation and treatment options for patients

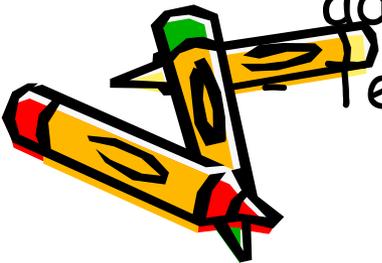


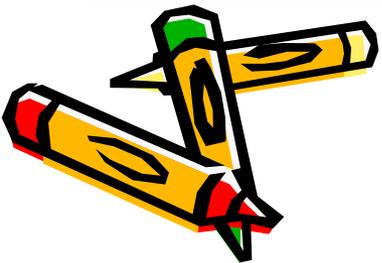
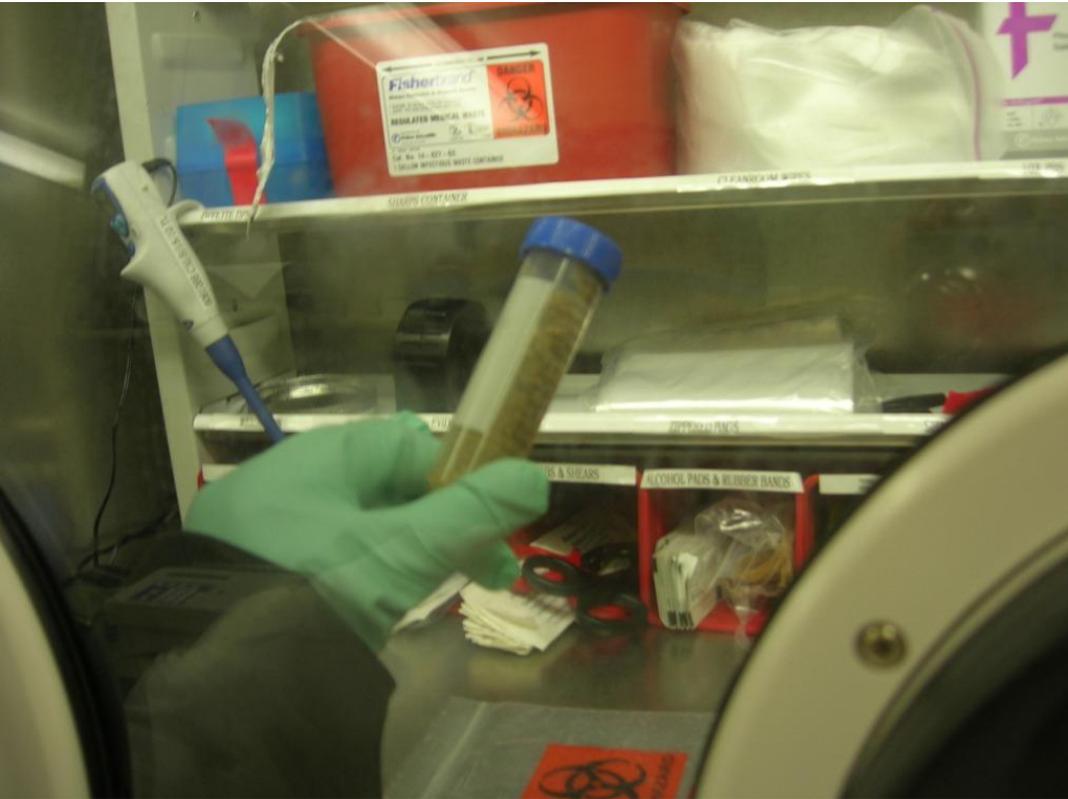
Operation Loose Wheel



- **Scenario Objectives**

- Test DPHL triage response for unknown materials receipt at DPHL
- Test DPHL and CST response to a potential contamination incident at DPHL
- Test coordination and call-out of CST in support of DPHL
- Test data exchange of CST and DPHL
- Test multi-matrix analyte prioritization and testing at DPHL
- Test LIMS reporting tests for triage and additional testing
- Test DPHL adherence to current protocols





Findings Operation Loose Wheel

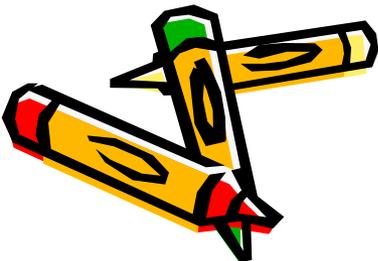


- Multi-component samples are difficult and can require extensive separation and analysis
- Degradation can result in no significant sample result
- Full unknown triage without screening takes 3 - 4 hours - long time in PPE and in the glovebox
- Not all assets are available at all times - adaptability and coordination is key
- Environmental screening with instrumentation - no formal protocol, adapt and institute



Operation Green Wonder

- Tested triage process
- Test limitations of screening equipment
- DPHL, CST



You have been selected for an *exclusive* marketing trial of DCB's new dehydrated anti-bacterial soap

GREEN WONDER[®]

This EXCITING NEW product is designed for the on-the-go professional for everyday use.

GREEN WONDER[®]

is effective against a broad spectrum of bacteria, fungi, and viruses including influenza virus, Norovirus, HIV, antibiotic-resistant strains of staphylococcus (MRSA) and enterococcus**.

It's *revolutionary* green design reduces the amount of hazardous Plastic containers going to the landfill everyday. Sealed in a small, easy to use recycled paper package, simply open **GREEN WONDER[®]** and rub vigorously; no water is needed!

GREEN WONDER[®] dissolves readily in water for larger jobs:

- Cleaning bathroom surfaces and countertops
- Disinfecting athletic mats and equipment
- Wiping doorknobs, work surfaces, etc.

GREEN WONDER[®]

NOW WITH ALMOND SCENT!
YOU CAN FEEL THE CLEAN!

ORDER MORE FABULOUS **GREEN WONDER[®]** AT:

http://www.DCB.com/GREEN_WONDEROFFER

or call (866) 879-7850

Mention this flyer and get 25% off your first order!

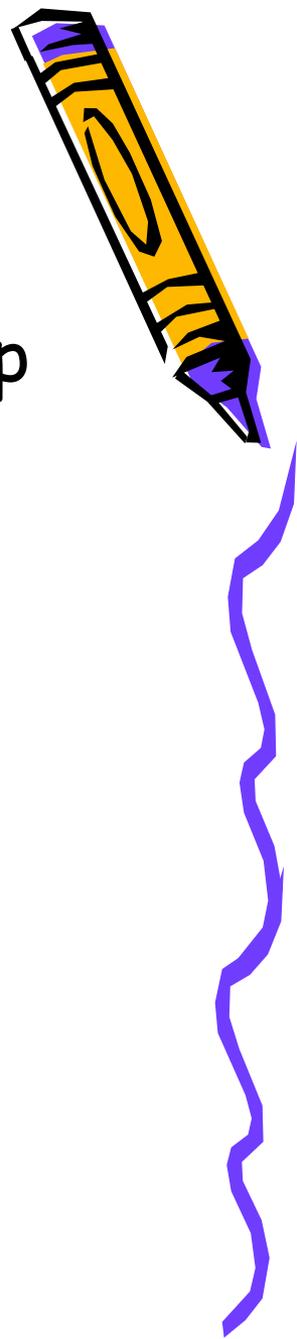
Order FREE TRIAL sizes to share

GREEN WONDER[®] with others

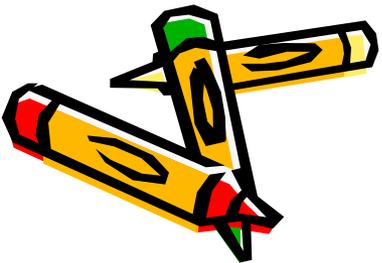
**Guaranteed effective against: Rotavirus, Polio, ringworm, Clostridium difficile, household molds, *Giardia lamblia*, *Cryptosporidium*, Hepatitis A, B and C, impetigo, mycobacterium tuberculosis, fungal and bacterial spores, *Penicillium chrysogenum*

DCB is a family coop working for a greener world.

IAFC HazMat Conference

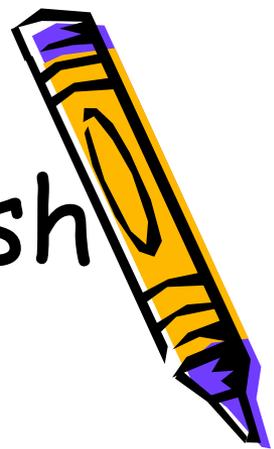


- "Where Does My Sample Go?" Field Trip
 - Tour and Overview
 - Operation Fried Starfish
 - Increased interaction!
 - Next year...
- ASTM 2770 Guidance
- RAZOR SPADA evaluation
- Unknown Environmental ID



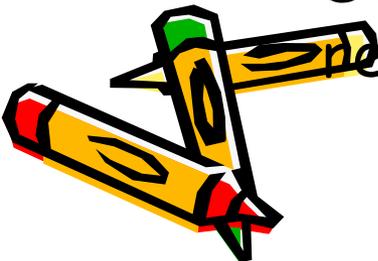


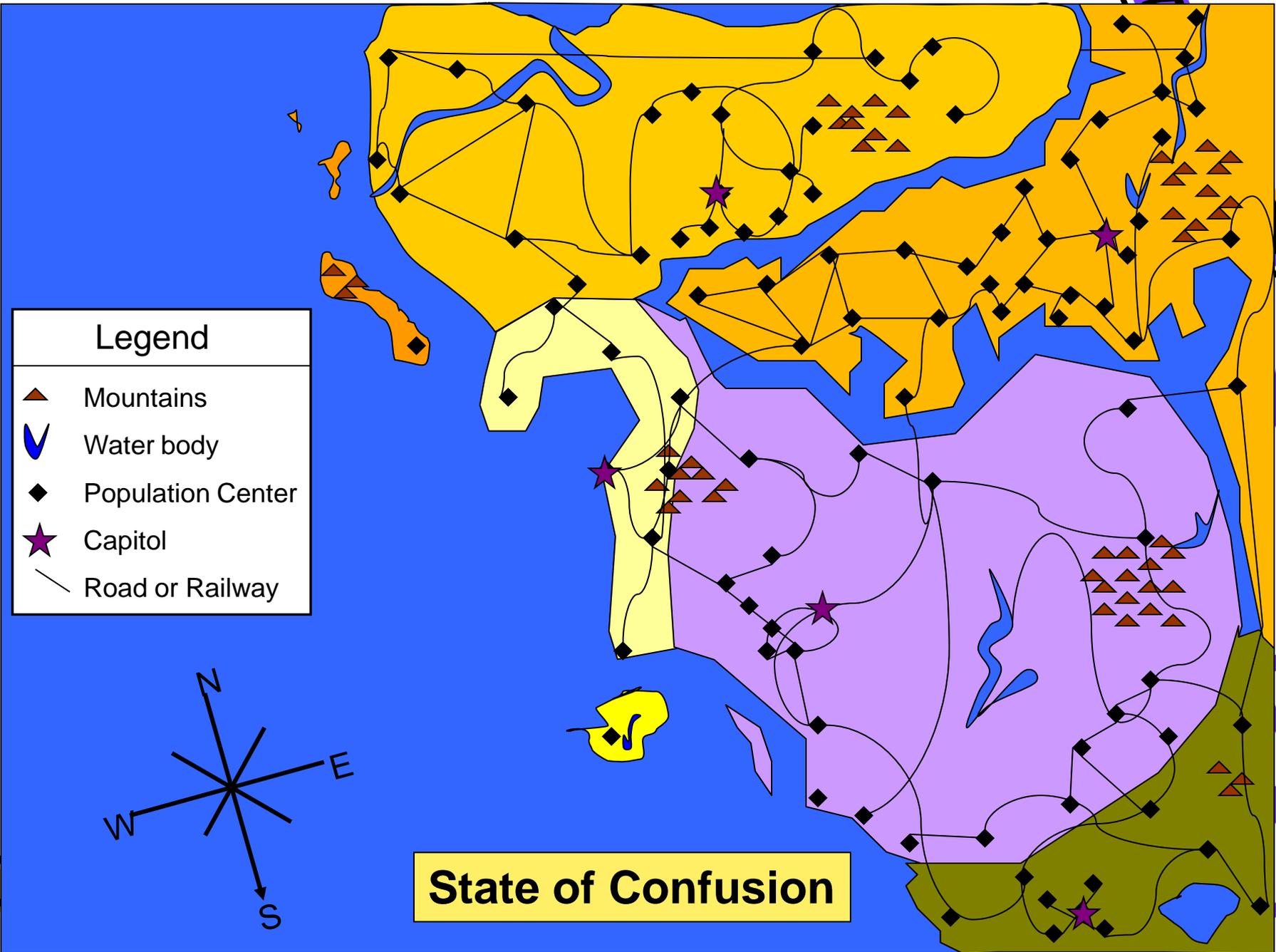
Exercise Fried Starfish



- Objectives:

- Evaluate special considerations responding to an Emergency Response Laboratory
- Determine additional actions needed to support responder safety pre, during, and post event
- Determine appropriate samples for analysis
- Evaluate referral and/or coordination needs within jurisdiction
- Determine different mitigation tactics and/or requirements within the fixed facility





Legend

- ▲ Mountains
- ∩ Water body
- ◆ Population Center
- ★ Capitol
- Road or Railway

State of Confusion



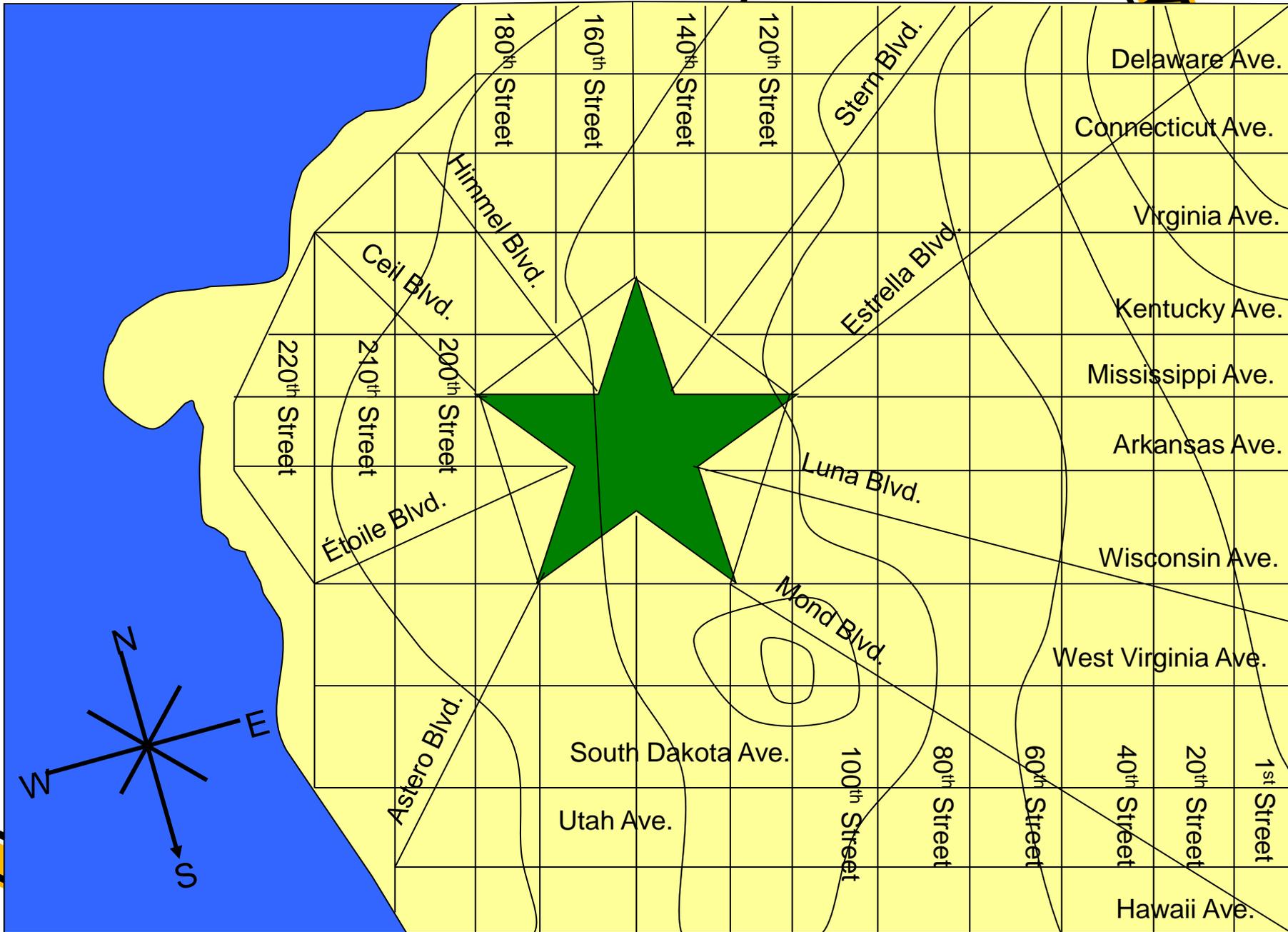
Star City, CF*



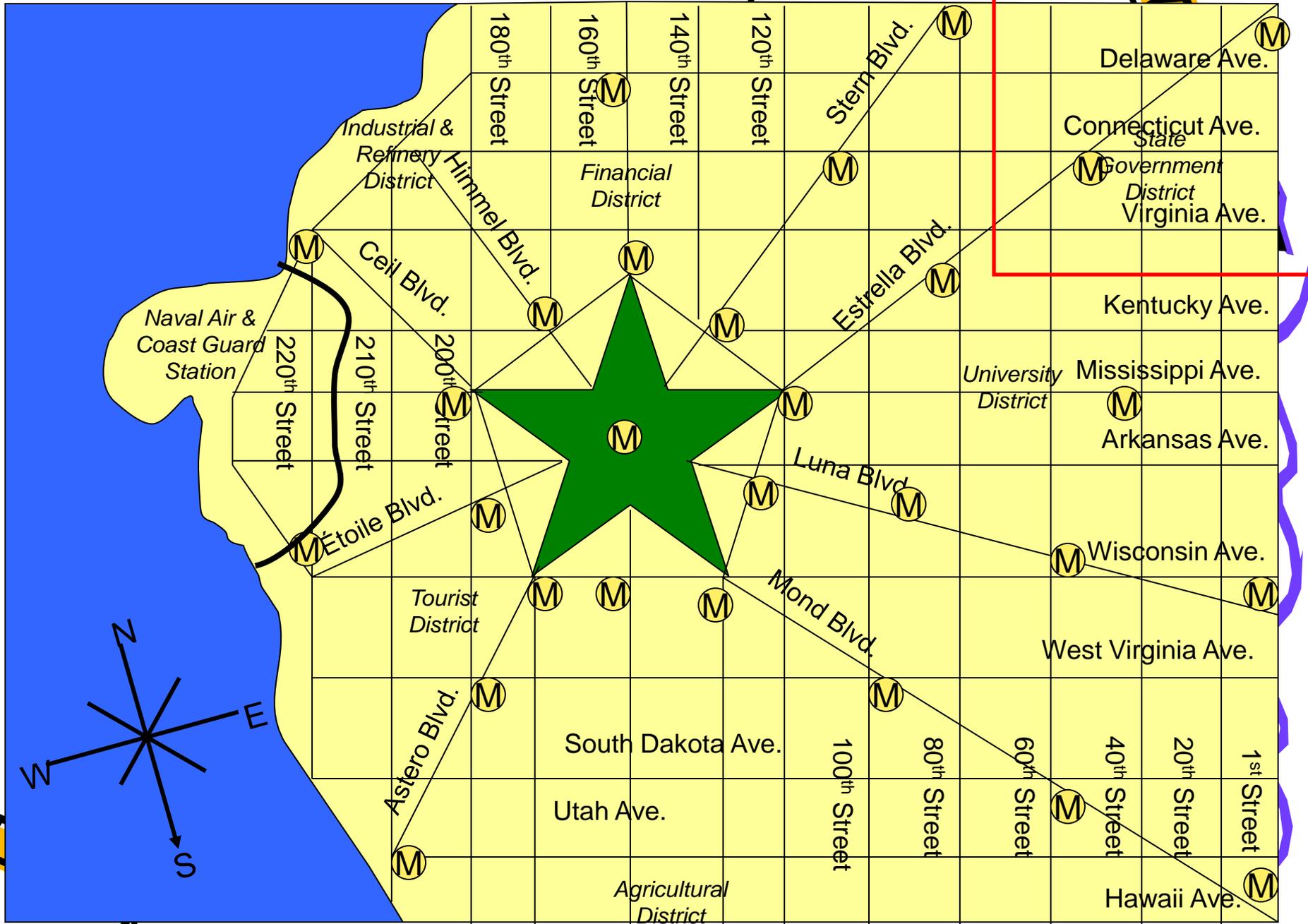
- "Home of the Fried Starfish"
- Population: 450,000 (+100,000+ during tourist season)
- 168 square miles
- Fifteen hospitals, seventeen major universities, multi-tiered medical system on the district level
- State Capital of Confusion
 - Houses multiple state, county, city governmental agencies
- Multiple freight and passenger railways throughout, extensively connections to national and local services
- Bustling historical district draws national and international visitors
- Thriving military and commercial port
- Large refinery complex with water, highway, and rail transit systems
- Winding agricultural space on southern border



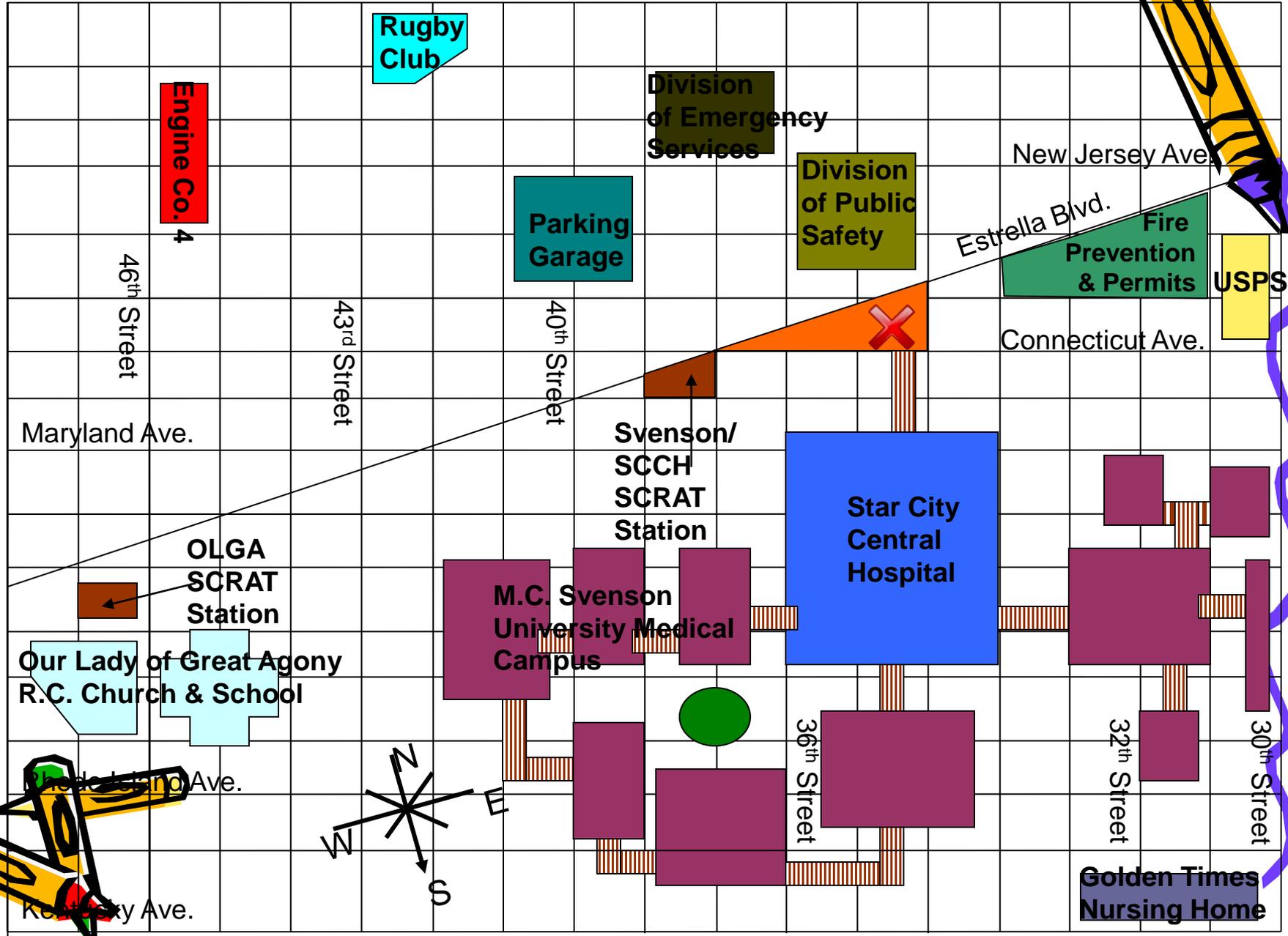
Star City



Star City



Star City Health Education Section



Rugby Club

Engine Co. 4

Division of Emergency Services

Division of Public Safety

New Jersey Ave.

Parking Garage

Estrella Blvd.
Fire Prevention & Permits

USPS

46th Street

43rd Street

40th Street

Connecticut Ave.

Maryland Ave.

Svenson/
SCCH
SCRAT
Station

Star City
Central
Hospital

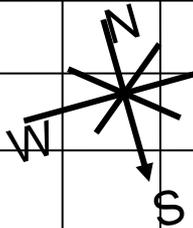
OLGA
SCRAT
Station

M.C. Svenson
University Medical
Campus

Our Lady of Great Agony
R.C. Church & School

Golden Times
Nursing Home

Golden Ave.

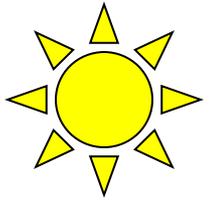


Kelly Ave.

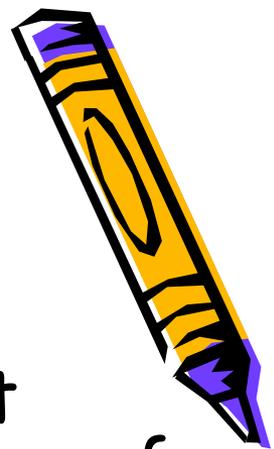
36th Street

32nd Street

30th Street

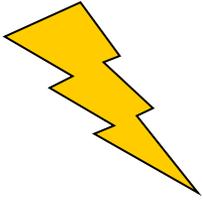


Incident Scenario



- Thursday 19 May, 12:30 PM
 - Viking Week: week-long coastal district events commemorating 350th anniversary of initial settlement
 - Increased public transit Star City Rapid Air Transport (SCRAT)
 - Political rally: 3PM City Hall (150th St. and Stern Ave.)
 - Governor of Confusion, multiple State Senators, and district State Representatives
 - Tours & open houses in the Health Education district
- Cockroaches found in Montgomery Franklin State Complex requires fumigation





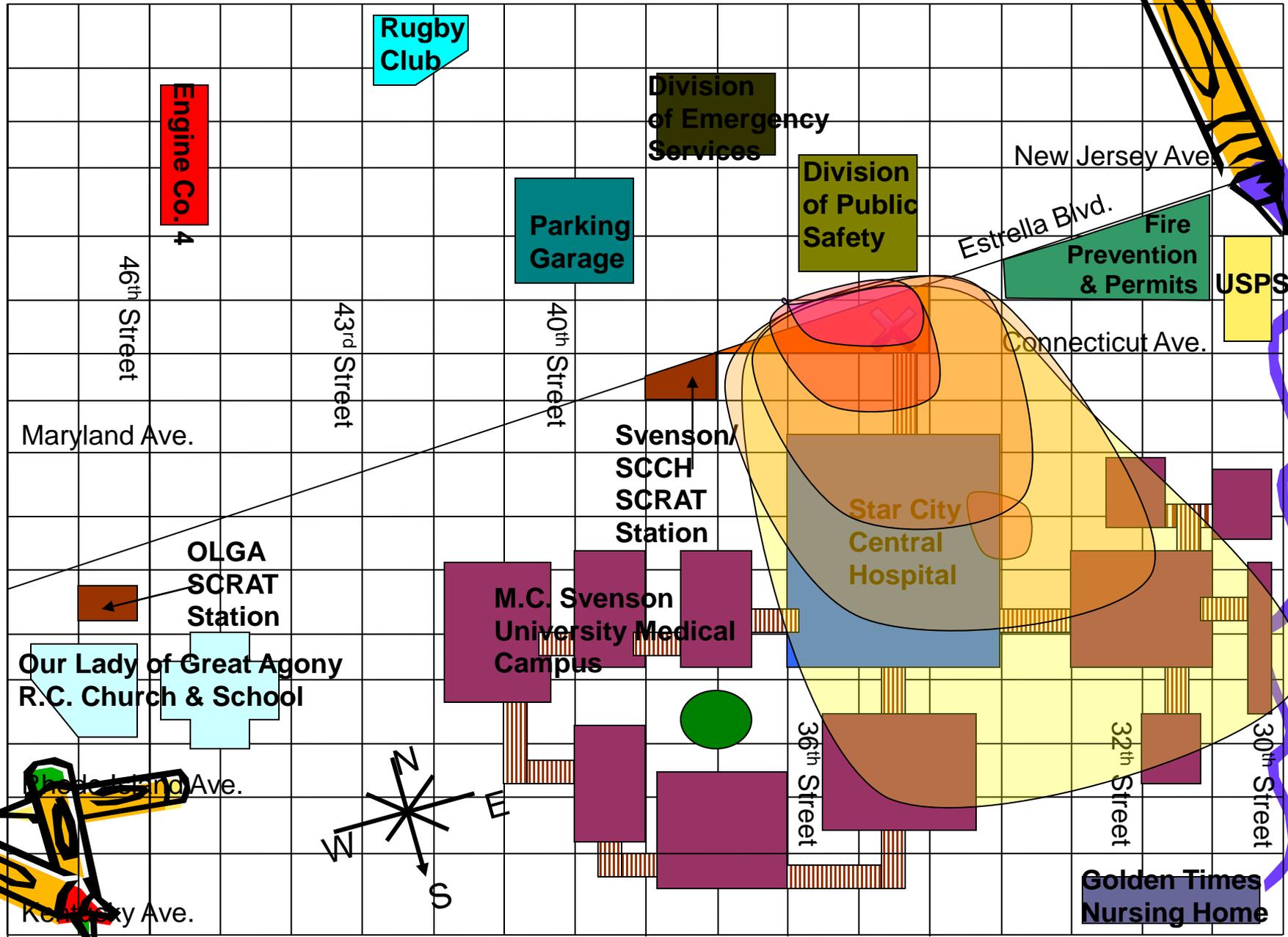
Dispatch



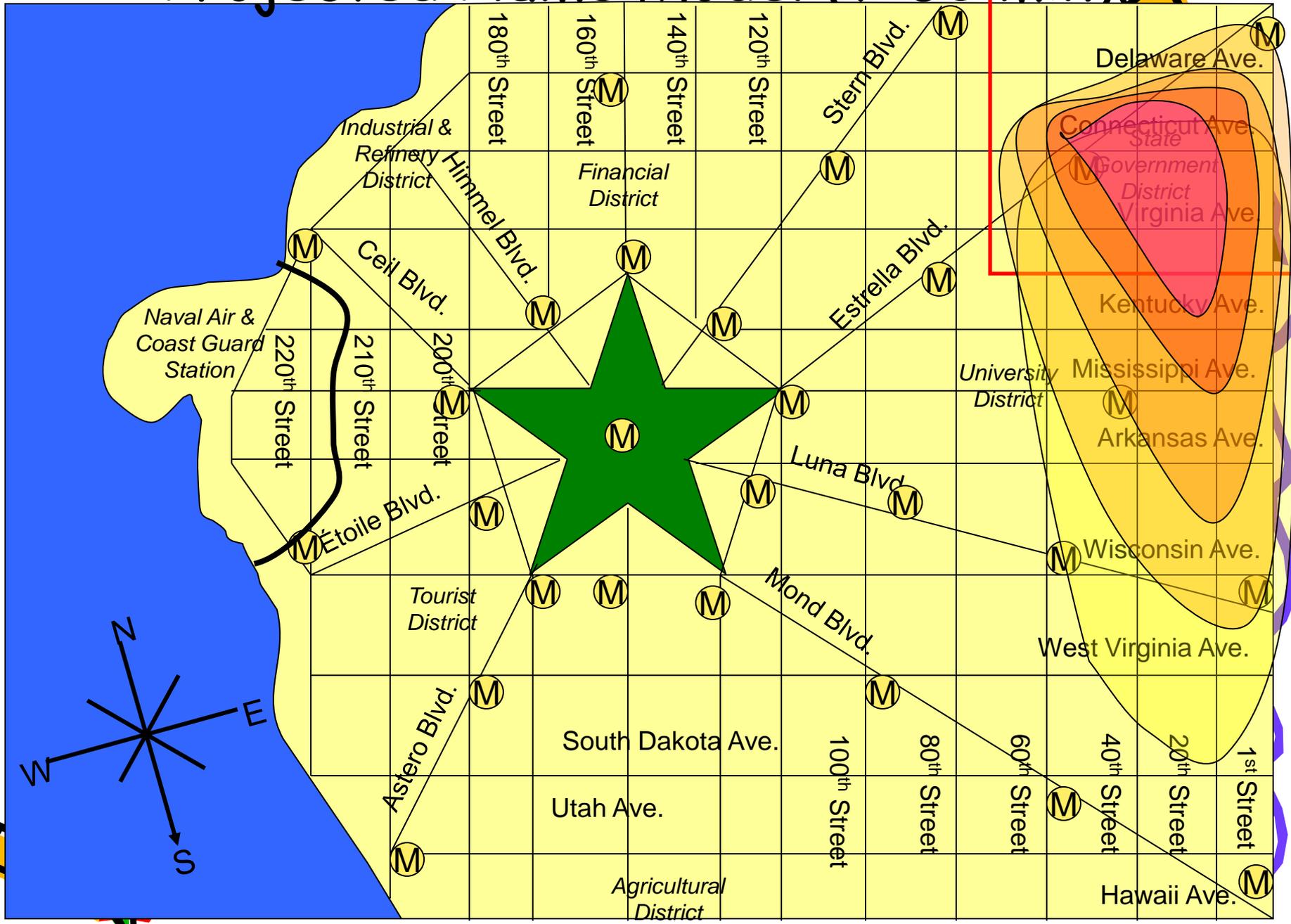
- Chemical leak - 3501 E. Connecticut Ave. (multi-story commercial building) - Montgomery Franklin State Building
 - 911 receives call shortly after lunch for accidental chemical release in North Tower
 - Minutes later multiple calls report a mist venting from the roof
 - 1235 Conditions:
 - 72F (HI = 72F), 75% RH, 85% sun
 - wind from NNW 15 mph, gusts to 25 mph
 - billowing clouds on the horizon
- Weather forecast calls for evening thunderstorms developing from the west



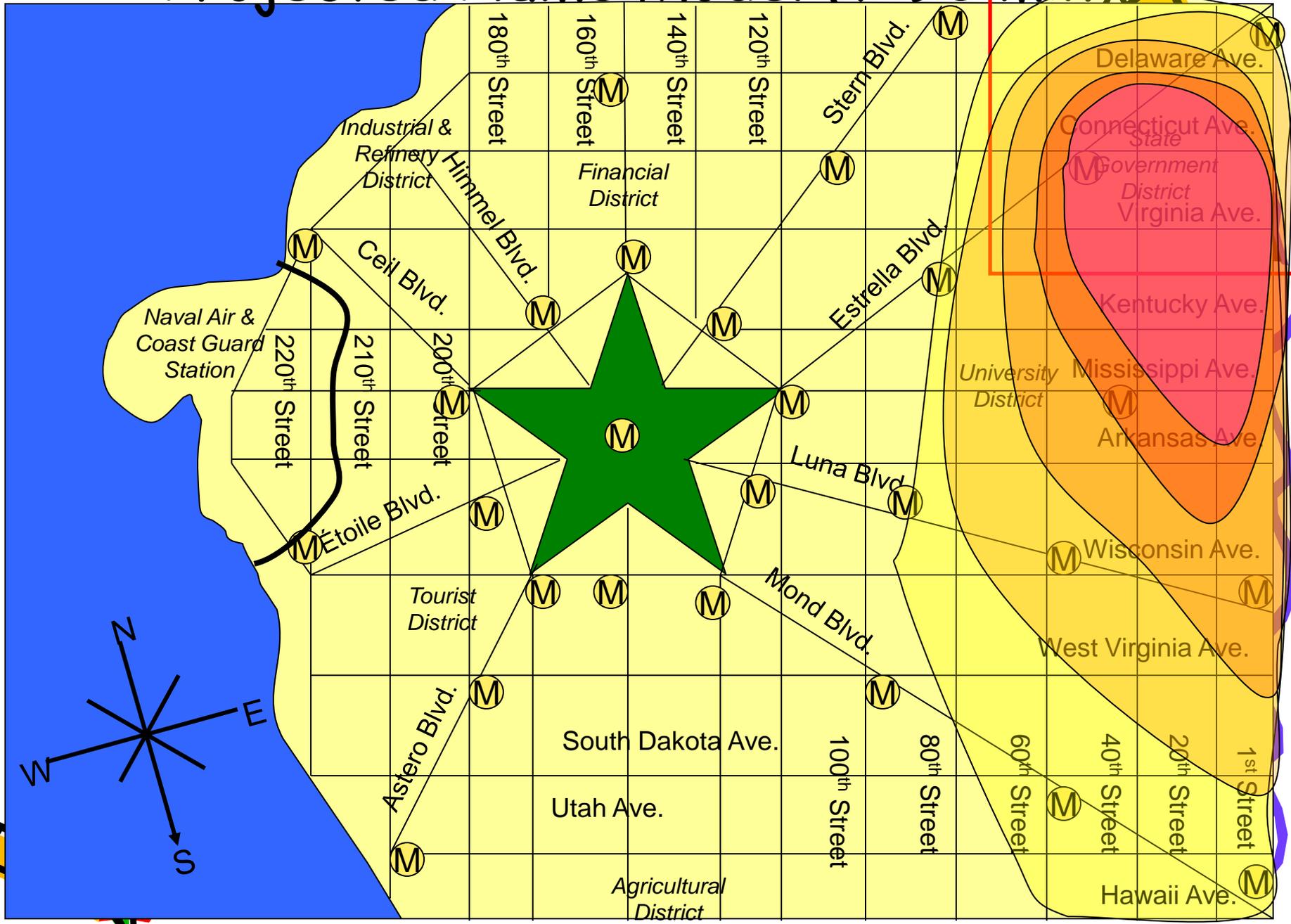
Initial Plume Model (t=5 min.)



Projected Plume Model (t=60 min)

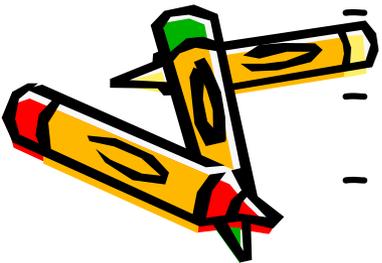
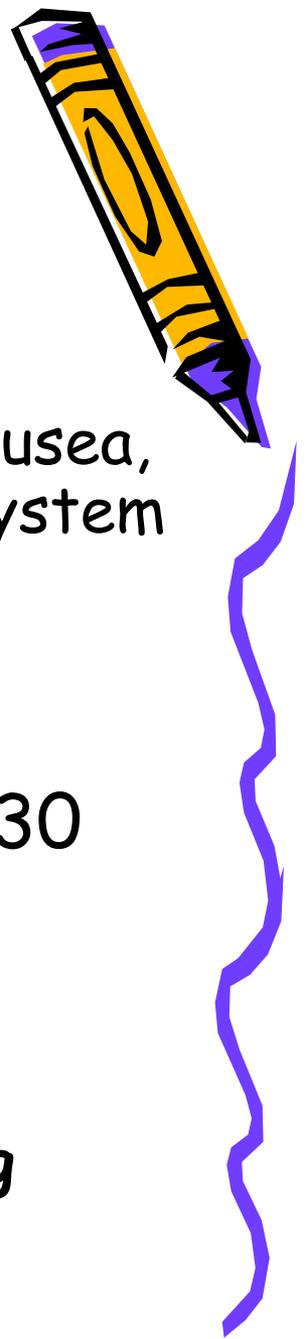


Projected Plume Model (t=90 min)



Fumigants

- N,N-diethyl-meta-toluamide (DEET)
 - Eye & Skin Irritant
 - Ingestion: Gastrointestinal irritation, nausea, vomiting and diarrhea. Central nervous system effects.
 - Inhalation: Respiratory tract & mucous irritatant.
- Methyl isocyanate (onset minutes to 30 days)
 - Eye, Skin, & Respiratory Irritant
 - Severe pulmonary edema
 - Injury to the alveolar walls of the lung
 - Severe corneal damage
 - Death

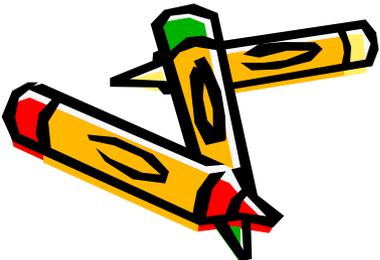


Potential Agents of Biowarfare



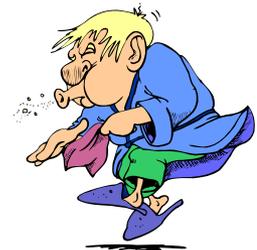
- Bacterial
 - Anthrax
 - Brucella
 - Glanders
 - Q-Fever
 - Rabbit fever
 - Plague
- Viral
 - Vaccinia
 - Smallpox
 - Chickenpox
 - Shingles
- Toxins
 - Ricin
 - Botulism

Other significant agents exist;, they are exceptionally rare and require highly specialized laboratories found in federal jurisdictions (i.e., BSL4 capabilities)

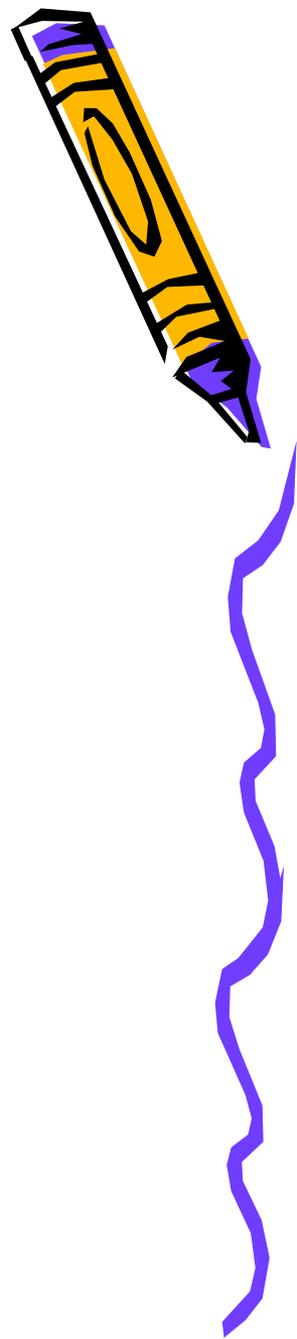


Medical Surveillance - Illness Reporting

- Generalized symptoms of possible BT related illness:
 - Any instance of fever exceeding 101°F or any persistent or reoccurring low grade fever
 - Tender, swollen lymph nodes
 - Any lesion or rash for which the cause is unknown
 - Any ulcerated or necrotic lesion
 - Persistent diarrhea (> 3 days) or any instance of bloody diarrhea
 - Any combination of clinical symptoms consistent with agent specific infection



Operation Loose Package



- Possible dates:
 - 22 - 26 August 2011
 - 29 Aug - 2 Sept 2011
- Potential objectives
 - Multi-agency coordination
 - Multi-laboratory receipt, triage, and referral
 - Additional integration of response organizations
- Federal partner involvement (USPS, FBI, etc.)

