

01.01 8/15/91 10e7

Comments to Weston's Site Visit Report

1. General Items

- * Action Item #7 (page 2): Make available missing sections of HRS to Baker/Weston.

What "missing sections" are they referring to?

2. Site-specific Items

- * Site 21: The proper spelling for the type of batteries noted is LeClanche.
- * Site 19: Perhaps some type of hydrologic assessment should be investigated to determine the pathway(s) TNT followed to migrate from the "covered trestle" at this site to Lee Pond, the closest receptor.
- * Site 9: The inspection comments repeatedly refer to this site as Site 19, not Site 9. This should be corrected to avoid confusion.
- * Site 16: It IS NOT the Hazardous Waste Storage Bldg. that was noted with dumping paint cans, including aerosol cans, and flammable liquids near a dumpster. This area is the Metal Dump and it is handled by a contractor for the Supply department. This dumpster has nothing to do with activities associated with the Hazardous Waste Storage Facility!!
- * Site 5: The recommendation to continuously sample one soil boring might not adequately address the EPA's and the State's concerns. I'm not quite sure, but I think migration potential for PCBs in soil is very small. Perhaps a permeability study to characterize the soils at this site and the ability of PCBs to migrate either horizontally and/or vertically in this area might help to determine any potential impact when assessing risk.
- * Site 12: Coke, a byproduct of the coal-fired incinerator, was identified at this site by Dr. Huggett (VIMS Toxicologist) as well as fly ash. According to Dr. Huggett, coke has given other superfund site cleanups some problems (although I don't know the specifics). This coke should probably be included in the sampling scheme to ensure an accurate assessment of all constituents at the site. One concern I have is the recommendation of cutting a road through the forest and grading it to drill a well. It seems this will impact the site further. Is the information gained from the well worth the impact cutting a road may cause?

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VARIOUS MANUFACTURERS, FOR NAVMINWARENGACT
 MSDS for BATTERY, DRY, CARBON ZINC, DISCHARGED

1 - Site Specific Information

NO Site Specific Information on file for this Chemical

2 - General Information DISCHARGED BATTERY, DRY, CARBON-ZINC

MANUFACTURER'S NAME:

NAVAL MINE WARFARE ENGINEERING ACTIVITY
 CODE 60, BUILDING 1959
 YORKTOWN, VA. 23691-5076
 (804) 887-4930 OR AUTOVON: 953-4930

CHEMICAL NAME AND SYNONYMS: DISCHARGED BATTERY, CARBON-ZINC

Battery, Dry Cell, LeClanche Cell, BA-44, Mk 105-0, Mk 106-1,
 Mk 107-0/1, Mk 108-0/1, Mk 109-0/1, Mk 110-0/1, Mk 111-0/1,
 Mk 112-0/1, Mk 113-0, Mk 114-0, Mk 115-0/1, Mk 116

CHEMICAL FAMILY:

MIXTURE

DATE OF PREPARATION:

8 FEBRUARY 1991

PREPARED BY:

Ann Allen, Code 63, Naval Mine Warfare Engineering Activity

DISCLAIMER:

The information provided below is believed to be accurate and represents the best information available to us for the hazardous materials in this assembly. However, we make no warranty, express or implied, with respect to such information and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

3 - Hazardous Ingredients

| MATERIAL | APPROXIMATE % | TLV (Units) |
|-------------------|---------------|-------------------------------|
| Mercury | 0.01 | 0.05 mg/m3 |
| Zinc Chloride | 4.0 | 1.0 mg/m3 (fume) |
| Ammonium Chloride | 4.0 | 10.0 mg/m3 (fume) * LECLANCHE |
| Manganese Dioxide | 29.0 | 5.0 mg/m3 |
| Carbon Black | 11.0 | 3.5 mg/m3 |
| Graphite | UNK | 15 mppcf |
| Manganese | UNK | 5.0 mg/m3 |
| Zinc Oxide | UNK | 5.0 mg/m3 |
| Ammonia | UNK | 35.0 mg/m3 |

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VARIOUS MANUFACTURERS, FOR NAVMINWARENGACT
SDS for BATTERY, DRY, CARBON ZINC, DISCHARGED

3 - Hazardous Ingredients (continued)

4 - Physical Data

| | |
|-------------------------------------|--|
| BOILING POINT: > 212 F | PERCENT VOLATILE BY VOLUME (%): Not known |
| VAPOR PRESSURE(mm Hg): Not known | EVAPORATION RATE (Butyl Acetate = 1): + 1 |
| VAPOR DENSITY (AIR = 1): > 1 | SOLUBILITY IN WATER: Negligible |
| SPECIFIC GRAVITY (H2O=1): > 1 | APPEARANCE AND ODOR: Black solid granules with possible ammonia odor, encased in battery assembly |

5 - Fire and Explosion Hazard Data

FLASH POINT (METHOD USED):
Not known

FLAMMABLE LIMITS:
LEL: Not known UEL: Not known

EXTINGUISHING MEDIA:
In bulk storage use CO₂, foam or dry powder. Water may cause
electrical shorts.

SPECIAL FIRE FIGHTING PROCEDURES:
In bulk storage areas, wear self-contained breathing apparatus
and protective clothing to avoid inhalation and contact with
hazardous decomposition products.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Cells may rupture when exposed to excessive heat.

6 - Health Hazard Data

THRESHOLD LIMIT VALUE:
See Section 3, Hazardous Ingredients. Manganese and zinc
chloride are experimental mutagens and tumor producers
and zinc chloride is an experimental teratogen.

EFFECTS OF OVEREXPOSURE:
In a fire situation, cells may release hazardous substances.

ACUTE OVEREXPOSURE:

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VARIOUS MANUFACTURERS, FOR NAVMINWARENGACT
SDS for BATTERY, DRY, CARBON ZINC, DISCHARGED

6 - Health Hazard Data (continued)

INHALATION - May cause irritation or metal fume fever in a fire situation.

INGESTION - Ingredients are poisonous.

CONTACT - Materials may cause skin or eye irritation by vapor or direct contact.

CHRONIC OVEREXPOSURE:

Not likely under normal use.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Respiratory infections and diseases. Skin diseases.

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION:

Remove to fresh air, use artificial respiration if needed. Seek medical attention.

EYES:

Flush at least 15 minutes with fresh running water, occasionally lifting upper and lower eyelid. Seek medical attention.

SKIN:

Thoroughly wash affected area until no trace of material remains.

INGESTION:

Not likely under normal use. If ingestion should occur, get immediate medical attention. Drink large quantities of water.

EXPOSURE IN A FIRE:

Remove victim from fire hazard area to fresh air. Seek medical attention.

7 - Reactivity Data

STABILITY:

Stable

CONDITIONS TO AVOID:

Excessive heat and fire (heating above 160 F), charging

INCOMPATIBILITY (MATERIALS TO AVOID):

Keep away from water.

HAZARDOUS DECOMPOSITION PRODUCTS:

In a fire situation, mercury vapor, ammonium chloride, ammonia, nitrous oxides, chlorine, manganese, zinc oxide and zinc zinc chloride fumes may be emitted.

HAZARDOUS POLYMERIZATION:

No

CONDITIONS TO AVOID:

None known

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VARIOUS MANUFACTURERS, FOR NAVMINWARENGACT
MSDS for BATTERY, DRY, CARBON ZINC, DISCHARGED

8 - Spill or Leak Procedures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Batteries are a dry solid and can be handled easily with shovels or similar equipment. When accumulating large quantities of undischarged batteries for disposal pack in non-conductive insulating material.

AVOID HEAT AND WATER.

Use rubber gloves for cleaning up spills or handling internal parts of cells. Use adequate ventilation and avoid contact of cell internal components with skin or eyes.

WASTE DISPOSAL METHOD:

Dispose of in accordance with all Federal, State, and Local regulations. Disposal by landfill may be illegal in some areas.

9 - Special Protection Information

RESPIRATORY PROTECTION (SPECIFY TYPE):

None needed under normal use

VENTILATION:

None needed

PROTECTIVE GLOVES:

None required under normal use; use rubber gloves to handle internal cell components.

EYE PROTECTION:

None required under normal use. If cells must be opened, wear protective goggles.

OTHER PROTECTIVE EQUIPMENT:

None required under normal use

10 - Special Precautions DISPOSE IAW ALL REGULATIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Do not store unpackaged cells together so contacts can touch. This situation will result in cell shorting and heat build-up.

OTHER PRECAUTIONS:

Do not charge, overheat (greater than 160 F), or open cells. Avoid contact with water.

VARIOUS MANUFACTURERS FOR NAVMINWARENGACT
MSDS for BATTERY, DRY, CARBON-ZINC, UNDISCHARGED

1 - Site Specific Information

NO Site Specific Information on file for this Chemical

2 - General Information UNDISCHARGED BATTERY, DRY, CARBON-ZINC

MANUFACTURER'S NAME:

NAVAL MINE WARFARE ENGINEERING ACTIVITY
CODE 60, BUILDING 1959
YORKTOWN, VA. 23691-5076
(804) 887-4930 OR AUTOVON: 953-4930

CHEMICAL NAME AND SYNONYMS: UNDISCHARGED BATTERY, CARBON-ZINC
Battery, Dry Cell, LeClanche Cell, BA-44, Mk 105-0, MK 106-1,
Mk 107-0/1, Mk 108-0/1, Mk 109-0/1, Mk 110-0/1, Mk 111-0/1,
Mk 112-0/1, Mk 113-0, Mk 114-0, Mk 115-0/1, MK 116

CHEMICAL FAMILY:
MIXTURE

DATE OF PREPARATION:
8 FEBRUARY 1991

PREPARED BY:

Ann Allen, Code 63, Naval Mine Warfare Engineering Activity

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| MATERIAL | APPROXIMATE % | TLV (Units) |
|-------------------|---------------|-------------------------------|
| Mercury | 0.01 | 0.05 mg/m3 |
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| Ammonium Chloride | 4.0 | 10.0 mg/m3 (fume) * LECLANCHE |
| Manganese Dioxide | 29.0 | 5.0 mg/m3 |
| Carbon Black | 11.0 | 3.5 mg/m3 |

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VARIOUS MANUFACTURERS FOR NAVMINWARENGACT
MSDS for BATTERY, DRY, CARBON-ZINC, UNDISCHARGED

4 - Physical Data

| | |
|-------------------------------------|---|
| BOILING POINT: > 212 F | PERCENT VOLATILE BY VOLUME (%): Not known |
| VAPOR PRESSURE(mm Hg): Not known | EVAPORATION RATE: + 1 |
| VAPOR DENSITY (AIR = 1): > 1 | SOLUBILITY IN WATER: Negligible |
| SPECIFIC GRAVITY (H2O=1): > 1 | APPEARANCE AND ODOR: Black solid granules with possible slight ammonia odor, encased in battery assembly |

5 - Fire and Explosion Hazard Data

FLASH POINT (METHOD USED):
Not known

FLAMMABLE LIMITS:
LEL: Not known UEL: Not known

EXTINGUISHING MEDIA:
In bulk storage use CO₂, foam or dry powder. Water may cause
electrical shorts.

SPECIAL FIRE FIGHTING PROCEDURES:
In bulk storage areas, wear self-contained breathing apparatus
and protective clothing to avoid inhalation and contact with
hazardous decomposition products.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Cells may rupture when exposed to excessive heat.

6 - Health Hazard Data

THRESHOLD LIMIT VALUE:
See Section 3, Hazardous Ingredients. Zinc Chloride is an
experimental mutagen, teratogen, and tumor producer.

EFFECTS OF OVEREXPOSURE:
In a fire situation, cells may release hazardous substances.

ACUTE OVEREXPOSURE:
INHALATION - May cause irritation or metal fume fever in a
fire situation.
INGESTION - Ingredients are poisonous.
CONTACT - Materials may cause eye and skin irritation by vapor
or direct contact.

CHRONIC OVEREXPOSURE:

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ARIOUS MANUFACTURERS FOR NAVMINWARENGACT
MSDS for BATTERY, DRY, CARBON-ZINC, UNDISCHARGED

6 - Health Hazard Data (continued)

Not likely under normal use.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Respiratory infections and diseases. Skin diseases.

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION:

Remove to fresh air, use artificial respiration if needed.
Seek medical attention.

EYE CONTACT:

Flush at least 15 minutes with fresh running water,
occasionally lifting upper and lower eyelid. Seek medical
attention.

SKIN CONTACT:

Thoroughly wash affected area until no trace of material
remains.

INGESTION:

Not likely under normal use. If ingestion should occur,
get immediate medical attention. Drink large quantities of
water.

EXPOSURE IN A FIRE:

Remove victim from fire hazard area to fresh air. Seek
medical attention.

7 - Reactivity Data

STABILITY:

Stable

CONDITIONS TO AVOID:

Excessive heat and fire (heat-
ing above 160 F), Charging

INCOMPATIBILITY (MATERIALS TO AVOID):

Keep away from water

HAZARDOUS DECOMPOSITION PRODUCTS:

In a fire situation, mercury vapor, ammonium chloride, nitrous
oxides, chlorine, and zinc chloride fumes may be emitted.

HAZARDOUS POLYMERIZATION:

No

CONDITIONS TO AVOID:

None known

Spill or Leak Procedures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Batteries are a dry solid and can be handled easily with
shovels or similar equipment. When accumulating large
quantities on undischarged batteries for disposal pack in

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ARIOUS MANUFACTURERS FOR NAVMINWARENGACT
SDS for BATTERY, DRY, CARBON-ZINC, UNDISCHARGED

8 - Spill or Leak Procedures (continued)

non-conductive insulating material.

AVOID HEAT AND WATER.

Use rubber gloves for cleaning up spills or handling internal parts of cells. Use adequate ventilation and avoid contact of cell internal components with skin or eyes.

WASTE DISPOSAL METHOD:

Discard in accordance with local, state, and federal regulations. Disposal by landfill may be illegal in some areas.

9 - Special Protection Information

RESPIRATORY PROTECTION (SPECIFY TYPE):

None needed under normal use

VENTILATION:

None needed under normal use

PROTECTIVE GLOVES:

None required under normal use

EYE PROTECTION:

None required under normal use

OTHER PROTECTIVE EQUIPMENT:

None required under normal use

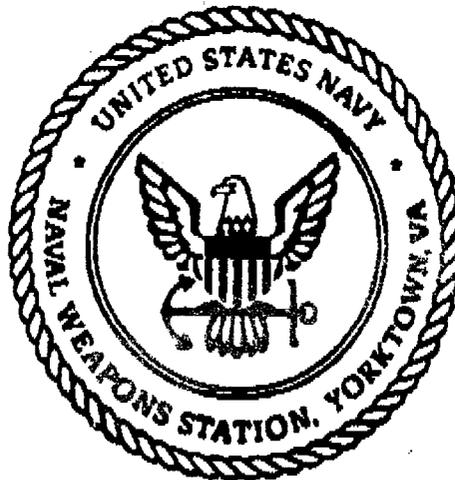
10 - Special Precautions DISPOSE IAW ALL REGULATIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Do not store unpackaged cells together so contacts can touch. This situation will result in cell shorting and heat build-up.

OTHER PRECAUTIONS:

Do not charge, overheat (greater than 160 F), or open cells. Avoid contact with water.



TELECOPIER TRANSMISSION COVER SHEET

FROM

AGENCY: ENVIRONMENTAL MANAGEMENT OFFICE, WPNSTA YORKTOWN

NAME/CODE: Jennifer Loffin / Code H

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TO

AGENCY: LANTDIV

NAME/CODE: Brenda Norton / Code 1822

TELECOPIER NO: (804) 445-6662

NUMBER OF PAGES, INCLUDING COVER SHEET: _____

COMMENTS: Brenda, here are my comments
on Weston's site visit report. I
have also included the MSDs
for the Leclanché batteries. Do
you want to send them to
Weston?