



HERITAGE

A 50-Year Legacy of Environmental Leadership

Natural Disasters: Response
Planning & Preparedness

TPSA Conference
San Antonio, TX
February 6, 2020

Natural Disaster Planning Considerations



- Consider response resources in operational area
 - Containers
 - Disposal facilities
 - Transportation
- Consider the types of waste
 - Recovery
 - Remediation
 - Support Activities
- Plan how waste will be managed
 - Collected
 - Stored
 - Disposed
- Exact location of potential spill may not be known
- Investigate the capabilities and locations
 - Transporters
 - Waste recovery facilities
 - Disposal facilities
- Tracking and reporting
- Evaluate capabilities of facilities before need arises, for example

Potential Spill Cleanup Wastes



Solids

- Wildlife
- Vegetation
- Containment boom
- Contaminated soil and sediment
- Absorbents (pads, rags, absorbent boom)
- Personnel Protection Equipment (PPE)
- General refuse from response team support activities

Liquids

- Recovered oil
- Water mixtures
- Decontamination fluids
- Spent solvents, cleaning solutions
- Sanitary waste from work camps and response centers

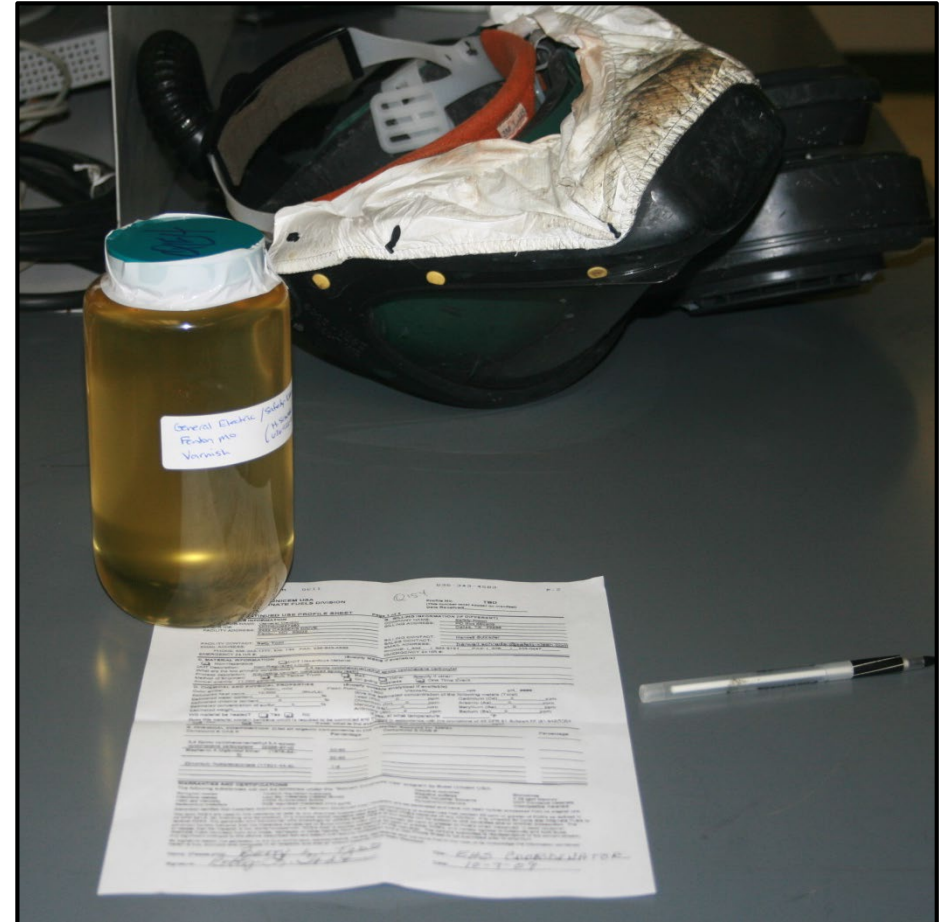
Other

- Lab waste
- Medical waste from wildlife rehab
- Equipment maintenance
- Empty containers
- C and D wastes from equipment decon sites and waste staging areas
- Impromptu wastes

Waste Sampling and Analysis



- Response worker/public safety
- Waste characterization
- Waste profiling
- Waste management facility permit requirements
- Transportation rules
- Monitor for changes in the waste

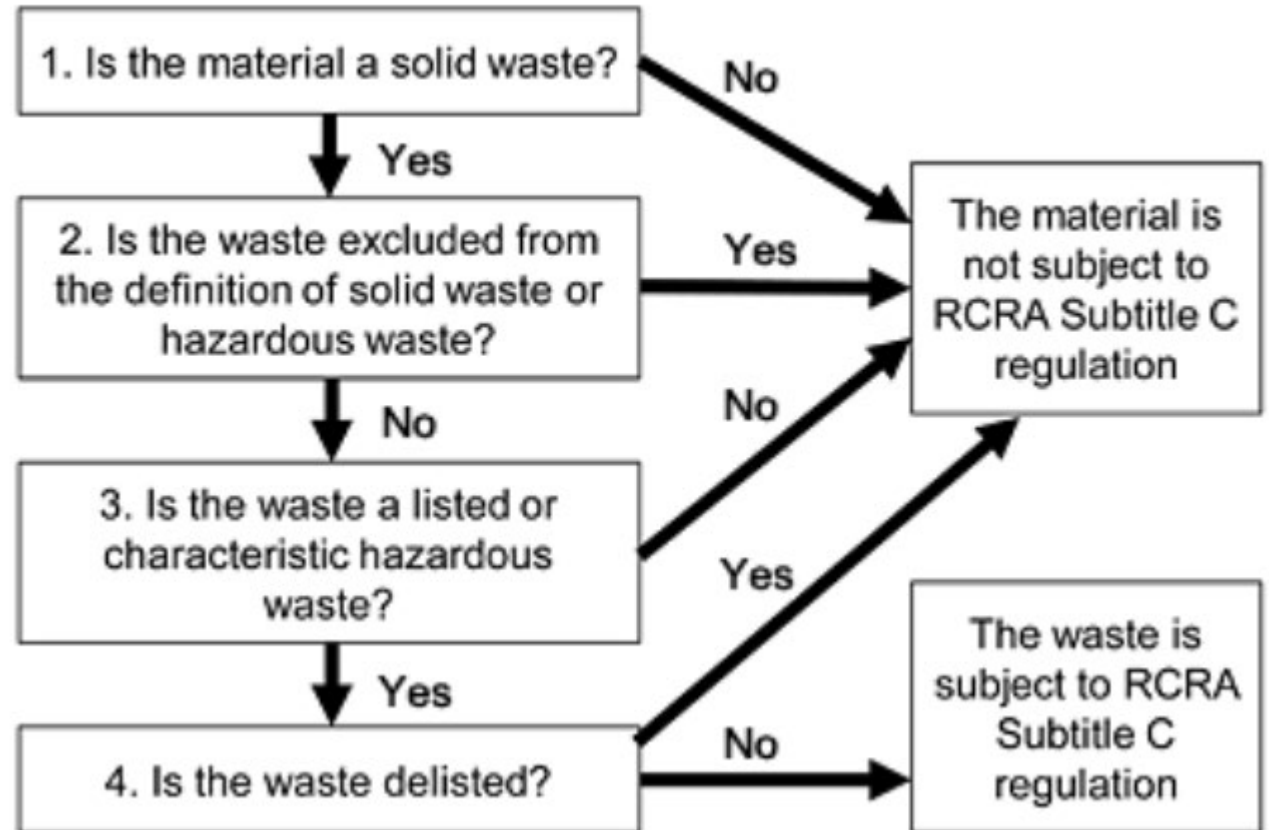


Hazardous Waste Determination



WASTE DETERMINATION FORM (ref: 40 CFR 262.11)		HERITAGE	
Facility Name:		Facility EPA ID #:	
Facility Location:		Wastestream #:	
1. Common Name:			
2. Process Generating the Waste:			
3. Point of Waste Generation (before dilution, mixing, or alteration):			
4. If SDS(s) are to be used instead of analytical, list chemicals that enter this wastestream below, and/or list and attach SDS(s).			
5. Is the material a solid waste? Solid waste includes any material disposed of or abandoned in lieu of disposal, including materials burned, incinerated, or recycled and dioxins or furans, see 40 CFR 261.2. "Solid" does not pertain to the physical state of the waste.			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
6. If the material is a solid waste, is the waste excluded from regulation under 40 CFR 261.4(a)? Common examples include materials that are reclaimed and returned to the original process, excluded scrap metal, spent material that is legitimately recycled, and laundered wipes. See 40 CFR 261.4 for specific management requirements that may apply for any excluded solid waste. If yes, indicate reason for the exclusion in the area below and attach documentation.			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
7. Is the material excluded from being a hazardous waste under 40 CFR 261.4(b-j)? Common examples include fossil fuel combustion waste, boiler and cooling tower blowdown, samples, and disposed excluded solvent-contaminated wipes. See 40 CFR 262.4(b-j) for specific management requirements that may apply for any excluded hazardous waste. If yes, indicate reason for the exclusion in the area below and attach documentation.			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
8. Is the waste a used oil (40 CFR 279) or universal waste (40 CFR 273)? If yes, check type or indicate other state-specific type:			
<input type="checkbox"/>	Used Oil	<input type="checkbox"/>	Batteries
<input type="checkbox"/>	Lamps	<input type="checkbox"/>	Mercury-containing equipment
<input type="checkbox"/>	Pesticides	<input type="checkbox"/>	State-specific:
9. Is the solid waste listed as a hazardous waste under 40 CFR 261.30-33? Consider the process generating the waste or the chemical constituents for virgin materials. Attach SDS, process information, or other generator knowledge. If yes, indicate waste code(s) below and attach documentation. Listed waste codes have a K, F, P, or U prefix letter.			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
Specific source (K):		Non-specific source (F):	
Commercial products, off-spec or intermediate, container or spill residues (P, U):			
For questions 10 through 16, attach analytical from representative sample, SDS, process information, or other generator knowledge. See 40 CFR 261.20-24.			
10. Is the waste a hazardous waste that is ignitable (D001)?			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
11. Is the waste a hazardous waste that is corrosive (D002)?			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
12. Is the waste a hazardous waste that is reactive (D003)?			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
13. Is the waste a hazardous waste that is characteristic for metals (D004-D011)?			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
14. Is the waste a hazardous waste that is characteristic for volatiles (D018-19, D021-22, D028-29, D035, D039-40, D043)?			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
15. Is the waste a hazardous waste that is characteristic for semi-volatiles (D023-27, D030, D032-34, D036-38, D041-42)?			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
16. Is the waste a hazardous waste that is characteristic for herbicides or pesticides (D012-17, D020, D031)?			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
17. Does the waste require special handling (e.g., fugitive dust, heat producing)? If yes, specify:			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
18. Does the waste contain friable asbestos material? If yes, check a category below			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
Nonfriable asbestos containing material that has become friable			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
Category I nonfriable asbestos-containing materials that will be or has been subjected to sanding, grinding, cutting, or abrading			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
Category II nonfriable asbestos-containing material that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material.			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
19. Does the waste contain PCBs? If yes, additional documentation will be required. See 40 CFR 761.			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
20. Is this waste a Department of Transportation Hazardous Material? See 49 CFR 171.8.			
	<input type="checkbox"/>	Yes	<input type="checkbox"/>
If the waste is a hazardous waste, indicate "Hazardous Waste" and list all applicable hazardous waste codes in the area below, including state codes. Or indicate other waste type such as universal, used oil, PCB waste, asbestos, excluded solid waste, excluded hazardous waste, nonhazardous solid waste, hazardous waste pharmaceutical, etc.			
Certification: I hereby certify that all information submitted herein and attached contains true, accurate and complete descriptions of this waste.			
Generator's Signature:		Title:	
Printed Name:		Date:	
This form is for internal use only by the generator for the purposes of compliance. It is not intended for review, auditing, or approval processes by Heritage or any other disposal facility. Maintain this record and supporting documents for 3 years following last waste shipment.			
July 2019			

The Hazardous Waste Identification Process



Disposal Facility Site Evaluation



- Perform environmental due diligence audits of facilities likely to be used and confirm:
 - All required permits
 - Favorable compliance history
 - Good safety record
 - Not listed for remediation by state or federal regulators
 - Adequate financial assurance
 - Talk to regulators
 - Neighbor relations

Superstorm Sandy Timeline



- 10/27/12 Gov. Christie declared State of Emergency
- 10/29/12 Sandy hit Brigantine, NJ as a post-tropical cyclone with hurricane force winds
- Storm surge drove into NJ and NY
- Estimated \$50B in damage
- 72 Deaths in US

Blake, et al, "Tropical Cyclone Report Hurricane Sandy." NHC, 2/12/13

New Jersey Response to Sandy



- No Emergency Debris Removal contract
- NJ used an existing CT contract that had been competitively bid
- 7-page NJ contract signed 10/31/13 and Request for waiver of advertising granted 11/21/12
- 322-page CT Disaster Debris Management Services contract originally awarded 6/08

nj.gov/comptroller/sandytransparency/contracts/sandy/approved/contracts.html

Contractor Requirements



- Contractor “shall remove, stage, sort, recycle and dispose of debris (Provide Debris Removal and Management Services) from specified roads or properties upon the Specific Direction of the State or one of the entities in the State’s cooperative Purchasing Program...”

Managed outside of normal contracts
- Not your everyday trash day

nj.gov/comptroller/sandytransparency/contracts/sandy/approved/contracts.html

Typical Line Items for Debris Contract



- Structure demolition
- Removal of
 - Hazardous limbs (hangers)
 - Hazardous trees (standing leaners)
 - Fallen trees
 - Hazardous stumps
 - Sunken vessels
 - Stray and abandoned vehicles
- Disposal
 - Vegetative debris
 - C & D disposal
 - Electronic Waste
 - HHW
 - Putrescent MSW
 - White goods
 - Freon from white goods
 - Animal carcasses
 - Aggregate/sediment

<http://nj.gov/comptroller/sandytransparency/contracts/sandy/approved/contracts.html>

Clean-up Details



- 10-17 employees per day
- 30 days packing
- Contract required 55-gallon containers
- Drums packed 3228
- Work sold on or about 11/28/12
- Crews packed first drums on 12/6/12
- All headed home for Christmas by 12/22/12
- Mobilization 1/2/13
- Packing again on 1/4/13
- All home by 1/17/13
- Approximate days packing 30

Drums by Location



Location	Containers
Barnegat	4
Bay Head	126
Belmar	270
Berkeley	43
Brick	335
Carolina Construction	6
Jersey City	20
Lavallette	759
Long Beach Island	1120
Manasquan	70
Mantoloking	70
Point Pleasant Beach	139
Seaside Heights DOT DMS	3
South Amboy	14
Stafford	144
Ventnor	91
Waretown	14
Total	3228

Challenges

- Staffing in short notice
- 7-day work week
- Locating housing
- Holiday travel
- Obtaining supplies
 - Drums (overpacks)
 - Vermiculite
 - Labels
- Weather
- New sites every day



(Lost and) Found





What Other Contractors Left Behind



Suggestions



- As with any ER, be prepared
- Consider soliciting pre-position contracts
- Municipalities may be able to use State contracts
- Consider debris removal contracts for all types of natural disasters
 - Hurricane
 - Superstorm
 - Tornado
 - Tsunami

Bidding Pre-position Contracts



- Ensure that the bidding meets oversight requirements
 - FEMA
 - State/Federal EPA
 - Company stakeholders
 - Community
- Carefully consider bid items
 - By the cubic yard, ton
 - Distance to disposal locations

Remember to Breathe





SPILL PREVENTION

What NOT to Do
Creative Solutions
Drill, Drill, Drill

In case of Hazardous Chemical or Petroleum Spill Call:

1-800-48-SPILL

Your organization has signed a contract with Heritage to provide Emergency Response. Call us at the first sign of an SPI issue to initiate a timely response to your emergency.



PROTECT ENVIRONMENT • PROTECT YOUR \$\$\$

Primary Containment



Systematic Program to Check Tank Integrity
Equipment Design • Security

Active Secondary Containment

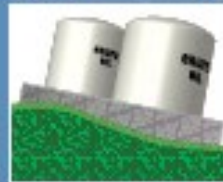


Maintenance • Location
• Drill, Drill, Drill

Passive Secondary Containment



Sizing



Human Errors

- Evaluate Plan
- Check Work
- Drill, Drill, Drill
- Look With a Fresh Pair of Eyes



Elizabeth Dillon
HSE Training Coordinator
Heritage
edillon@heritage-enviro.com
919.961-9742

**Be the
Problem
Solver.**

**Not the
Vendor.**

