

# Waste Characterization Examples

## Example 1

Non-empty aerosol brake cleaner cans that have a Safety Data Sheet (SDS) identifying the following constituents:

Constituent	CAS Number	% by Wt.
Acetone	67-64-1	45 --55
Toluene	108-88-3	25 – 35
Methanol	67-56-1	10 – 20
Carbon dioxide	124-38-9	5 - 10

The point of generation is when the aerosol can is to be discarded. The aerosol can is empty when the pressure within the can is at or approaching atmospheric pressure, it is not clogged and there are no audible liquids to be heard when shaken.

### Listed Review

1. Is this an unused raw material commercial chemical product containing a sole active ingredient? **NO**  
If Yes: Is there a SDS available? **NA**

2. Does the waste contain spent solvents or is it a wastewater treatment waste not discharged directly to the wastewater treatment plant pursuant to a permit issued by the treatment authority? **No, the waste solvent was not used.**

If Yes: Does the spent solvent or wastewater treatment waste meet a listing definition found in Part 111 Table 203? **NA**

Does the solvent blend before use contain:

- Only a F003 listed solvent? **NA**
- A F003 listed solvent and 10% or more by volume of any F001, F002, F004, or F005 listed solvents? **NA**
- 10% or more by volume of a F001, F002, F004, or F005 listed solvents before use? **NA**

If YES = Waste is a listed hazardous waste, advance to listed waste exclusion review.

3. Does the process generating the waste make the waste a hazardous waste, by definition because the process waste is listed in Part 111 Table 204a (K listed)? **NO**

### Listed Waste Exclusion Review – NA

4. Does the waste exhibit a characteristic that makes it a characteristic hazardous waste?
- ✓ Ignitable – **YES, WASTE IS D001**
  - ✓ Toxic – **NO See Page 2-26 and 1-27 (Table 201a)**
  - ✓ Corrosive – **NO**
  - ✓ Reactive – **NO**

Most aerosols are ignitable or toxic, but some contain products that are reactive or corrosive. Be sure to check if the contents is corrosive (D002) or reactive (D003).

- **Characteristic Waste Exclusion Review - NONE** – Manage as a D001 hazardous waste. Also apply the D003 reactive hazardous waste code if the aerosol is capable of detonation or explosive reaction if subjected to a strong initiating source or if heated under confinement.

### LDR Review

If generated by a SQG or LQG, the LDRs apply and notification is required. This is a nonwastewater, the treatment is "DEACT," and the UHCs include **ACETONE, TOLUENE, and METHANOL**. See Pages 4-4, 4-13, and 4-15.

**Liquid Industrial Waste and Solid Waste Review – SKIP for a hazardous waste.**



## Example 2

Dirty solvent removed from a degreasing tank that has a Safety Data Sheet (SDS) identifying the following constituents:

Constituent	CAS Number	% by Wt.
Acetone	67-64-1	45 --55
Toluene	108-88-3	25 – 35
Methanol	67-56-1	10 – 20

### Listed Review

1. Is this an unused raw material commercial chemical product containing a sole active ingredient? **NO**  
If Yes: Is there a SDS available? **NA**
2. Does the waste contain spent solvents or is it a wastewater treatment waste not discharged directly to the wastewater treatment plant pursuant to a permit issued by the treatment authority? **YES, it is a spent solvent!**

If Yes: Does the spent solvent or wastewater treatment waste meet a listing definition found in Part 111 Table 203? **See Page 1-28 (Table 203a)**

Does the spent solvent blend before use contain:

- Only a F003 listed solvent? **NO**
- A F003 listed solvent and 10% or more by volume of any F001, F002, F004, or F005 listed solvents? **YES, ACETONE, WASTE IS F003.**
- 10% or more by volume of a F001, F002, F004, or F005 listed solvents before use? **YES, TOLUENE, WASTE IS F005**

If YES = Waste is a listed hazardous waste, advance to listed waste exclusion review.

3. Does the process generating the waste make the waste a hazardous waste, by definition because the process waste is listed in Part 111 Table 204a (K listed)? **NO**

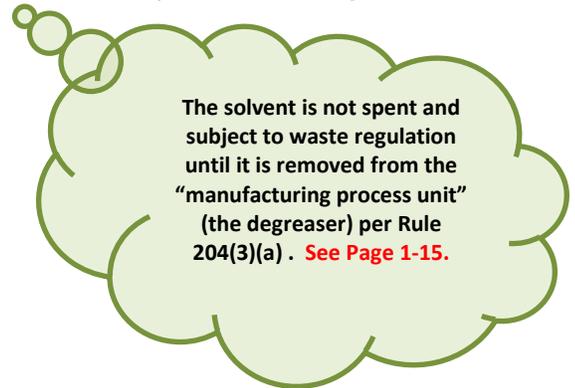
### Listed Waste Exclusion Review

- **NONE, Manage as a F003 and F005 Listed Hazardous Waste**

**Characteristic, Liquid Industrial Waste, and Solid Waste Review** – SKIP for a listed hazardous waste which presumes relevant characteristic codes that apply (D001 ignitable).

### LDR Review

If generated by a SQG or LQG, the LDRs apply and notification is required. This is a nonwastewater, the treatment is "DEACT," and the UHCs include **ACETONE, TOLUENE, and METHANOL.** **See Pages 4-4, 4-13, and 4-15.**

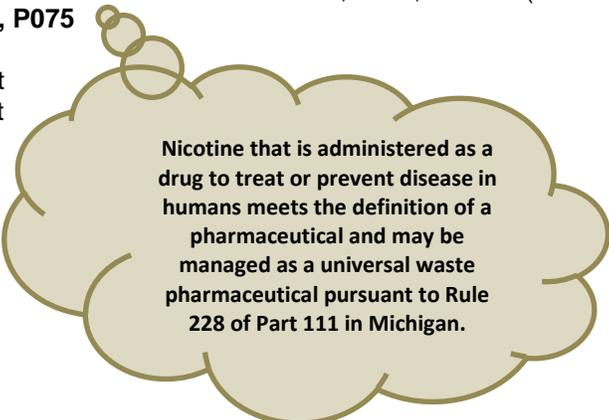


## Example 3

Expired nicotine patches (smoking cessation aids) discarded because they cannot be lawfully administered to a patient or sold as a product.

### Listed Review

1. Is this an unused raw material commercial chemical product containing a sole active ingredient? **YES**  
If Yes: Is there a SDS available? **YES**  
If Yes: Is material a commercial chemical product listed in Part 111 Table 205a, 205b, or 205c (P or U listed)? **YES, NICOTINE AND NICOTINE SALTS, P075**
2. Does the waste contain solvents or is it a wastewater treatment waste not discharged directly to the wastewater treatment plant pursuant to a permit issued by the treatment authority (F listed)? **NO**
3. Does the process generating the waste make the waste a hazardous waste, by definition because the process waste is listed in Part 111 Table 204a (K listed)? **NO**



Nicotine that is administered as a drug to treat or prevent disease in humans meets the definition of a pharmaceutical and may be managed as a universal waste pharmaceutical pursuant to Rule 228 of Part 111 in Michigan.

### Listed Waste Exclusion Review

Do any exclusions or exemptions apply?

- **YES, Universal Waste Exclusion for pharmaceuticals only, not R & D or e-cigarettes.**

**Characteristic, Liquid Industrial Waste, and Solid Waste Review - SKIP for a listed hazardous waste. No characteristic codes are presumed for nicotine products.**

### LDR Implications

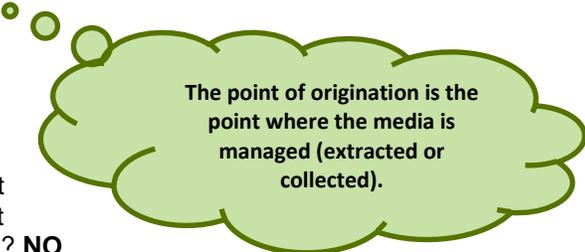
If generated by a SQG or LQG, the LDRs apply and notification is required. This is a nonwastewater, the treatment specified for P075 is "CMBST" which designates high temperature organic destruction or catalytic extraction process.

## Example 4

Collected stormwater runoff and groundwater from a closed gas station underground storage tank farm removal.

### Listed Review

1. Is this an unused raw material chemical product containing a sole active ingredient? **NO**  
If Yes: Is there a SDS available? **NA**
2. Does the waste contain solvents or is it a wastewater treatment waste not discharged directly to the wastewater treatment plant pursuant to a permit issued by the treatment authority (F listed)? **NO**
3. Does the process generating the waste make the waste a hazardous waste, by definition because the process waste is listed in Part 111 Table 204a (K listed)? **NO**



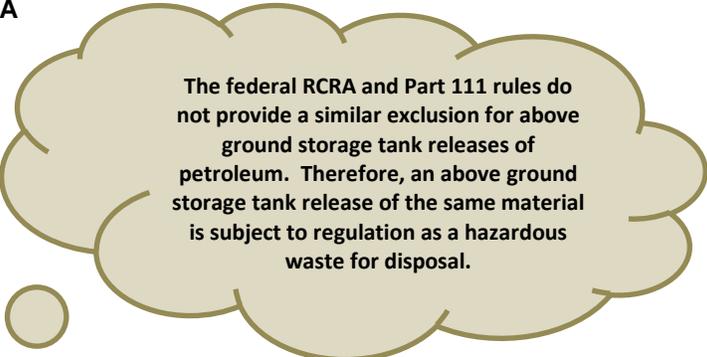
The point of origination is the point where the media is managed (extracted or collected).

### Listed Waste Exclusion Review

Do any exclusions or exemptions apply? **NA**

### Characteristic Review

4. Does the waste exhibit a characteristic that makes it a characteristic hazardous waste?
  - ✓ Ignitable – **NO**
  - ✓ Toxic – **YES for BENZENE (CAS NO. 71-43-2), D018**
  - ✓ Corrosive – **NO**
  - ✓ Reactive – **NO**



The federal RCRA and Part 111 rules do not provide a similar exclusion for above ground storage tank releases of petroleum. Therefore, an above ground storage tank release of the same material is subject to regulation as a hazardous waste for disposal.

### Characteristic Waste Exclusion Review

**YES** – Per Rule 204(2)(l) petroleum contaminated media that fails the toxicity characteristic for hazardous waste numbers D018 through D043 only and are remediated pursuant to an approved underground storage tank clean-up are excluded from the definition of hazardous waste. Waste is not a hazardous waste.

### LDR Implications

**NA** – Remediation waste is not a hazardous waste generated by a SQG or LQG

### Liquid Industrial Waste Review

5. Does the waste fail the paint filter test (liquids break through the filter using Test Method 9095 under SW-846)? **YES**  
**Material is subject to LIW regulation.**

### Liquid Industrial Waste Exclusion Review

Do any exclusions or exemptions apply?

**NONE** – Manage as a liquid industrial waste.