

RCRA Exclusions & Exemptions:

HSM · WWTUs · ENUs



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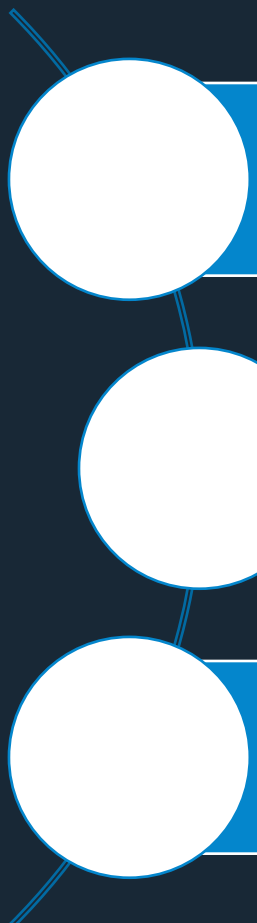
Agenda: RCRA Exclusions & Exemptions



1. Purpose
2. Application
3. Key Citations
4. Examples
 - Hazardous Secondary Materials (HSM)
 - Elementary Neutralization Units (ENU)
 - Wastewater Treatment Units (WWTU)
5. Key takeaways and Q&A

Exclusions vs. Exemptions

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Exclusion:

Material excluded from the definition of solid waste (40 CFR 261.4(a))

Exemption:

Solid and hazardous waste subject to reduced regulatory requirements or exempt (40 CFR 261.4(b))

Documentation:

All claimed exclusions and exemptions must be documented (RO 11678)

Link →

RO 11678: Every exclusion and exemption must be documented — burden of proof is on the regulated entity

Regulatory Crosswalk: Federal RCRA → Michigan

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Topic Area	 Federal RCRA (40 CFR)	 Michigan (MAC R. 299)
Definitions	260.10 Key RCRA terms (tank, surface impoundment, etc.)	R 299.9101–9109 HSM, WWTU, ENU, tank, surface impoundment
Solid & Hazardous Waste Definitions	261.2 (solid waste), 261.3 (hazardous waste) What is solid waste? What is hazardous waste?	R 299.9202, R 299.9203 Michigan solid waste & hazardous waste definitions
Exclusions & Exemptions	261.4(a) solid waste, 261.4(b) hazardous waste Materials excluded from RCRA Subtitle C	R 299.9204(a), R 299.9204(b) Exclusions from solid & hazardous waste definitions
HSM Recycling Exclusions	261.4(a)(23)–(27) Recycling-based exclusions (generator-controlled, third-party, remanufacturing)	R 299.9232–9234 Legitimacy criteria & recycling exclusion conditions
Generator Requirements	262.11, 262.13 Hazardous waste determination process	R 299.9304–9307 VSQG / SQG / LQG conditions & exemptions
Permitting Exemptions (ENU & WWTU)	264.1(g)(6), 265.1(c)(10), 270.1(c)(2)(v) ENU & WWTU exempt from RCRA permitting	R 299.9503 ENU & WWTU operating license exemptions

Applying Exclusions and Exemptions



1. Is it Solid Waste?

No → STOP (not RCRA waste)



2. Excluded as Solid Waste?

Yes → EXIT (not subject to RCRA)



3. Is it a Hazardous Waste? (Listed or Characteristic)

No → Subtitle D non-hazardous waste



4. Excluded/Exempt from HW?

Yes → EXIT (relief from some/all reqs)



→ Full RCRA Subtitle C Applies

Link

Solid Waste [40 CFR 261.2]

- Discarded
- Abandoned
- Recycled
- Waste-like
- Military Munition

Link

Hazardous Waste [40 CFR 261.3]

- Listed
 - *F-list for non-specific sources*
 - *K-list for source-specific waste*
 - *P-list for acutely hazardous chemicals*
 - *U-list for toxic chemicals*
- Characteristic
 - *Ignitability*
 - *Corrosivity*
 - *Reactivity*
 - *Toxicity*

Exclusions & Exemptions: Benefits & Costs



Benefits

Reduced Permitting

May eliminate RCRA Part B permit

Less Oversight

Relief from tank standards, closure reqs

Cost Savings

No financial assurance, lower disposal costs



Costs

Strict Criteria

All conditions must be met simultaneously

Enforcement Risk

Retroactive liability if determination fails

Documentation Burden

Burden of proof on regulated entity (RO 11678)

HSM: Overview

|| ~~Hazardous~~ Secondary Materials (HSM) — Recycling-based exclusions that can remove materials from RCRA entirely



Regulation

- 40 CFR 261.4(a), 261.2(e)(1)
- MAC R 299.9204(1)



Exclusion Pathways

- What it does
 - Control of Generator
 - Offsite Reclaim
 - Offsite Remanufacture
 - Export



Requirements

- 299.9232 Legitimacy
- 299.9333 Remanufacture, or
- 299.9334 Reclaim



Practical takeaway

- Common issues
- Examples

HSM Exclusion: Basics [R 299.9204(1)]



Four Paths to Exclusion

(aa) Generator-Controlled Reclamation

Material remains under the control of the generator during reclamation
Federal: 40 CFR 261.4(a)(23)

(bb) Offsite Reclamation

Material transferred to a third party for reclamation, not under generator control
Federal: 40 CFR 261.4(a)(24) / (25)

(cc) Offsite Remanufacture

Material transferred to an offsite facility for remanufacturing
Federal: 40 CFR 261.4(a)(27)

(dd) Export

Material exported outside the United States for reclamation
Federal: 40 CFR 261.4(a)(24) / (25)

Compliance Requirements

R 299.9232

Legitimacy Determination

Required for all pathways. Establishes that the recycling activity is genuine and not disposal disguised as recycling.
Applies to: (aa), (bb), (cc), (dd)

R 299.9334

Reclamation Conditions

Containment, notification to EGLE, reasonable efforts, and management standards for materials being reclaimed.
Applies to: (aa), (bb)

R 299.9333

Remanufacture Conditions

Requirements specific to materials transferred for remanufacturing at an offsite facility.
Applies to: (cc)

HSMs: What the HSM Exclusion Does



Removes Solid Waste Designation

- Material is no longer solid waste, so it is not hazardous waste and RCRA Subtitle C does not apply.



Eliminates Subtitle C Requirements

- No manifesting, no LDR treatment standards, no hazardous waste storage permits for qualifying materials.
- No biennial reporting or waste minimization obligations under the exclusion.



Enables Legitimate Recycling

- Generators can reclaim or transfer materials for reclamation without full RCRA regulation.



⚠ Conditions Still Apply

- Legitimacy determination, containment, notification to EGLE, and management standards remain required.

HSM: Legitimacy and Sham Recycling

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Legitimacy Factors — R 299.9232

1. **Useful contribution** — material provides a meaningful input to the recycling process or product
2. **Valuable product** — recycling produces a product or intermediate with real market value
3. **Managed as valuable** — generator and recycler handle the material like a commodity, not a waste
4. **Product comparison (weigh factor)** — recycled product comparable to a legitimate product; must consider but does not alone disqualify

Sham Recycling Indicators

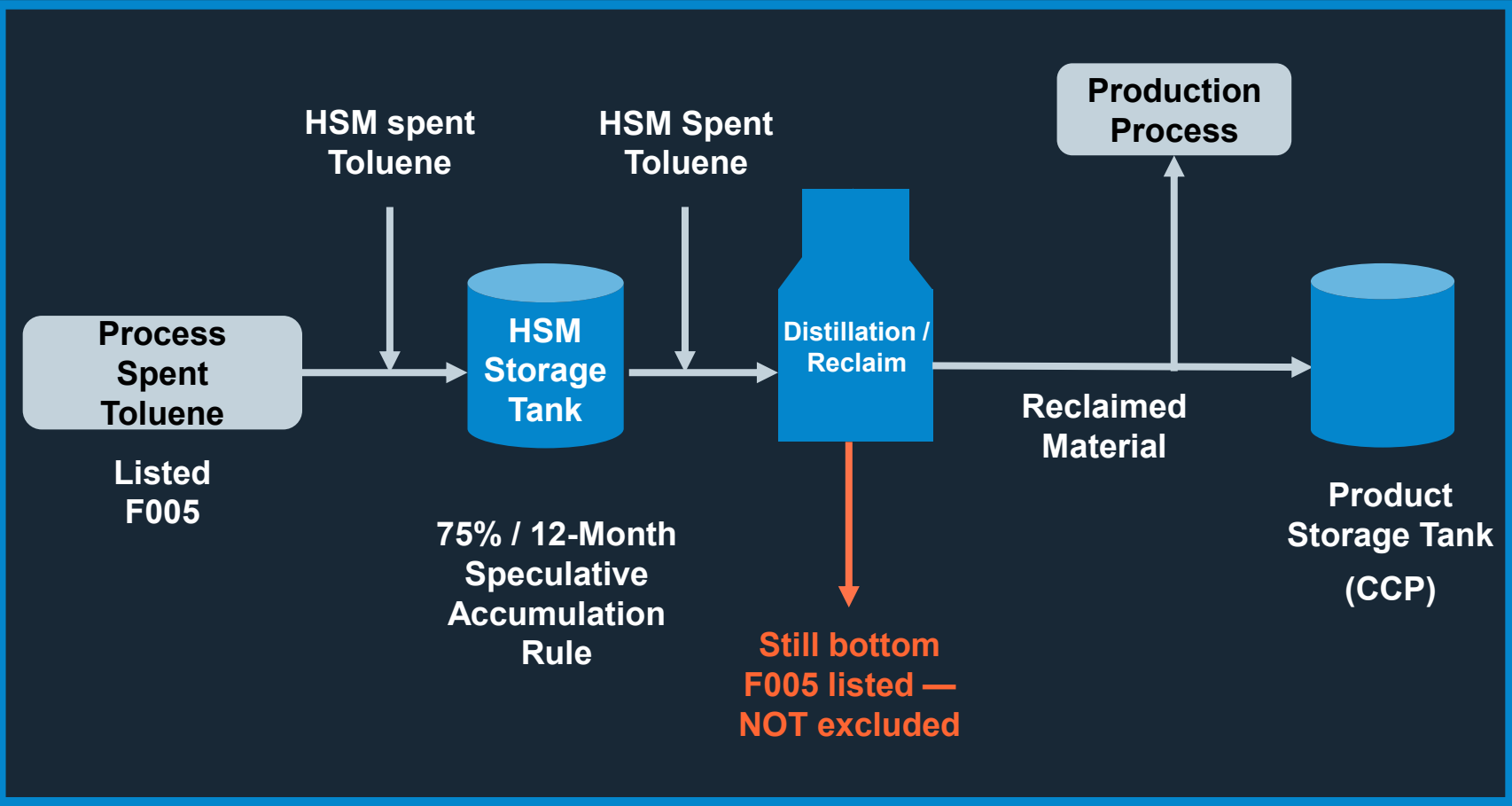
- Is the material stockpiled with no end use in sight?
- Does the recycled product contain significantly higher contaminant levels than the analog?
- Does the generator pay well above market rate — do the economics resemble disposal fees?
- Is the material actually used in production, or land-applied without agronomic basis?



If sham → material was hazardous waste the entire time. Enforcement action, cleanup liability, and penalties apply retroactively.

HSM: Reclaimed and returned to process for reuse [R. 299.9204(1)(aa)]

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Legitimacy Check

- ✓ **Useful contribution** — Spent toluene is the feedstock
- ✓ **Valuable product** — Reclaimed toluene has market value
- ✓ **Managed as valuable** — Contained in tanks, tracked
- ~ **Product comparison** — *Weigh factor: evaluate contaminant levels vs. virgin toluene*

ENUs: Overview

Elementary Neutralization Units (ENU) — The narrowest exemption, limited to corrosivity-only waste in qualifying devices



Regulation

- 40 CFR 260.10 / 270
- MAC R. 299.9103(e) / 299.9503(e)



Exemption

- What it does



Requirements

- Three-part test:
 - ① Qualifying device (tank, container, vessel)
 - ② Corrosive-only waste (D002)
 - ③ Neutralization-only treatment



Practical takeaway

- Exemption boundary: the unit itself
- Examples

ENUs: The 3-Part Eligibility Test



01

Qualifying Device

[R. 299.9103(g)(ii)]

Tank, container, tank system, transport vehicle, or vessel as defined in 40 CFR 260.10.

02

Corrosive-Only Waste

[R. 299.9103(g)(i)]

D002 only — $\text{pH} \leq 2$ or ≥ 12.5 per 40 CFR 261.22. Any additional characteristic (D001, D003, D004–D043) or listed code (F, K, P, U) disqualifies.

03

Neutralization-Only Treatment

[R. 299.9103(g)(i)]

pH adjustment only — adding acid or base to reach non-corrosive range. No oxidation, reduction, or precipitation. Unit-by-unit analysis required.

ENUs: FEDERAL ENU Exempts from

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Markings and Labels

- RCRA hazardous waste labeling;



Inspections

- Daily; or
- Weekly



Containment

- Subpart I container containment
- Subpart J tank containment



Air Emission Standards

- RCRA Subparts AA, BB, and CC
- CAA requirements may still apply



Accumulation Time Limits

- Time; or
- Volume limits

Regulatory basis: 40 CFR 264.1(g)(6) / 265.1(c)(10) — Qualifying ENUs are exempt from the following Subtitle C requirements:

ENUs: MICHIGAN ENU All Apply



Markings and Labels

- “Hazardous Waste”
- “Contents”
- “Date”



Inspections

- Daily; or
- Weekly



Containment

- Subpart I container containment
- Subpart J tank containment



Air Emission Standards

- RCRA Subparts AA, BB, and CC
- CAA requirements may still apply



Time Limits

- No speculative accumulation
- **90/180 limit out due to permitting exemption**

ENUs: Common Pitfalls



Pre-Neutralization Storage

Storage Device

- Upstream storage containers are not exempt
- Stored D002 waste counts toward generator status (can push VSQG → LQG)



Mixtures and Reactions

D002-Only Disqualification

- Dissolved metals above RCRA thresholds add D-codes and disqualify the unit
- Co-mingling with listed waste (F001–F005) triggers the mixture rule and lists entire volume
- Precipitation or dilution alongside neutralization voids the exemption



Sludges / Residues

New Point of Generation (POG)

- Residuals become a new POG once removed from the ENU
- HW determinations required for sludges, precipitates, and filter cakes
- ENU exemption does not follow residuals out of the unit

ENUs: Summary Review



3-Part Eligibility Test

- Qualifying device
- D002-only waste
- Neutralization only

What the Exemption Provides

- Exempt from Permitting and accumulation time

What Remains Required

- RCRA labeling, daily/weekly inspections,, and Subpart AA/BB/CC air emission standards
- Waste determination before and after neutralization
- Unit must remain leak-free
- Land disposal restrictions and corrective action as an SWMU

Common Pitfalls

- Michigan container and tank requirements
- Pre-neutralization storage containers are not ENUs
- Additional characteristics or listed waste codes disqualify the unit immediately
- Sludges and residuals are a new POG once removed

Core Principle

The exemption boundary is the unit itself. Upstream storage is not covered. Downstream residuals are not covered. The neutralization unit is where the exemption lives and nowhere else.

Regulatory Basis

- 40 CFR 260.10 (definition); 264.1(g)(6) / 265.1(c)(10) (exemptions)
- Michigan: MAC R. 299.9103(e) and 299.9503(e)

WWTUs: Overview



Regulation

- 40 CFR 260-270
- R 299.9109(I)
- R 299.9503(1)(g)



Exemption

- What it does



Requirements

- Tank or Tank System
- Hazardous Wastewater or Wastewater Sludge
- Subject to CWA § 402 (NPDES) or § 307(b) (pretreatment program)
- SQG Subject to R. 299.9307(1)(d)(ii)
- LQGs subject to Subpart J tank requirements



Practical takeaway

- Common issues
- Examples

WWTUs: The 3-Part Eligibility Test



01

Tank or Tank System

[R. 299.9108(a) or (b)]

Must be a stationary device of non-earthen materials (steel, concrete, fiberglass, or plastic) per 40 CFR 260.10, including its ancillary equipment and containment system.

02

Subject to CWA §402 or §307(b)

[R. 299.9109(nn)(i)]

Facility must be regulated under an NPDES permit (Section 402) or a pretreatment program (Section 307(b)) under the Clean Water Act.

03

Hazardous Wastewater or Sludge

[R. 299.9109(nn)(ii)]

Unit must manage hazardous influent wastewater or treatment sludge. Not formally codified under RCRA — generally interpreted as low-concentration contaminants in water.

WWTUs: What the WWTU Exemption Does



Prevents Duplicative Regulation and permitting

- CWA takes precedence, No RCRA Part B permitting for qualifying units



Narrow, Unit-Level Scope

- Not a blanket exclusion — all three eligibility elements must be clearly met

WWTUs: General Facility Requirements



01

Waste Determination

Hazardous waste characterization under §262.11 is still required for all wastewater and sludge streams.

02

Pretreatment Standards

Industrial users discharging to POTWs must comply with general and specific prohibitions under 40 CFR §403.5.

03

Documentation

A unit-by-unit qualification record is required for each claimed WWTU and must be available for regulatory inspection.

04

Storage Limitation

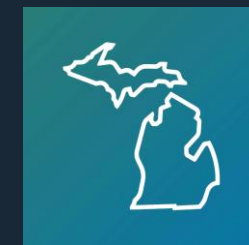
Storing hazardous wastewater before off-site shipment for treatment or disposal can disqualify the unit from the exemption.

05

Corrective Action

The WWTU remains a Solid Waste Management Unit (SWMU) subject to corrective action for any environmental release.

WWTUs: Michigan Overlay – MAC R. 299 and EGLE Expectations



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Topic	Federal	Michigan MAC	EGLE Interpretation
WWTU Definition	40 CFR 260.10	R 299.9109(I)	Same
WWTU RCRA Permit Exemption	EXEMPT [40 CFR 270.1]	EXEMPT [R 299.9503(1)(g)]	Same
WWTU RCRA Tank Compliance	EXEMPT 40 CFR 264.1(g)(6) [RO 13112]	REQUIRED	State imposes stricter compliance requirements
SQG	EXEMPT	REQUIRED	SQGs must comply with R.299.9306 Tank Requirements
LQG	EXEMPT	REQUIRED	LQGs must comply with Subpart J (R. 299.9615) Tank Requirements

WWTUs: Common Issues and Red Flags



Common Red Flags

- Misclassified units — lagoons/impoundments $\neq$ tanks (260.10)
- Mixed use or blanket determinations defeat exemption

Equipment vs. Waste

- Per EPA , Exemption covers the unit, not the waste inside it
- Sludges and residuals are fully regulated once removed

Off-Site Waste & Subpart J

- Receiving off-site HW triggers Parts 264/265 tank standards
- Leaking units may lose exempt status entirely

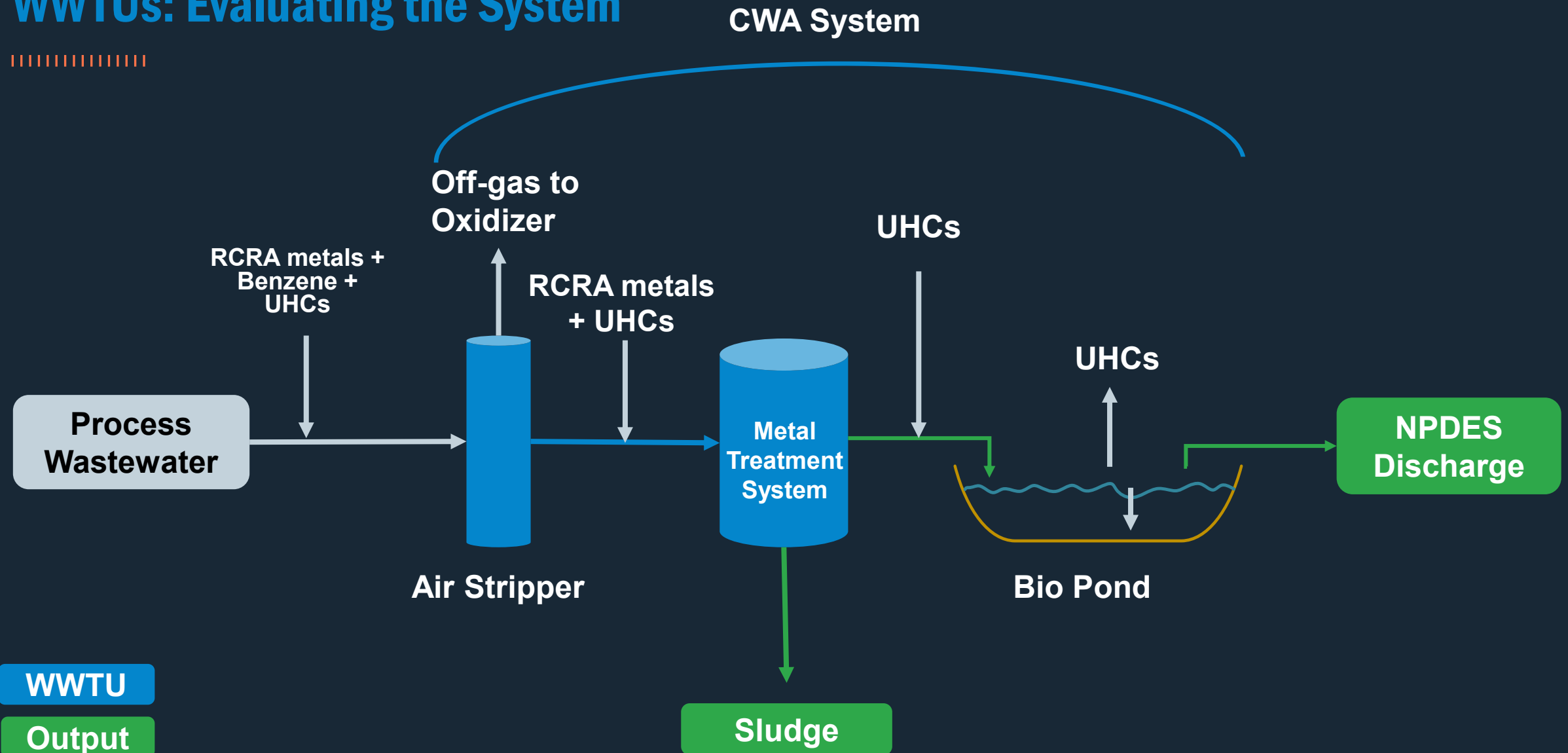
CWA & Documentation

- No CWA history = no exemption (NPDES/pretreatment required)
- Support file must be current, complete, and coherent



WWTUs: Evaluating the System

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Summary Table: ENU vs WWTU

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Feature	ENU Exemption	WWTU Exemption
Waste Type	Corrosive (D002) only	Hazardous wastewater
Treatment Method	Neutralization	Physical, chemical, biological treatment
Equipment	Tank, container, transport vehicle, or vessel	Tank / Tank system only
Permit Requirement	No RCRA permit	No RCRA permit if CWA-regulated
CWA Regulation Required	No	Yes (Section 402 or 307(b))
Residue Management	Sludge may be hazardous	Sludge may be hazardous

Questions & Discussion



How do
exclusions apply
at your facility?

Scenarios or
units you'd like
to walk through?

Documentation
or compliance
questions?

Open floor for questions on HSM,
ENU, and WWTU exemptions

Thank You



RCRA Exclusions & Exemptions Training

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