

How to Use Downstream Vendor Programs to Manage EHS Risks

September 19, 2019



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NAEM delivers actionable strategies that empower corporate EHS&S leaders to make an impact



NAEM is a community for EHS&S leaders



YOUR SPEAKERS



Amber Crouch
Senior Manager Environmental Affairs
Emerson Electric Co.



Brooke Dillon
Senior Managing Consultant
Ramboll



Chris Hawk
Environmental Engineer
Penske Truck Leasing Co

DOWNSTREAM VENDOR AUDITS

A TOOL FOR EHS AND ESG RISK MANAGEMENT



TODAY'S AGENDA





DOWNSTREAM VENDORS - DEFINED

- Hazardous waste treatment, storage and disposal facilities
- Universal waste destination facilities
- Lead-acid battery recyclers
- Used oil recyclers
- Scrap metal recyclers
- Electronic waste handling facilities
- Medical waste facilities
- Cardboard, plastic, aluminum recyclers
- Municipal waste landfills
- Waste to energy/incinerators

DEFINING THE RISKS



Resource Conservation and Recovery Act (RCRA) Liability

Generator retains **strict liability** for any mismanagement of hazardous waste



Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Liability

Generator liability is strict, **joint and several**

LOOKING BEYOND CERCLA LIABILITY

- Reputation/Brand Management
- Zero Waste to Landfill Certification
- Electronic Waste/Basel Convention
- Compliance with the ISO 14001: 2015 Standard
- Operational Continuity



USZWBC.ORG

REPUTATION MANAGEMENT AND CORPORATE SUSTAINABILITY REPORTING



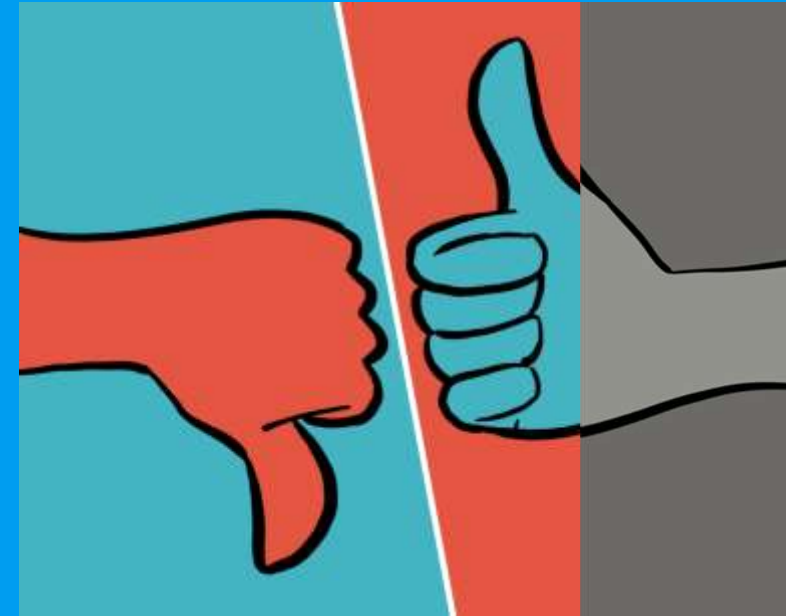
**86% of the S&P 500
publish a sustainability
report**

RAMBOLL



65% of Americans say that when a company takes a stand on a social or environmental issue, **they will do research to see if it is being authentic**

(2017 Cone Communications CSR Study)



76% of Americans would **refuse to purchase from a company** upon learning that it supported an issue contrary to their beliefs

(2017 Cone Communications CSR Study)

ZERO WASTE TO LANDFILL CERTIFICATION



Section 14.2.2: Reviewers should take a risk based approach regarding when to assess processing at a downstream diverting entity to assure the diverting entity is processing the material being sent there.

Section 14.2.3: Validations performed to verify non-landfill processing should be based on how likely the diverting entity will landfill waste....Where possible, perform a site visit to any diverting entity that is likely to landfill waste at a higher rate...



ZERO WASTE TO LANDFILL CERTIFICATION

RECYCLE Credit 2: Acquire written documentation from every service provider on where recyclable commodities from the facility are sent for final processing

RECYCLE Credit 2 – Potential Strategies: Identify all recycling vendors and locations, and understand their operations, processes and end products. Compile documentation for recyclable commodities including the type of processing and the end product they produce. Communicate directly with the vendor and consider visiting their operations center







BASEL CONVENTION



*the world environmental
agreement on wastes*

ELECTRONIC WASTE AND THE BASEL CONVENTION

- End-of-Life Electronic and Electrical Equipment Policies
 - Managed in accordance with applicable laws/regulations
 - No EEE may be sent to landfill or incineration
 - May not be exported to developing countries/Comply with the Basel Convention
- Recycling/disposition vendors must meet supplier codes of conduct for EEE
 - E-Stewards, R2 and other certifications
 - Submit to audits and review downstream vendor performance

E-WASTE RECYCLER CERTIFICATIONS – ESG ELEMENTS

Performance Criteria	 R2 Responsible Recycling	 e-Stewards
EHS Management Systems	X	X
Reuse and Refurbishment	X	X
Legal Requirements	X	X
On-Site EHS	X	X
Downstream vendor due diligence	X	X
Data Destruction	X	X
Security	X	

Performance Criteria	 R2 Responsible Recycling	 e-Stewards
Insurance Requirements	X	X
Closure Plan, Financial Review	X	X
Transportation	X	X
Tracking of toxic 'focus' materials	X	X
Ethical Labor		X
Restrictions on export		X
Landfill/Incineration Prohibition		X

ISO 14001 – LIFE CYCLE PERSPECTIVE

*"Consistent with a **life cycle perspective**, the organization shall :*

- (a) Establish controls...to ensure that its environmental requirement(s) are addressed in the design and development process for the product or service, considering **each stage of its life cycle**;*
- (b) Determine its environmental requirement(s) for the procurement of products and services, as appropriate;*
- (c) Communicate its relevant environmental requirements to external providers;*
- (d) Consider the need to provide information about potential significant environmental impacts associated with the transportation or delivery, use, end-of-life treatment and final disposal of its products and services. "*



HOW DO VENDOR AUDITS FIT IN?



CLIENT SURVEY

DOES YOUR COMPANY HAVE A FORMAL WASTE VENDOR AUDIT PROGRAMS?

- 9 out of 10 company respondents indicated that their organizations have formal waste vendor policies and programs



WHAT TYPE OF WASTE VENDORS ARE INCLUDED?

- Hazardous Waste
- Electronic Waste
- Universal Waste
- Lead-acid Battery Recyclers
- Used Oil/Nonhazardous Waste Liquid Recyclers
- Scrap Metal Recyclers
- Solid Waste and Compost

VENDOR AUDIT SCOPE CONSIDERATIONS

Survey: Typical Vendor Audit Scopes

Audit Scope	RCRA	ESG	Other
Contamination	X	X	
EHS Compliance	X	X	X
Financial Performance	X		X
Transportation		X	X
Labor		X	
Security		X	
Sustainability		X	
Downstream vendor vetting practices		X	X

Audit Program Considerations

- Desktop vs. In-Person
- Internal or Third-Party
- Frequency
- Scope: Uniform or Risk Based
- **Financial Performance Review**
- **Risk Ranking System**
- **Criteria for Rejection**



Rental | Leasing | Logistics

VENDOR AUDIT CASE STUDIES



EMERSON™

CORE SERVICES



TRUCK LEASING

Is a leading transportation services provider in North America, offering:

- Full-Service Leasing
- Contract Maintenance



TRUCK RENTAL

Operates one of the newest and most diverse truck rental fleets in North America providing both:

- Commercial Rental
- Consumer Rental



LOGISTICS

Serves companies in North America, South America, Europe, and Asia, offering:

- Dedicated Contract Carriage (DCC)
- Transportation Management (TM)
- Distribution Center Management (DCM)

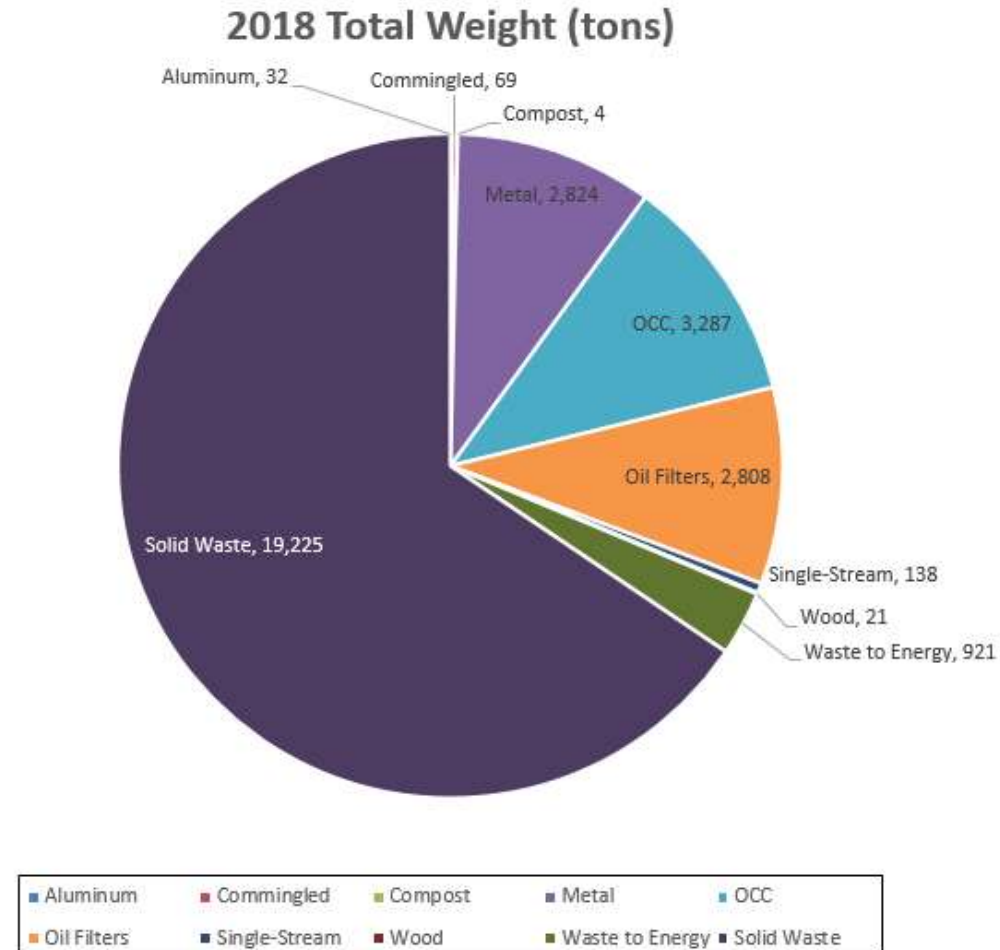
Waste Management – Vehicle Wastes

Penske's waste management program is designed to minimize waste generation, recycle the wastes that are generated, and ensure proper disposal to limit the impact on the environment. Penske handles waste generated from vehicle maintenance as follows:

- Used Oil - Approved vendors collect used oil from our locations and it is re-refined into new motor oil or used as a fuel for industrial applications. Penske recycles nearly 3 million gallons of used oil annually.
- Used Oil Filters - Approved vendors collect filters from our locations and recycle the metal for reuse in other applications. Penske recycles over 13,000 drums of used oil filters annually.
- Used Antifreeze - Approved vendors collect our used antifreeze and recycle it for reuse. In addition, the use of extended life antifreeze decreases the amount of waste we generate.
- Spent Batteries - These are picked by the original vendor who then sends them to a battery recycling facility.
- Scrap Tires - Tires are picked up by the original vendor and retreaded or recycled into other products such as mud flaps or conveyor belts.
- Parts Washing Solvent - Approved vendors collect our spent parts washing solvent and recycle it for reuse.

Waste Management – Solid Wastes

In 2018 Penske successfully diverted 34% of our total trash from landfills to a recycler.



Waste Audit Programs

- Annual internal desktop audit of env. programs including waste:
 - Objective to ensure 800 locations are implementing corporate programs
- Triennial third-party waste audits:
 - Objective is to identify new regulations, data gaps, programmatic deficiencies, and implementation deficiencies within operations.
- Triennial third-party waste vendor audits:
 - Review CHWMEG reports for vehicle fluid waste vendors (transfer, recycling & disposal facilities) every three years.
 - Review compliance records, housekeeping, operational risks, and financial status.
 - Created internal scoring system to compare all facilities amongst each other.
- Semiannual Solid Waste audits:
 - Third-party waste broker review recycling/diversion data.
 - Rightsizing to maximize efficiency of cost of all services.



Rental | Leasing | Logistics

Emerson – Corporate Overview

Emerson is a global technology, engineering and manufacturing company with a 129-year legacy of providing innovative solutions for customers in industrial, commercial and residential markets.

Through our two business platforms – Automation Solutions and Commercial & Residential Solutions – we develop and deliver advanced technologies, software and services that enhance productivity, efficiency and safety for our customers.

<https://www.emerson.com/en-us>



Financial Performance 2018

Driving strong business results



Creating value for shareholders:

+25% One-year shareholder total return

62 YEARS Increased dividends

Key Facts at a Glance

1890 Founded

Headquarters:
St. Louis, Missouri (USA)

Stock symbol:
NYSE: EMB

54% of destination sales were outside the United States

18K active patents held by Emerson worldwide in 2018

Recognitions 2018

Ranked #178 America's largest corporations by revenue (FORTUNE 500)

Ranked #2 FORTUNE World's Most Admired (Industrial Machinery category)

Ranked #15 in the annual "Top 50 Readers' Choice" survey (Woman Engineer Magazine)

Scored 100% Corporate Equality Index (Human Rights Campaign's Best Places to Work for LGBTQ Equality)

More information about Emerson's business and operational performance can be found at [emerson.com](https://www.emerson.com) and in our latest Annual Report to Shareholders and Form 10-K (filing with the U.S. Securities & Exchange Commission).



Waste Management Program

Global and Domestic Policy

Waste Management

Waste Minimization: Long-term pollution prevention (and sometimes even short-term) is less expensive than proper treatment and disposal of generated wastes or emergency response for releases of hazardous material or waste. It can result in raw material savings, increased production efficiencies, better product quality, reduced emissions to the environment, and reduced environmental costs. Re-use or recycling of packaging and packaging waste is more economical than proper treatment and disposal of generated packaging waste. Many countries have statutory obligations requiring proper management of packaging and packaging waste.

- ✓ Ensure all containers are properly closed and labeled appropriately with the contents of the container.
- ✓ Maximize drip time for drip operations.
- ✓ Segregate waste materials to the extent practical (such as aluminum, stainless steel, copper, hazardous waste, office trash, and packaging waste). (Figure 23-25)
- ✓ Identify and substitute less toxic materials for more toxic materials whenever possible.
- ✓ Evaluate each discrete production unit within the facility for potential improvements in the process which could minimize waste volume, reduce toxicity, or reduce other emissions.
- ✓ Ship hazardous waste offsite for disposal at least every six months.
- ✓ Use licensed or government-recognized vendors for the disposal of hazardous waste.
- ✓ Solvent-management training (including management of cleaning rags and paper towels) should be provided to all applicable employees.
- ✓ Keep containment and work areas clean to maximize the possibility of recovering and reusing spilled materials.
- ✓ Remember that metal swarf/chips are recyclable materials, not waste.
- ✓ Packaging and packaging waste should be minimized and should be recycled and reused, if possible. Document reductions in packaging and packaging waste as necessary.

1. Question: What types of TSD facilities require environmental liability reviews and how frequently should reviews be performed?

Answer: It is Emerson's policy that environmental liability reviews be performed for TSD facilities that manage hazardous and certain nonhazardous industrial wastes generated by an Emerson facility.

Environmental liability reviews are performed to limit the potential for liability under CERCLA. CERCLA (or Superfund) liability applies to current and former owners of a site presenting a hazard, transporters of hazardous substances, and persons who arranged for hazardous substances to be brought to a site (i.e., generators).

Section 101(14) of CERCLA broadly defines "hazardous substances" as any element, compound, mixture, solution, or substance which, when released to the environment, may present substantial danger to public health, welfare, or the environment. It includes any substance designated under Section 311(b)(2)(A) or any toxic pollutant listed under section 307(a) of the Federal Water Pollution Control Act; any hazardous waste having the characteristics identified under or listed pursuant to RCRA Section 3001; any hazardous air pollutant listed under section 112 of the Clean Air Act; and any imminently hazardous chemical substance or mixture for which the government has taken action under Section 7 of the Toxic Substances Control Act. A CERCLA hazardous substance does not have to be a hazardous waste.

Below are types of TSD facilities and whether the facility requires a liability review under the Emerson policy.

Type of TSD Facility	Liability Review (Yes or No)
Hazardous waste TSD	Yes
Municipal landfill	No
Scrap metal recycler	Yes
Drum reconditioner	Yes
Wooden pallet recycler	No
Lead-acid battery recycler	Yes
Used oil recycler	Yes
Used coolant recycler	Yes
Publicly-owned treatment works receiving industrial wastewater	No
Privately-owned treatment works receiving industrial wastewater	Yes
Computer recycler	Yes
Office paper recycler	No
Industrial laundry facility receiving cloth rags and uniforms	No
Medical waste TSD	No
Fluorescent light bulb recycler	Yes
Nickel-cadmium battery recycler	Yes

Common Waste streams

Most Common Types of Waste

- Used Oil, Grease & Oily debris
- Paint related waste
- Aerosols
- Lightbulbs & Batteries
- Solvents
- Solvent rags
- Electronic waste



Audit Program – Waste & TSDF's

**EMERSON ELECTRIC CO.
TREATMENT STORAGE AND DISPOSAL FACILITY
SITE VISIT QUESTIONNAIRE**

Please forward a copy of this completed questionnaire to Emerson Corporate Environmental Affairs and keep the original in the site's environmental files.

Audit date: _____

Person(s) conducting review: _____

Phone #: _____ Email: _____

Division/ Facility: _____

A. GENERAL INFORMATION

1. Disposal Company Name: _____

2. Address (site and mailing if different): _____

3. U.S. EPA Identification Number: _____

4. Facility Contact: _____ Title: _____
Telephone: _____ Email: _____

B. SERVICES OFFERED

1. Permitted Hazardous Waste Activities:

☐ Landfill ☐ Incineration ☐ Storage
☐ Transfer ☐ Transportation ☐ Wastewater Treatment
☐ Distillation ☐ Fuel Blending ☐ Other Treatment/Reclamation

2. Nonhazardous Waste Activities:

☐ Landfill ☐ Recycling/Reclamation

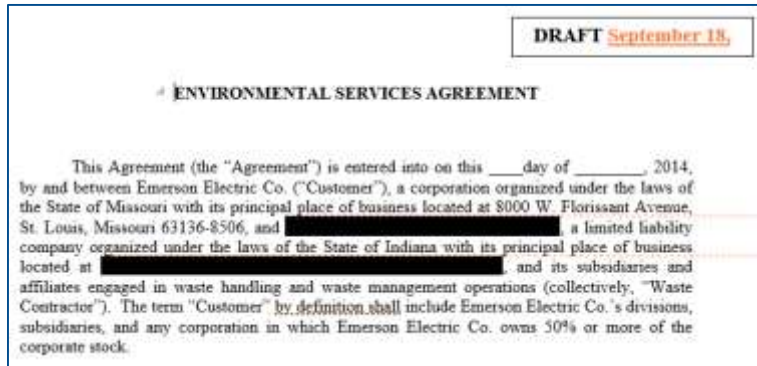
Emerson Environmental Services
TSD Facilities
Reviewed October/November 2018

Facility Name	Facility Type	Facility Address	City	State	Notes	Date of Last Inspection
Chem Station	U.S. Air Force, Inc.	222 Cassin Loop #1007	Amherst	MA	Compliance in compliance with RCRA. No information available regarding UAS or CWA. No RCRA violations or formal or informal enforcement actions noted.	RCRA 11/1/2018
Chem Station	U.S. Steel, LLC	300 American Court	St. Louis	MO	Facility is considered significant compliance with RCRA and emergency response. CWA, CAA compliance topics developed. RCRA permitting violations from first quarter 2018 through 2018. The facility has received noncompliance issues as 7 of the past 12 quarters. 6 quarters of which were considered significant violations. There have been 12 informal noncompliance issues and 2 formal enforcement actions in the past 7 years totaling \$301,708 in penalties. The facility has issues of noncompliance with air emissions in 4 of the past 12 quarters; significant 2 informal enforcement actions and 2 formal enforcement actions for \$1,000 in penalties. There were further report deviations from their up-plant level records in June 2018. The facility is checked as noncompliance for the CWA, being in noncompliance in 1 of the last 12 quarters. They have received 1 informal enforcement action and 1 formal enforcement action in the past 7 years totaling \$11,000. 2017 and 2018 CWA violations as 1.2-dibenzofuran offsite at 30% and 100%. 2017 lead offsite violations at 15%, 67% and 100%. Lead offsite violations in 2018 at 100%. Issues of violations were noted in June, July and August 2018. RCRA had 2018/12 lead compliance action noted on 1/2/19 with penalty of \$11,000. CWA observation notes noted on 1/2/19 with penalty of \$1,000. CWA non-compliance action of concern noted on 1/1/19 with penalty of \$11,000. RCRA issued final compliance order on 4/2/19 for non-compliance of 100,000.	RCRA 10/1/2018 CAA 1/2/2019 CWA 4/2/2017
Chem Station	U.S. Steel, LLC	104 West Lincoln Road	Phoenix	AZ	Facility is in compliance with RCRA. No CWA or CAA information available. Facility is TSD treatment, use and storage in CWA. No other violations or penalties identified between 2018 and 2018.	RCRA 1/2017

Emerson TSDF Review Information									
Country	State	City	Facility Name	Name of Review	Date Review	Reviewer Contact Info.	TSDF Type	EPA ID#	
US	CO	Henderson	Vulco ES Technical Solutions LLC	John Smith	9/27/2018	john.smith@emerson.com	General TSDF (Fuels blending, acids, bases, salts, etc.)	CO088551164	
US	MN	Roseville	Evoqua Water	John Smith	10/9/2018	john.smith@emerson.com	General TSDF	MN056109478	
US	MN	Saint Paul	Tech Dump	John Smith	10/10/2018	john.smith@emerson.com	Bulbs, electronics, paper, cardboard recycling	Green Valley, MN000192987	
US	MN	Saint Paul	Tech Dump	John Smith	10/10/2018	john.smith@emerson.com	Bulbs, electronics, paper, cardboard recycling	Saint Paul, MN000060377	
US	OH	Gakema	Arrow Electronics	John Smith	12/5/2018	john.smith@emerson.com	electronic waste	NA	
US	PA	Greensburg	Commonwealth	John Smith	12/11/2018	john.smith@emerson.com	Electronic waste	NA	
US	OH	Dayton	Clean Water Dayton	John Smith	12/13/2018	john.smith@emerson.com	General TSDF (Fuels blending, acids, bases, salts, etc.)	OH0004274631	
US	OH	Dayton	Franklin Iron & Metal	John Smith	12/18/2018	john.smith@emerson.com	scrap metal	NA	
US	TX	Houston	B&B Iron & Metal	John Smith	1/29/2019	john.smith@emerson.com	scrap metal	NA	
US	MN	St. Paul	Tech Dump	John Smith	4/9/2019	john.smith@emerson.com	Bulbs, electronics, paper, cardboard recycling	MNR000070466	
US	OH	Cincinnati	Cleanites Recycling	John Smith	4/30/19	john.smith@emerson.com	bulbs, batteries	NA	
US	WI	Milwaukee	Covanta Environmental	John Smith	6/12/2019	john.smith@emerson.com	Wastewater Treatment	WIC000095781	

Managing Risk

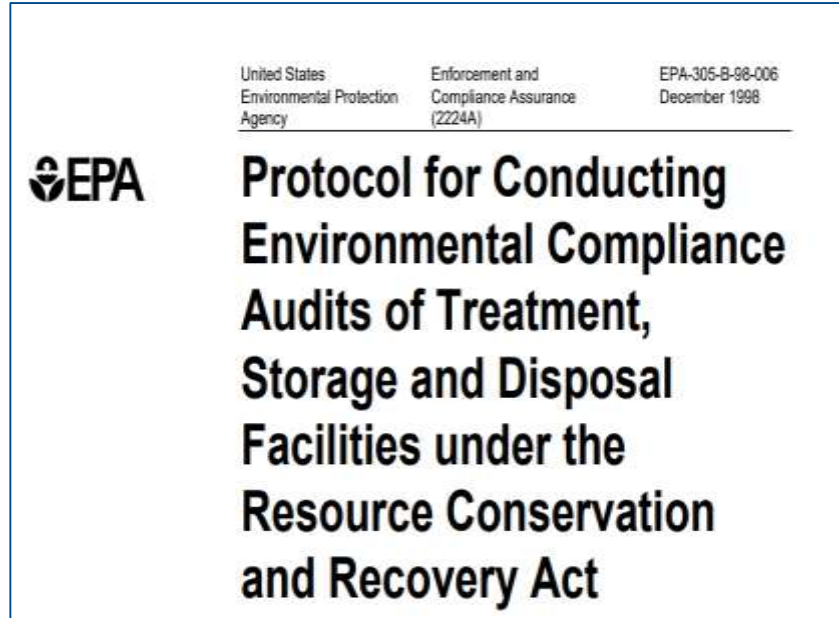
Written Agreements



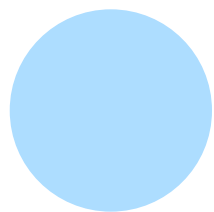
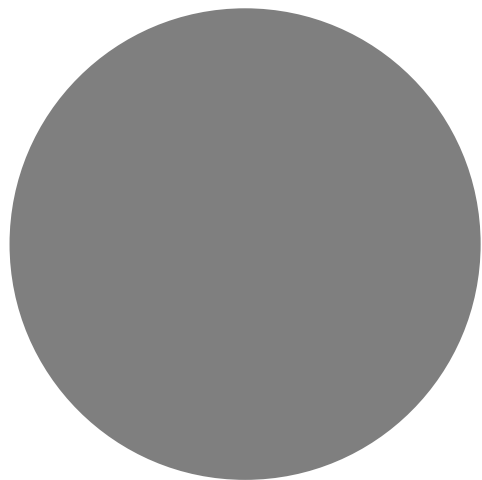
Don't Forget these Sections:

- Non-conforming waste
- Title
- Representations & Warranties
- Indemnification
- Have internal legal council review

Use EPA Guidance



<https://www.epa.gov/sites/production/files/documents/apcol-rcratsdf.pdf>



CREATING A VALUE PROPOSITION

