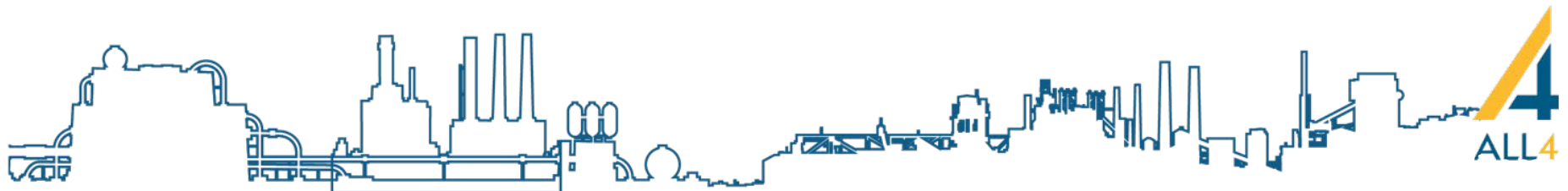


Ask the Experts: Environmental Considerations for the Alcoholic Beverage Industry

Today's Environmental Consulting is on our Tab

Hosted by:

ALL4 LLC



Let's Set The Bar (Agenda)

- Discussion of environmental items related to alcoholic beverage manufacturing.
- Q&A with our experts!

Who Are We?

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- ❑ Mike Malchitsky – Mike.Malchitsky@bostonbeer.com
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Matrix of Environmental Programs

Air Program Components	Water Program Components	Sustainability & Other Program Components	Waste Program Components
CAA Preconstruction Permitting	NPDES Stormwater Construction	Sale of By-products Product Recovery Reuse/Recycling	Waste Determinations for Non-Hazardous & Hazardous Materials
CAA Operating Permits	NPDES Stormwater Operating	CO ₂ Capture	Form 25R & Form 26R (PA Facilities)
CO ₂ & GHG Reporting	SPCC Plans	GHG Accounting	Form GM330 Biennial Report (PA Facilities)
Refrigeration (Ozone Depleting Substances)	Wastewater Discharger (Direct & Indirect)	Radiation Permit	Generator Status and Registration
Tier II // TRI // RMP			

Air Program Management

- ❑ Top Air Questions:
 - Do I need a construction or operation air permit?
 - Am I subject to any requirements?
- ❑ Answer: Calculate your potential emissions!
- ❑ Potential emissions tell you:
 - If you need an operating permit .
 - If you need a construction permit.
 - If you are an area or major source of hazardous air pollutants (HAP).
 - If certain rules apply.

Typical Air Emissions Units

Beer/Malt Beverages

Grain Brewing	Brewhouse	Fermentation/ Post-Fermentation	Filling
Grain Unloading, Grain Handling, Malt Kiln, Malt Mill	Wort Cooler, Brew Kettles, Mash Tun	Yeast Propagation, Fermenters, Aging Tanks, Activated Carbon Regeneration	Can/ Bottle/ Keg/ Bag-in-Box Filling, Destruction

Distilled Spirits (DS) / Bourbon Distillery

Granary Operations	Fermentation	Distillation	DS Products
Grain Receiving, Malt Receiving, Grain Cleaning, Grain Storage, Grain Milling	Yeast Propagation, Fermentation, Beer Well	Beer Column / Pot Still, Doubler / Thumper, Heads & Tails Tank, Product Storage, Dry House Operations	Bulk DS Loading, Proofing, Barrel Dumping, Barrel Filling, Product Gauging

Air Program – Permits

- Need a permit?
 - Consider flexible limits for growth.
 - Understand the bigger vision.
 - Permit avoidance.

- Potential emissions = No permit?
 - You may still have requirements if your units utilize natural gas or diesel/ULSD.

Air – Emissions Unit Requirements

- ❑ Are you an Area or Major Source of HAP?
- ❑ Boilers / Process Heaters / Steam Generating Units
 - Potentially subject to:
 - 40 CFR 63, Subpart JJJJJ – Area Source Boiler MACT
 - 40 CFR 63, Subpart DDDDD – Major Source Boiler MACT
 - 40 CFR 60, Subparts Db or Dc – NSPS
- ❑ Stationary Engines (Generators and Fire Pumps)
 - Potentially subject to:
 - 40 CFR Part 63, Subpart ZZZZ – MACT
 - 40 CFR Part 60, Subpart IIII – NSPS for CI ICE
 - 40 CFR Part 60, Subpart JJJJ – NSPS for SI ICE


Air – Siting Considerations

- Attainment Status of Area for Ozone
 - Major Stationary Source Emission Thresholds Reduced in Designated Nonattainment Areas

- Separation of Operations Across Multiple Sites
 - Distillery
 - Aging / Maturation Warehousing Operations
 - Bottling & Packaging

- Understand Area Attainment Status Before Construction or Modification.

The Devil's Cut of the Angel's Share

- 
- Strategic Permitting Considerations.
 - Additional Control Requirements for Fugitive Emissions from ***“Major Stationary Sources.”***
 - Requirements Vary Across Jurisdictions.
 - Support Facility Determinations
 - Are Aging Warehouses Listed on Facility Permit?
 - Paying Fees for Fugitive VOC Emissions?

Wastewater (Indirect Dischargers)

- Wastewater Permitting & Pretreatment
 - Speak with Wastewater Superintendent
 - Review Sewer Use Ordinance in Conjunction with Characterization of Discharge Streams
 - Understand POTW Capacity for New Facility or Expansion
 - Rural Municipalities Could Have Less POTW Capacity
- Facility Designed to Prevent “Slug” Discharges?
- Regular Sampling and Reporting
- Must Renew Operating Permits

Stormwater Permitting

- NPDES – Stormwater Permitting Types
 - Construction vs Operational
 - Stormwater Pollution Prevention Plan (SWPPP / SWP3)

- Construction Permitting
 - State or Local Site Disturbance Thresholds Vary
 - Does Contractor Manage Construction Permit?
 - Plan Transition from Construction to Operating

Stormwater Permitting

- Operational Permitting
 - Regular Inspections of Outfalls and Property
 - Sampling and Reporting of Results
 - Update Plans for Changes and Review Regularly
- Determine Requirements for Additional Plans?
 - Groundwater Protection Plan (GPP)
 - Hazardous Materials Use and Spill Prevention Control (HMPC) Plan
 - Spill Prevention Control and Countermeasure (SPCC) Plan

SPCC Plans


- Spill Prevention, Control, and Countermeasure (SPCC) Plan
 - Who has...
 - Oil or gas tanks? 40 CFR Part 112, Subpart A
 - AST > 1,320 gallons
 - UST > 42,000 gallons

- Chemical tanks over 1,200 gallons for cleaning chemicals, pH adjustment WW, etc.

Sustainability

- By-Products Sale and Reuse
 - CO₂ Capture Systems
 - Sale of Distiller's Grains (DDG, DDGS & WDG)
 - Land Application of Stillage, RHU Bottoms, and Waste Beer
 - Sale of spent yeast to animal feed

Where does waste beer go?



The waste beer liquid gets land applied as fertilizer on a farm!

Reduce, REUSE, & Recycle locally!

Tons of spent grain and yeast for animal feed at local farms!!!

Did you know???

Sustainability

- CO₂ and GHG Accounting
 - Internal or External Customer Requirement?
 - GHG Accounting Protocol Used?
 - Does your organization use the same accounting protocols as competitors in your industry?
 - **“Apples to Apples”** comparison for product sustainability claims?
 - External GHG Reporting for Sustainability
 - Scope 1, 2, & 3 GHG Emissions

Hazardous Waste

- ❑ Ignitability, Corrosive, Reactive, or Toxic.
- ❑ VSQG – 220 lbs/month max
- ❑ SQG – 2,200 lbs/month max
- ❑ LQG – Any Amount > 2,200 lbs/month
- ❑ Allowed one planned and one unplanned event each year to go over allotted amount.
- ❑ Planned event must submit notification prior month to exceedance.

<https://www.epa.gov/hwgenerators/categories-hazardous-waste-generators>

Residual Wastes

- 25R Forms Source Reduction strategy. Forms held internally in case of an audit. (PA only)
- 26R Form due March 1st to report certain residual wastes over a threshold. (PA Only)
- 330GM Biennial Report due March 1st (PA Only)
 - Even years Residual Waste over 13 tons/yr
 - Odd years Hazardous Waste over 13 tons/yr

Waste Determinations

- Has Facility Prepared Waste Determination Forms?
 - Used Fluorescent Bulbs
 - Aerosol Cans (Spent or Unusable)
 - Paints (Latex and Oil-based)
 - Oils and Oil Filters (Fleet Vehicles)
 - Used Batteries (Various)
 - Ethyl Alcohol Mixtures < 70% ABV
 - Ethyl Alcohol Mixtures > 70% ABV
 - Used Filters/Spill Kits ladened with Ethyl Alcohol
 - Spent or Unusable Solvents (maintenance chemicals)

Tier II Reporting

- ❑ On-site Chemical Storage Reporting
- ❑ Due March 1 for Previous Calendar Year
- ❑ Public Data Provided to Emergency Planning and Response Agencies
- ❑ The Big Questions:
 - Why do we report?
 - Do I need to report?
 - What do I need to report?
 - How do I report?

Toxic Release Inventory (TRI) Reporting

- ❑ Chemicals *Manufactured, Processed, or Otherwise Used*
- ❑ Reports are Publicly Available Data
- ❑ Due July 1 for Previous Calendar Year
- ❑ The Big Questions:
 - Why do we report?
 - Do I need to report?
 - What do I need to report?
 - How do I report?

Miscellaneous Reporting

- Risk Management Plans (RMP)
 - Must have one in place if over threshold in 40 CFR §68.130 for qualifying chemicals onsite.
- Refrigeration
 - Regulated by the EPA for any Ozone depleting substances.
 - Need to pay attention to refrigerant being phased out and any leaks/recharge activities.

Miscellaneous Reporting

- Radiation Permit
 - Mostly used for quality check points on production lines.
 - Annual Wipe test
 - Semi-Annual Inventory/Inspection
 - X-ray vs Radiation source permits

Questions and Answers!

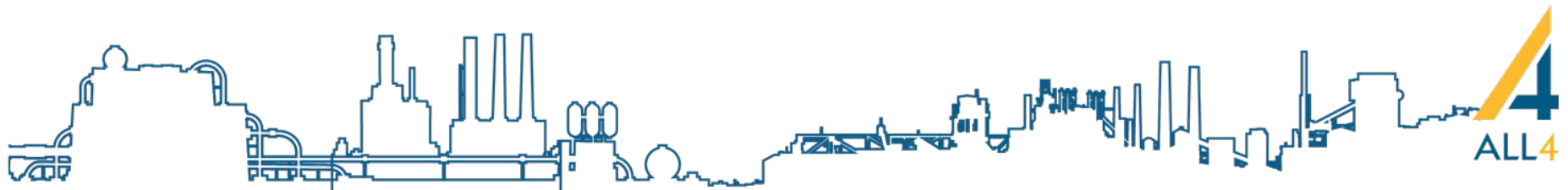
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