

*An Assessment of Distillery Safety Training Needs and Training Development and
Deployment to Address the Most Pertinent Safety Issues*

Project Summary

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Summary

In summary, the average respondent to the Kentucky Bourbon Distillery Safety Training Needs Assessment worked at a Kentucky Bourbon Distillery, was responsible for safety of employees at their employer's bourbon distillery (85.71%) and had safety responsibilities at their distillery as either a manager (25%), training provider (22.92%), or as a decision maker (20.83%). Respondents noted the person who conducts safety training for employees at their distillery is most likely a safety manager (42.31%). **In the opinion of respondents, the biggest area of risk of working in a distillery is in the area of barrel handling, warehousing, maintenance, and ricking, followed by slips, falls and trips and fire/fire safety.**

The three most needed safety trainings in which professionals at respondents' workplace would benefit from additional training were identified as 1) barrel movement/transport safety (12.5%), ergonomics (8.33%) and confined spaces (6.25%).

The average respondent preferred training delivery for the two topics being provided once a month, two months in a row (44%), followed by two days in a row (40%). Employees at their distilleries currently receive training mostly in small groups (72%). **The distillery employee preference of training delivery, according to respondents appears to be in person face to face instructor led trainings in small groups (80.95%).** A majority of the respondents indicated their employer utilizes external trainers to deliver safety content (70.83%).

Almost all the respondents (95.83%) indicated their employer prefers to have safety-related trainings hosted mostly on-site at their location. A majority of the respondents (75%) indicated employees at their bourbon distilleries currently receive safety-related training off-site once per year. Slightly more than half (58.33%) of the respondents indicated employees at their bourbon distillery attend trainings for required certifications once per year.

Most respondents work at a bourbon distillery located in a rural area (58.33%), followed by in an urban area (37.50%). Respondents work at distilleries made up of a variety of numbers of employees. Thirty-three percent (33.33%) said their distillery employs less than 30 individuals, while 16.67% have 71-100 employees. Respondents worked in various departments with the top two departments selected being the health and/or safety team (10.09%), followed by management (9.17%). In smaller distilleries, employees often work multiple areas of distilleries, as needed. The age brackets of respondents were mostly 36-45 year olds (33.33%), followed by 26-35 year olds (29.17%) and 46-55 year olds (20.83%).

Data Analysis

Data were analyzed using descriptive statistics in Microsoft Excel®. All data were summarized and reported in the aggregate to protect the confidentiality of participants.

Section 3: Findings

Survey Assessment Findings

The findings are presented in the order of the questions in the survey. The results are given in frequency (*f*) in percentages (%). The questions on this needs assessment were to investigate the areas of need for distillery safety training gaps.

Thirty-one (31) respondents began the survey.

1. Do you work at a bourbon distillery in Kentucky?

Table 1. Work at a Kentucky Bourbon Distillery.

Response	<i>f</i>	%
Yes	29	96.67%
No	1	3.33%
Total	30	100%

2. Are you responsible for the safety of employees at your employer's bourbon distillery?

Table 2. Responsible for Safety of Employees at Employer's Bourbon Distillery.

Response	<i>f</i>	%
Yes	24	85.71%
No	4	14.29%
Total	28	100%

3. What is the nature of your responsibility for safety within the distillery in which you work?

Table 3. Respondents' Responsibilities for Safety in their Distillery.

Role	<i>f</i>	%
Manager	12	25.00%
Training provider	11	22.92%
Decision maker	10	20.83%
Employee	8	16.67%
Other: Please specify	7	14.58%
-HR Manager	1	

-Security	1	
-Owner	1	
-Supervisor	2	
-Health & Safety Supervisor	1	
Total	48	100%

4. Who conducts safety trainings for employees at your employer's bourbon distillery? Please select all that apply.

Table 4. The Person who Conducts Safety Training for Employees at Respondents' Bourbon Distillery.

Response	<i>f</i>	%
Safety Manager (or person with equivalent title)	22	42.31%
External Company	13	25.00%
Other employees	11	21.15%
Other: Please specify	4	7.69%
-Mix of on site, ADP and external company	1	
-Owner	1	
-OJT	1	
-Department Managers	1	
KY Distillery Association	1	1.92%
KY Dept of Agriculture	1	1.92%
OSHA	0	0.00%
Total	52	100%

5. In your professional opinion, what is the biggest area of risk working in a distillery?

Table 5. Opinion of Biggest Area of Risk Working in a Distillery.

Responses	<i>f</i>
Barrel handling	7
Slips, falls, trips	3
Barrel Warehousing	2
Barrel Warehouses & Maintenance	2
Barrel warehouse ergonomics-Rolling/handling of bourbon barrels	2
Ricking (Rickhouses)	2
Fire/Fire safety	2
Strains and sprains	1
Employees following the safety guidelines at all times	1

The biggest area of risk working in a distillery is taking shortcuts once the job is comfortable to employees. Also, incorrect/lack of usage of PPE.	1
The central locations for blending and finished tanks because of high flammability.	1
The chemicals they use to clean with (Caustic), Steam burns, hot surfaces and ergonomic injury.	1
Activities with sanitation - caustic cleaning, steam	1
Working at heights in racks	1
Customers that visit who have already been drinking alcohol. Being robbed. A guest falling and hurting themselves.	1
Total	27

6. Select the 3 most needed safety trainings in which professionals at your workplace would benefit from additional training.

Table 6. Most Needed Safety Trainings in the Workplace Selected by Respondents

Safety Training Topic	<i>f</i>	%
Barrel movement/transport safety	12	12.50%
Ergonomics	8	8.33%
Confined spaces	6	6.25%
First aid/CPR	5	5.21%
Distilling operations	5	5.21%
Emergency response and management	4	4.17%
Hazard communication	3	3.13%
Noise	3	3.13%
Explosion prevention	3	3.13%
Slip and fall prevention	3	3.13%
Bonding and grounding	3	3.13%
Permits to work	3	3.13%
Authorized fall protection	3	3.13%
Department of Transportation (DOT) Hazardous Materials Transportation (HAZMAT)	3	3.13%
Fire prevention	3	3.13%
Machinery and equipment	3	3.13%
Forklift safety	2	2.08%
Hand and power tool safety	2	2.08%
Ladder and scaffold safety	2	2.08%
Flammable and combustible liquids	2	2.08%
Boiler safety	2	2.08%
Authorized Lockout & Tagout	2	2.08%
Spill treatment	1	1.04%
Food processing/handling	1	1.04%
Spill prevention and response	1	1.04%

Bloodborne pathogens	1	1.04%
Electrical safety	1	1.04%
Grain storage and handling	1	1.04%
Machine guarding	1	1.04%
Authorized Confined Spaces	1	1.04%
Hazardous waste	1	1.04%
Fire Extinguisher (Portable)	1	1.04%
Hazardous materials	1	1.04%
Lockout & Tagout	1	1.04%
Crane operation	1	1.04%
Other. Please insert: Barrel Handling	1	1.04%
Total	96	100%

Table 7. Top three Most Needed Trainings

Safety Training Topic	Ranked		
	(f) Times Ranked #1	(f) Times Ranked #2	(f) Times Ranked #3
Barrel movement/transport safety	4	3	0
Ergonomics	4	1	2
Ladder and scaffold safety	2	0	0
First aid/CPR	1	1	1
Fire prevention	1	1	1
Emergency response and management	1	0	1
Authorized Confined Spaces	1	0	0
Authorized Lockout & Tagout	1	0	1
Slip and fall prevention	1	0	2
Food processing/handling	1	0	0
Permits to work	0	2	1
Hazard communication	0	2	0
Explosion prevention	0	2	0
Distilling operations	0	1	2
Machine guarding	0	1	0
Confined spaces	0	1	0
Hazardous materials	0	1	0
Bonding and grounding	0	1	0
Spill treatment	0	1	0
Department of Transportation (DOT) Hazardous Materials Transportation (HAZMAT)	0	0	2
Boiler safety	0	0	1
Crane operation	0	0	1
Noise	0	0	1
Hazardous waste	0	0	1
Spill prevention and response	0	0	1
Grain storage and handling	0	0	0
Lockout & Tagout	0	0	0
Asbestos safety	0	0	0
Authorized fall protection	0	0	0
Flammable and combustible liquids	0	0	0
Fire Extinguisher (Portable)	0	0	0
Hand and power tool safety	0	0	0
Respiratory protection	0	0	0
Chemical management	0	0	0
Radiation awareness	0	0	0

8. As mentioned, we plan to host two safety trainings based on the statewide top identified training topics. If trainings were hosted off-site in Kentucky (in the same city) to address the most needed safety training areas you selected, which schedule of delivery would you prefer most?

Table 8. Schedule of Training Delivery Preferred.

Response	<i>f</i>	%
Once a month, 2 months in a row	11	44%
Two days in a row	10	40%
Once a week, 2 weeks in a row	4	16%
Total	25	100%

9. How do employees at your distillery most often receive training?

Table 9. How Employees Receive Training.

Response	<i>f</i>	%
In small groups	18	72%
Individually in person	4	16%
Individually online	3	12%
In large groups	0	0%
Other: Please specify	0	0%
Total	25	100%

10. Please rank, 1-5 (1 being the most favored), the methods of training delivery by employee preference at your bourbon distillery?

Table 10. Preference of Training Delivery by Employees.

Response	1 %	2 %	3 %	4 %	5 %
In person face to face instructor led in small groups	80.95%	9.52%	4.76%	4.76%	0.00%
In person face to face instructor/ supervisor led individually	14.29%	47.62%	23.81%	9.52%	4.76%
In person face to face instructor led in large groups	0.00%	28.57%	42.86%	14.29%	14.29%
Online live webinar training	4.76%	4.76%	14.29%	52.38%	23.81%
Online asynchronous - recorded training to watch on their own schedule	0.00%	9.52%	14.29%	19.05%	57.14%

11. Does your employer allow trainees to select training delivery formats?

Table 11. Are Trainees Allowed to Select Training Delivery Formats?

Response	<i>f</i>	%
No	11	44%
Sometimes	9	36%
Yes	5	20%
Total	25	100%

12. Does your employer utilize external trainers to deliver safety content?

Table 12. External Trainers Used to Deliver Safety Content.

Response	<i>f</i>	%
Yes	17	70.83%
No	6	25.00%
Unsure	1	4.17%
Total	24	100%

13. Where does your employer most prefer to have safety-related trainings hosted?

Table 13. Employer Preference to Host Safety-Related Trainings.

Response	<i>f</i>	%
On-site, at your location	23	95.83%
Virtual	1	4.17%
Off-site, in your city	0	0.00%
Off-site, in Kentucky	0	0.00%
Other: Please specify	0	0.00%
Total	24	100%

14. On average, how often do employees at your bourbon distillery currently receive safety-related training offsite per year?

Table 14. Amount of Times Employees Receive Safety-Related Trainings Offsite per Year.

Response	<i>f</i>	%
Once per year	18	75.00%
Twice per year	4	16.67%
More than three times per year. Please specify how many times per year:	2	8.33%
Other: Never	1	
Three times per year	0	0.00%
Total	24	100%

15. How often do employees at your bourbon distillery attend trainings for required certifications per year?

Table 15. How Often Employees Attend Trainings for Required Certifications per Year.

Response	<i>f</i>	%
Once per year	14	58.33%
Twice per year	9	37.50%
Three times per year	1	4.17%
More than three times per year. Please specify how many times per year:	0	0.00%
Total	24	100%

16. What is the size of the community where the bourbon distillery you work at exists?

Table 16. Size of Community where Bourbon Distillery Located.

Response	<i>f</i>	%
Rural Area	14	58.33%
Urban Area	9	37.50%
Suburban Area	1	4.17%
Total	24	100%

17. How many individuals are employed at the bourbon distillery in which you work?

Table 17. Number of Individuals Employed at Bourbon Distillery.

Response	<i>f</i>	%
Less than 30	8	33.33%
71-100	4	16.67%
101-200	3	12.50%
201-400	3	12.50%
More than 400	3	12.50%
31-50	2	8.33%
51-70	1	4.17%
Total	24	100%

18. In which department(s)/area(s) of the bourbon distillery do you work? Mark all that apply.

Table 18. Department(s)/Area(s) of Bourbon Distillery where Respondents Work.

Response	<i>f</i>	%
Health and/or Safety Team	11	10.09%
Management	10	9.17%
Barrel Dumping	6	5.50%
Processing	6	5.50%
Distiller (Head, Lead or Distiller Assistant)	5	4.59%

Forklift Operations	5	4.59%
Blender/Mingler	5	4.59%
Distillery operation (Whiskey Still, Cooker, Hammer Mill, Fermenter, etc.)	5	4.59%
Grain receiving	4	3.67%
Quality Control	4	3.67%
Cistern Room	4	3.67%
Barrel Entry	4	3.67%
Engineering	4	3.67%
Quality Control	4	3.67%
Bottling Operations	4	3.67%
Environmental	4	3.67%
Continuous Improvement	3	2.75%
Regauge	3	2.75%
Grain Operations	3	2.75%
Boiler operation	2	1.83%
Shipping and Receiving	2	1.83%
Industrial Maintenance	2	1.83%
Wastewater Treatment	2	1.83%
Dry house	1	0.92%
Truck Driver	1	0.92%
Tourist Operations	1	0.92%
Distillery Marketing and/or Communications	1	0.92%
Sales and Promotion	1	0.92%
Distribution	1	0.92%
Administrative Staff	1	0.92%
Other: Please Insert	0	0.00%
Water Plant	0	0.00%
Tanker Loading	0	0.00%
Human Resources	0	0.00%
Total	109	100%

19. What is your present age?

Table 19. Age of Respondents.

Response	<i>f</i>	%
36-45 years	8	33.33%
26-35 years	7	29.17%
46-55 years	5	20.83%
21-25 years	3	12.50%
66-75 years	1	4.17%
18-20 years	0	0.00%
56-65 years	0	0.00%
76-99 years	0	0.00%
Total	24	100%

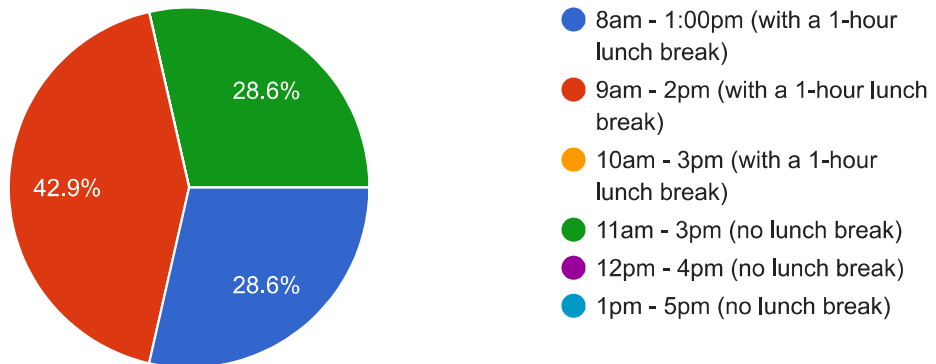
KY Distillery Safety Trainings - Scheduling Questions

7 responses

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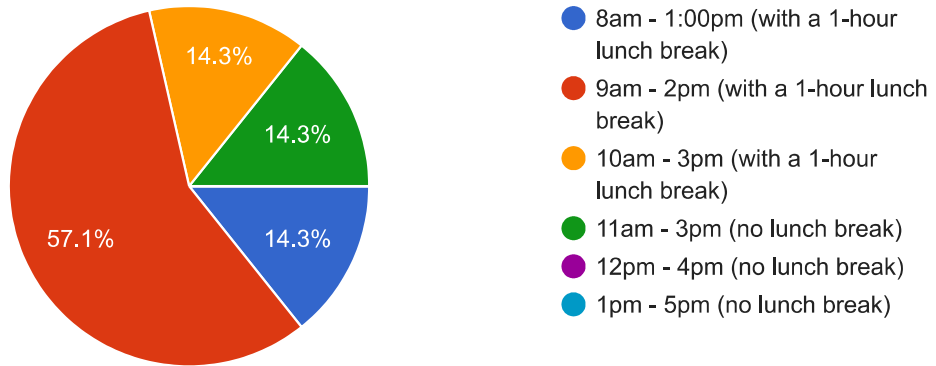
What time of day would be best for you to attend a 4 hour training in person? *The location is not confirmed for the training, but please consider the best time of day for the training should it be located in the Clermont to Bardstown, KY area.

7 responses



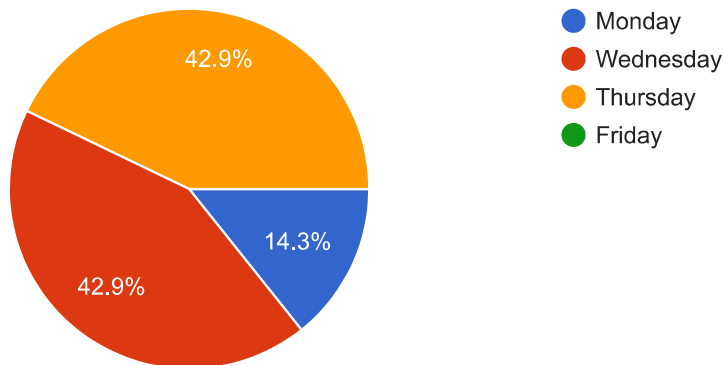
What time of day would be best for you to attend a 4 hour training in person? *The location is not confirmed for the training, but please consider the best time of day for the training should it be located in the Lawrenceburg, KY area.

7 responses



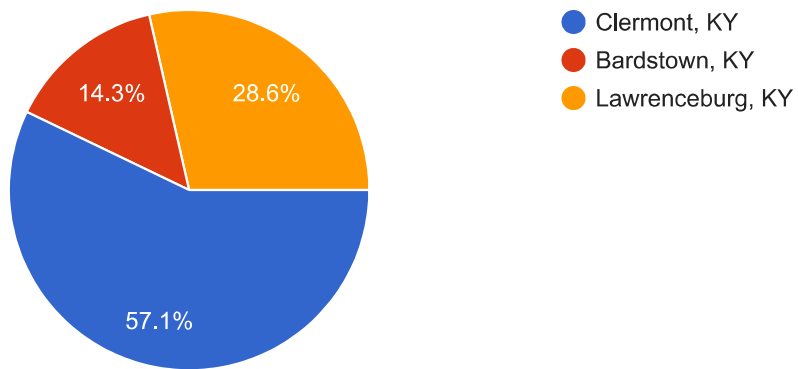
What day of the week would be best for you to attend a distillery safety training at an offsite location (as mentioned above)? Results will be utilized for scheduling both the ergonomics safety training as well as the upcoming barrel handling safety training.

7 responses



If you had a preference of physical location in which to attend a safety training offsite, which of the three locations would you most prefer?

7 responses



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