

2009 TTB Expo Presentation

Lowering the Alcohol Content of Wine

Presented by

Mari Kirrane, ITD

Joan Carpenter, NRC



Overview

- Technology
- Where it can Take Place
- DSP and Wine Premises Applications
- Records and Reports

The Situation

- A wine has naturally fermented to an alcohol content higher than desired
- Options:
 - Blend with lower alcohol wine to desired level
 - Remove some alcohol through distillation

Wine Alcohol Reduction

- What equipment may be used?
- What can be done with the spirits removed from the wine?
- Where can this be done?
- What are the labeling considerations?
- What TTB qualification is required?
- What TTB recordkeeping and reporting is required?

Technology

What Equipment may be Used?

- Processes authorized for the treatment of wine, juice, and distilling material:
 - Spinning Cone Column
 - Reverse Osmosis
 - Osmotic Transport
- These processes must be conducted on Distilled Spirits Plant premises

Alcohol Reduction Equipment



**Spinning
Cone Column**

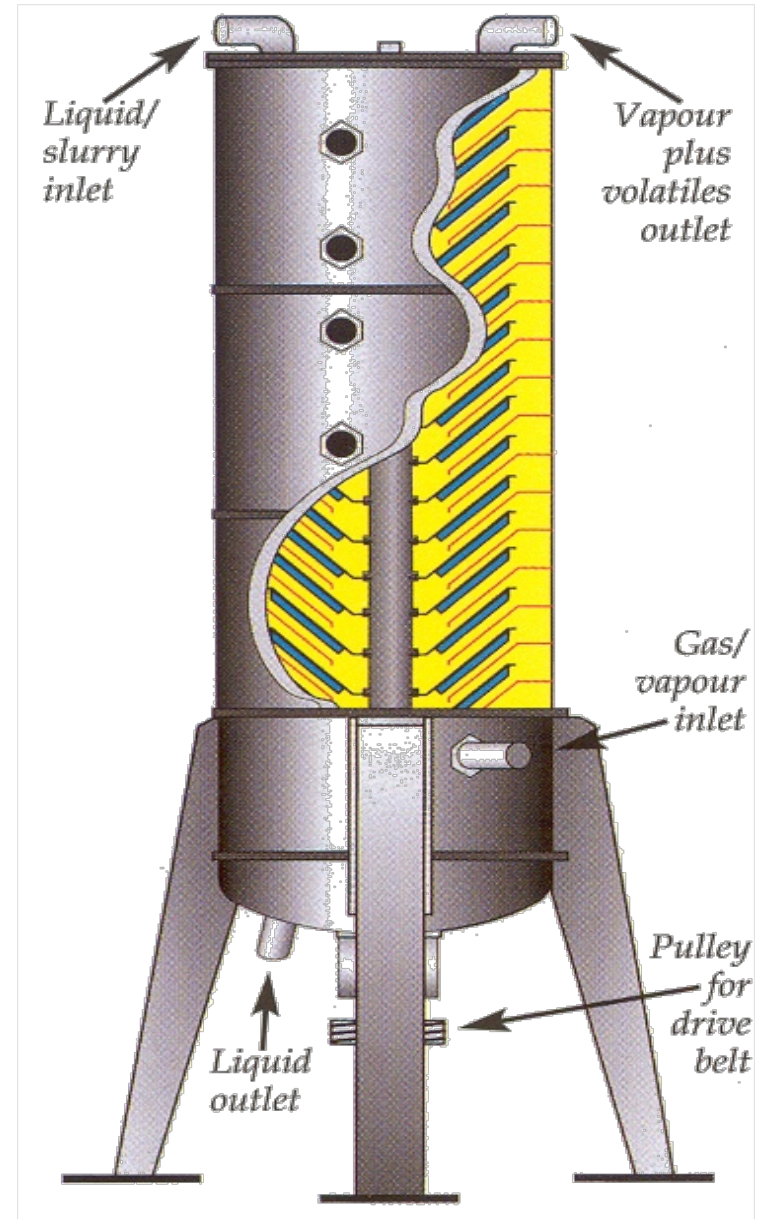
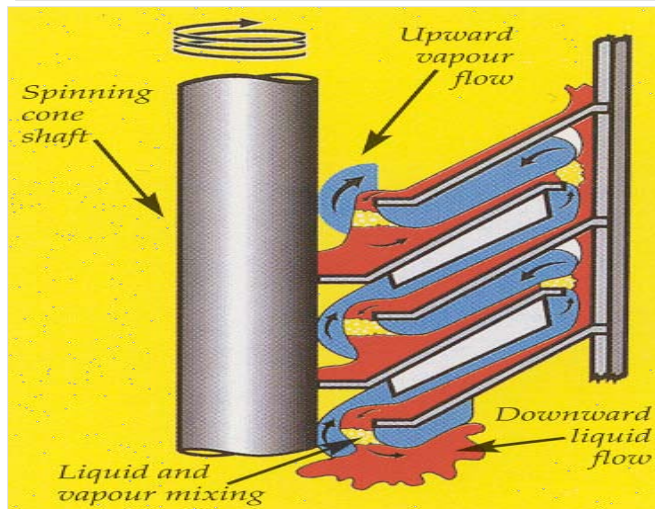
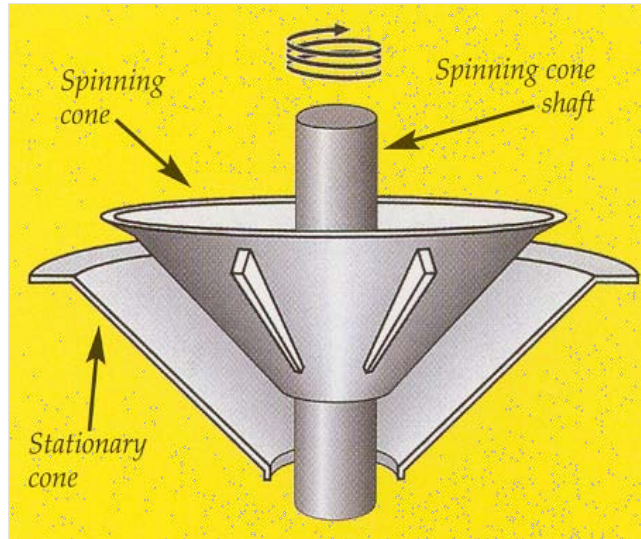


**Reverse
Osmosis**



**Osmotic
Transport**

Spinning Cone Column

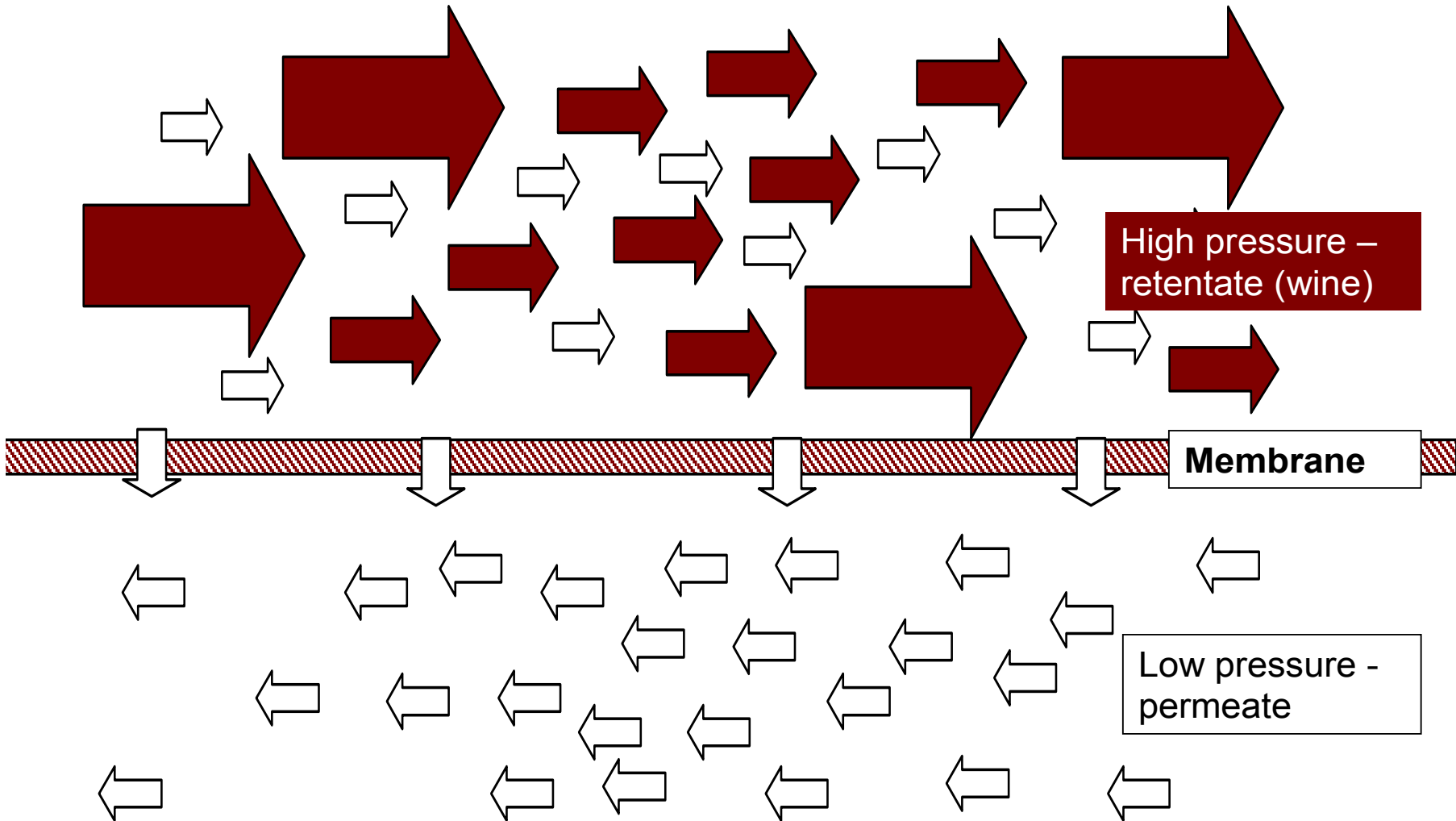


Spinning Cone Column

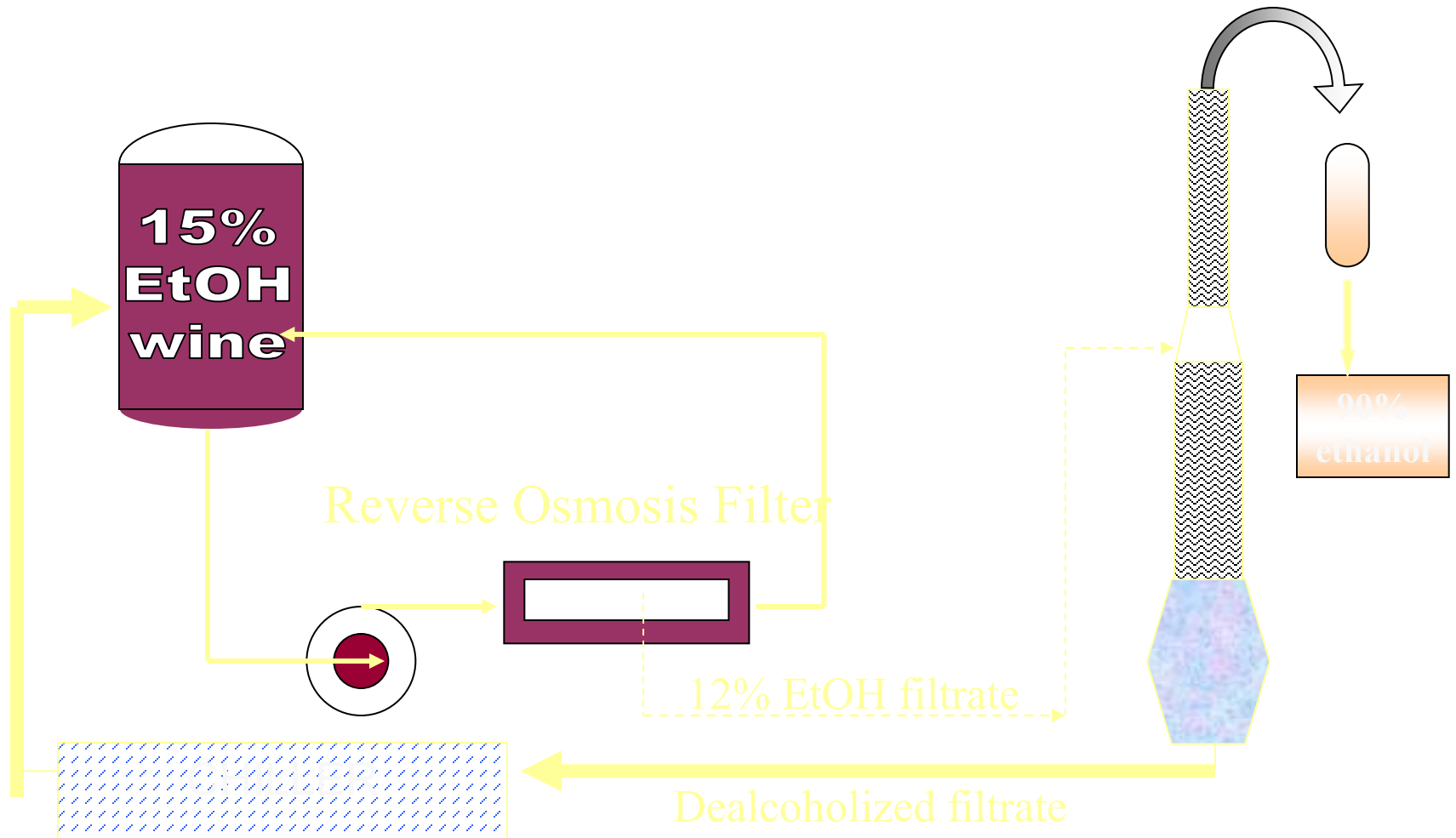
- 3-step process
- Ship wine to DSP
- Treat a portion of the wine
- Removed alcohol does not need to be distilled



Reverse Osmosis

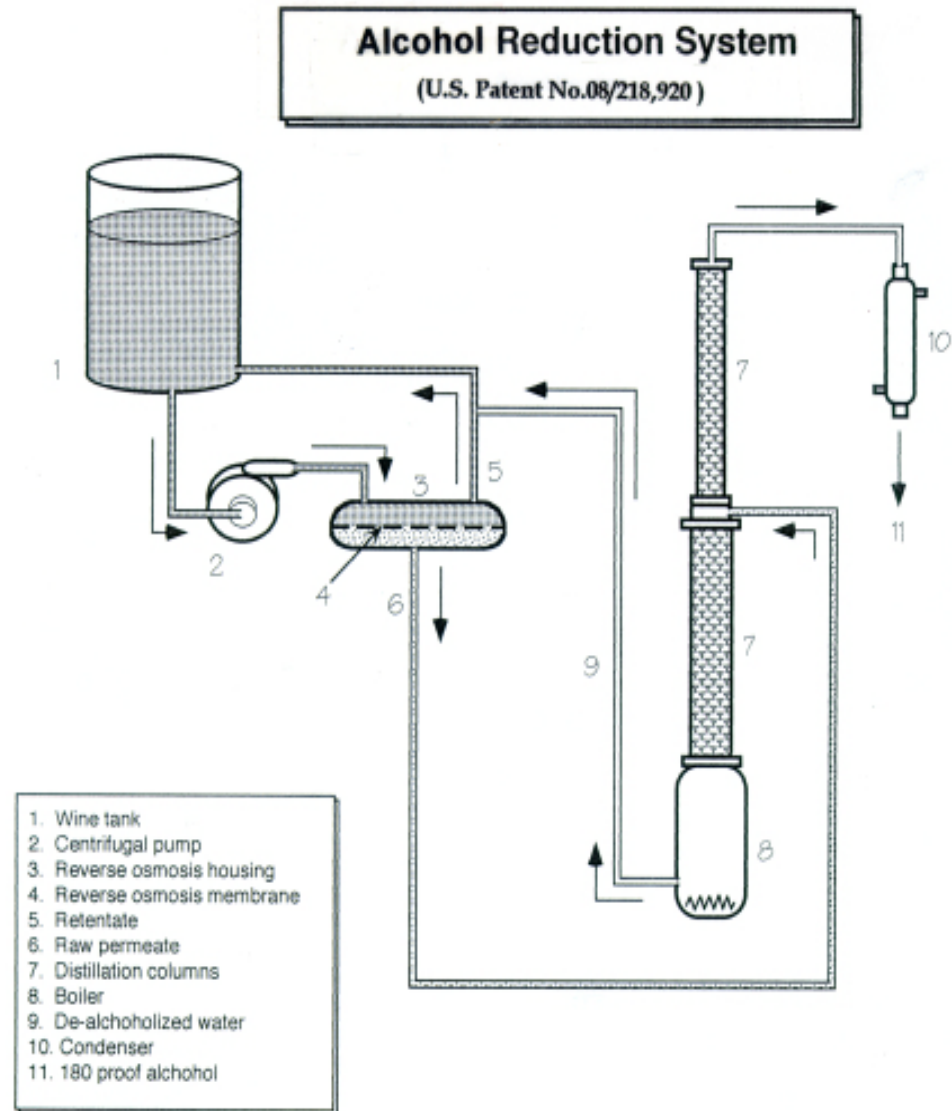


Wine Alcohol Reduction Via Reverse Osmosis Filtration



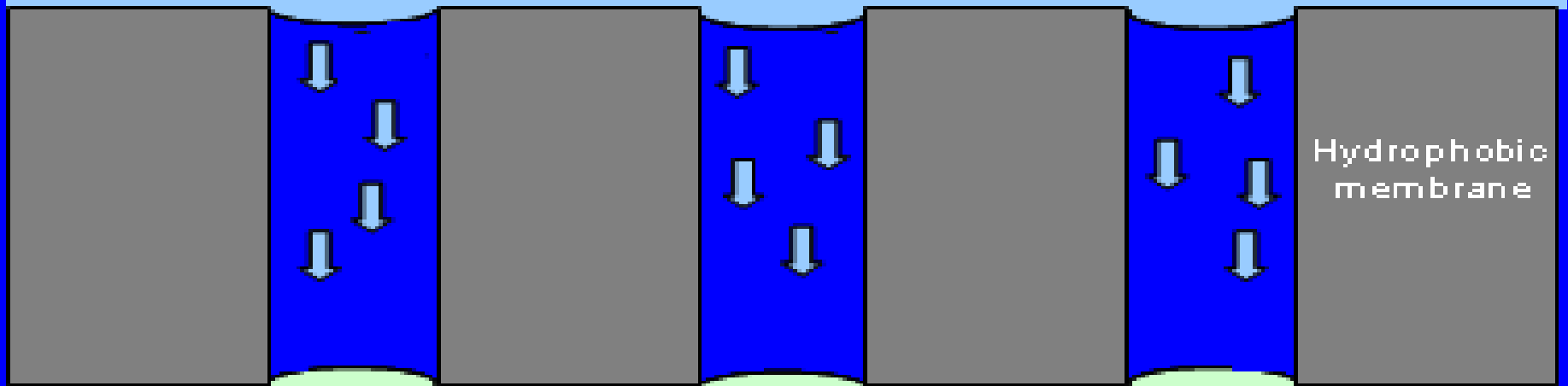
Reverse Osmosis

- 3-step process
- Treat a portion of wine
- Ship wine to DSP
- Removed alcohol/water must be distilled



Osmotic Transport

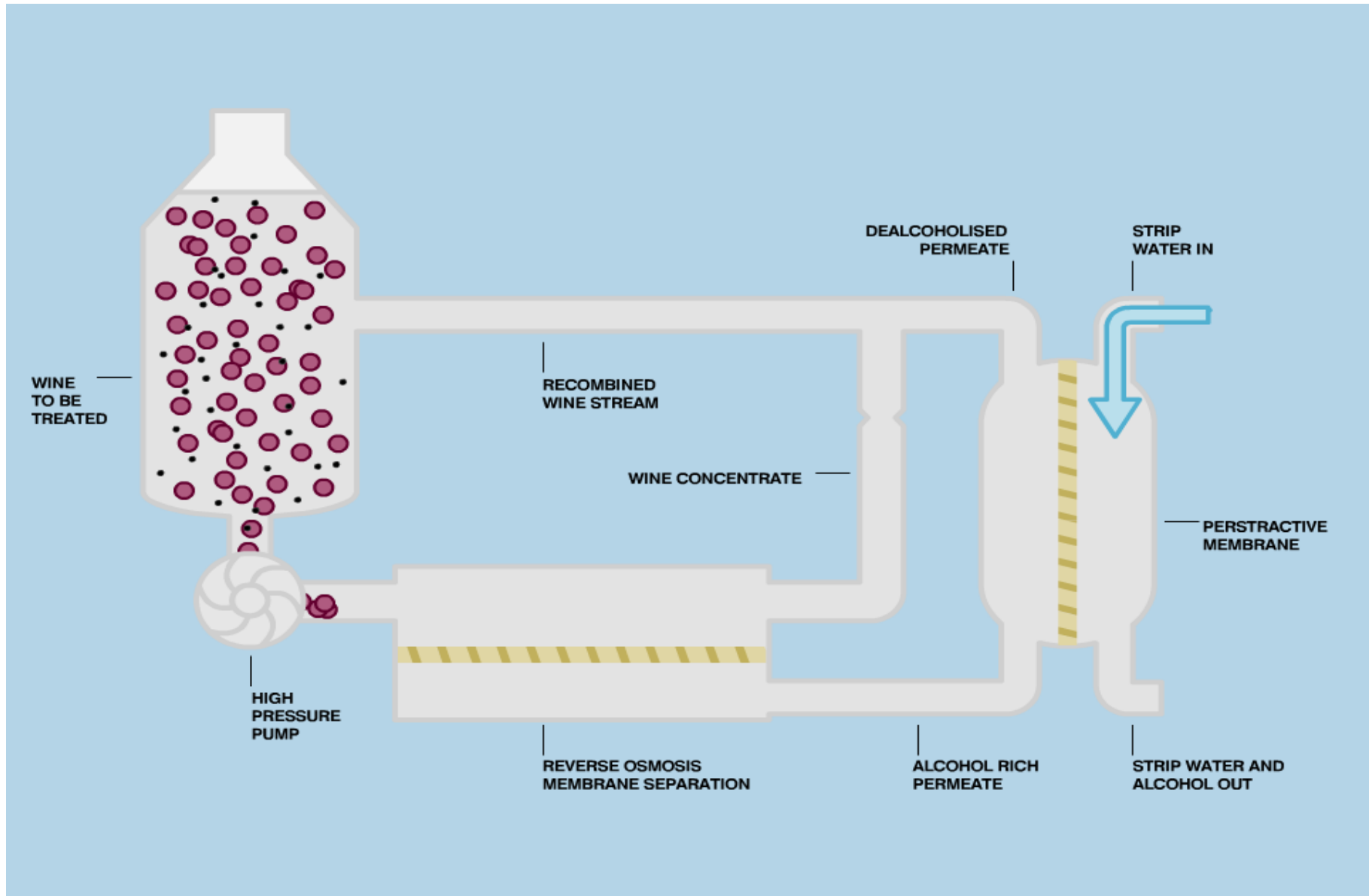
Alcohol rich stream (decreasing alcohol)



Hydrophobic membrane

Strip water stream (increasing alcohol)

Alcohol Adjustment



Osmotic Transport

- 1-step process
- Can treat entire batch
- Removed alcohol does not need to be distilled
- Portable equipment

Spirits Removed From the Wine

- What can be done with the spirits removed from the wine?
 - Transferred in bond to a BW for use as grape wine spirits, if over 140 degrees proof
 - Transferred in bond to another DSP
 - Destroyed by the DSP

Where it can Take Place

Where can this be Done?

- At the Distilled Spirits Plant of the equipment operator
- At a Distilled Spirits Plant contiguous to a Bonded Wine Premises
- At a Distilled Spirits Plant which alternates use of space and equipment with a Bonded Wine Premises

Labeling Considerations

- Estate Bottled:
 - Wine removed from the bonded wine premises loses eligibility for this term
 - Exception: If the alcohol reduction takes place at the same property, by the same owner, eligibility is retained, if all other criteria are met

DSP and Wine Premises Applications

Qualification Requirements

- If alcohol reduction takes place at the equipment operator's DSP premises, no further requirements for the wine's producer
- If alcohol reduction takes place at the same property as the winery:
 - DSP qualification
 - Amendment of the winery qualification, in some cases

Qualification Options as a DSP

- Stand-alone DSP, or
- DSP that is contiguous to a Bonded Winery with same ownership, or
- DSP that alternates with a Bonded Winery with same ownership

Qualifications as a DSP

Three Major Forms Required

- Registration of DSP, TTB F 5110.41
- DSP Bond, TTB F 510.56
- Permit Application(s):
 - Basic Permit, TTB F 5100.24 and/or
 - Operating Permit, TTB F 5110.25

DSP Qualification

Registration of Distilled Spirits Plant

- Type of Operations:
 - Distiller
 - Warehouseman
 - Processor who Denatures, Bottles, Manufactures Articles
- Supplemental Pages you must submit with TTB F 5110.41 are listed on reverse of Registration Form

Registration on TTB F 5110.41
(Internal Revenue Code)

DSP Qualification (Continued)

Application for a Basic Permit

- Type of Operations:
 - Distilling
 - Warehousing and Bottling Distilled Spirits
 - Processing (Rectifying) Distilled Spirits and Wine

TTB F 5100.24 – Application for Basic Permit Under the FAA Act

DSP Qualification (Continued)

Application for an Operating Permit

- Warehousing of Spirits (without bottling) for non-industrial use
- Required if spirits will be stored for more than 40 days, per TTB policy

TTB F 5110.25 – Application
for Operating Permit

DSP Qualification (Continued)

- Distilled Spirits Bond on TTB F 5110.56:
 - Operations Bond:
 - One Plant Bond
 - Adjacent Wine Cellar Bond
 - Area Bond
 - Withdrawal Bond
 - Unit Bond

TTB F 5110.56 – Distilled
Spirits Bond

DSP Qualification (Continued)

- Change in Bond/Consent of Surety:
 - Required if alternating premises between winery and distillery
 - Include a diagram of areas to be alternated

TTB F 5000.18

DSP Qualification (Continued)

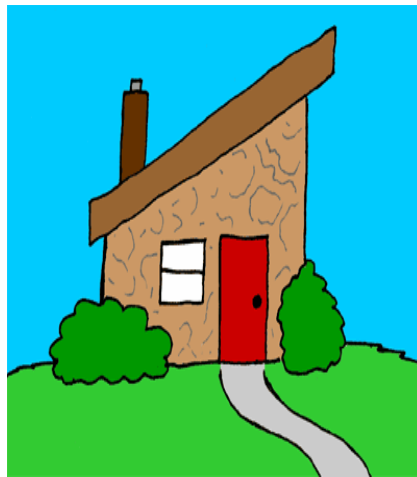
- Environmental Information on TTB F 5000.29
- Water Quality Considerations on TTB F 5000.30
- Signature Authority (Options)
 - TTB F 5000.8, POA or
 - TTB F 5100.1 Signing Authority for Corporate Officials/LLC
 - Internal Documents

Wine Premises Application Documents

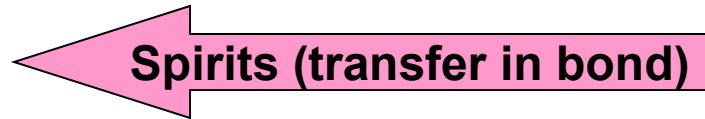
- Amended TTB F 5120.25:
 - If wine premises are curtailed to provide space for the DSP or
 - If wine premises will be alternated with the DSP premises
- Diagram, if wine premises will be alternated with DSP premises

Records and Reports

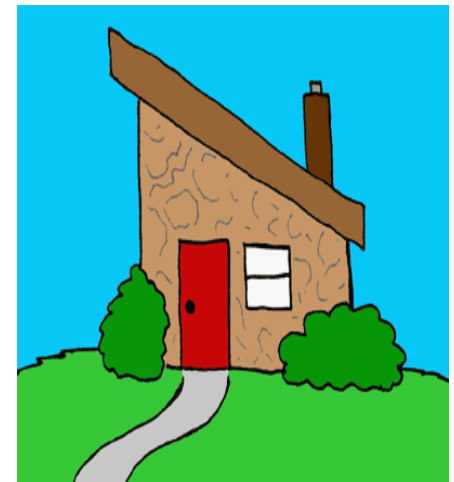
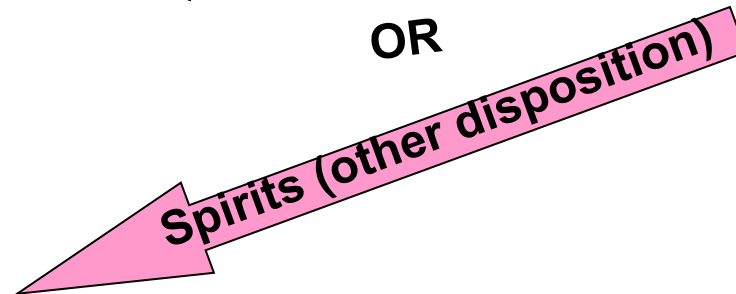
What's Happening



WINERY



OR



DSP

Recordkeeping Requirements – Winery

- Bulk Still Wine Record (27 CFR 24.301)
- Transfer in Bond Record to send wine to the DSP (27 CFR 24.309)
- Spirits Record if receiving spirits back from DSP (27 CFR 24.316)

Reporting Requirements – Winery

- Report of Wine Premises Operations:
 - Original wine: Transferred in bond to DSP
 - Reduced alcohol wine: Received in bond back from DSP
 - Spirits: Shown as received in Part III, if receiving spirits back from the DSP

Recordkeeping Requirements – DSP

- Daily Production Record (27 CFR 19.736)
- Daily Storage Record, if a Warehouseman and spirits are stored more than 40 days (27 CFR 19.740)
- Transfer in bond of wine back to the BW
- Transfer in bond of spirits to the BW or other disposition (destroyed, transferred in bond to another DSP, etc.)

DSP to DSP

- TTB F 5100.16 — Application for Transfer of Spirits and/or Denatured Spirits in Bond
- Receiving DSP files TTB F 5100.16 with the NRC prior to receiving shipment

Reporting Requirements – DSP

- Production Report on TTB F 5110.40
- Storage Report on TTB F 5110.11, if qualified as a Warehouseman (i.e., spirits will be stored for more than 40 days)

Notice of Change in Status of Plant

- Notice of Change in Status of Plant on TTB F 5110.34:
 - Allows DSP to refrain from filing production reports when operations cease for more than 90 days
 - Qualification continues; reactivated when needed
 - Request for Variance to maintain an Alternation Log in lieu of TTB F 5110.34 may be submitted

Summary

- Technology
- Where it can Take Place
- DSP and Wine Premises Applications
- Records and Reports

Contact Information

Mari Kirrane

TTB Wine Technical Trade Advisor

221 Main Street, Suite 1340

San Francisco, CA 94105

(p) 415-625-5793

(c) 202-329-6564

winetradeadvisor@ttb.gov

Contact Information (Continued)

Joan Carpenter

NRC – Distilled Spirits & Multi-Permit
Application Section

550 Main St., Suite 8002

Cincinnati, OH 45202

(p) 512-684-6943

(f) 202-435-7664

