
Anheuser-Busch Inc.]
221 Daniel Webster Highway]
Merrimack, NH 03054]
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FINAL REVISED RACT ORDER
April 15, 2002
ARD-00-001

A. Introduction

This RACT Order is issued by the New Hampshire Department of Environmental Services, Air Resources Division, to Anheuser-Busch, Incorporated pursuant to RSA 125-C.

B. Parties

1. The New Hampshire Department of Environmental Services, Air Resources Division ("DES"), is a duly constituted administrative agency of the State of New Hampshire having its principal offices at 6 Hazen Drive, Concord, NH 03302, telephone number (603) 271-1370.
2. Anheuser-Busch, Incorporated (Anheuser-Busch), is a New Hampshire corporation, having a mailing address of 221 Daniel Webster Highway, Merrimack, NH 03054, telephone number (603) 595-1214.

C. Statements of Fact and Law

1. Anheuser-Busch owns and operates the following processes located at its Merrimack Plant at 221 Daniel Webster Highway, Merrimack, NH ("the facility"):
 - a. Malt Beverage Production, including but not limited to brewing, fermenting, lagering, finishing, packaging, and residuals processing.
2. Effective August 19, 1995, DES re-adopted The Code of Administrative Rules, Part Env-A 1204 STATIONARY SOURCES OF VOLATILE ORGANIC COMPOUNDS (VOCs) with amendments.
3. Anheuser-Busch filed a "VOC Reasonable Available Control Technology (RACT) Compliance Plan" on September 24, 1996 for the facility.
4. DES issued a Letter of Sufficiency dated April 21, 2000.
5. Anheuser-Busch filed a permit application for a malt beverage production increase on August 9, 2001 with supplemental information supplied on August 29, 2001 and November 26, 2001.

6. Anheuser-Busch proposed the following measures as RACT in its "VOC RACT Compliance Plan" for the facility:
 - a. Implementation and maintenance of process loss reduction activities, including the following:
 - i. Development of information management systems, which enhance operator and supervisor involvement in planning, quality assurance, and maintenance. These systems provide production schedules, efficiencies, trends, and product availability directly to operators and supervisors on the production floor.
 - ii. Enhanced training.
 - iii. Development of performance objectives and metrics.
 - iv. Operating philosophy changes integrated with state-of-the-art packaging equipment improvements that result in reduced bottle breakage and emissions.
 - v. Development and implementation of enhanced maintenance programs.
 - vi. Use of detection devices that continually check the fill level of all bottles and cans. The result of this procedure is less rejected product, which in turn results in less VOC emissions.
 - b. Implementation of pollution prevention measures to minimize VOC emissions from malt beverage production. These measures will include efficient operation of equipment, process loss minimization, and use of state-of-the-art equipment.
 - c. Anheuser-Busch shall be limited to 37.6 pounds of VOC per thousand barrels of beer packaged per calendar month.
 - d. Compliance with the VOC performance standard will be demonstrated via record keeping and reporting. Anheuser-Busch will keep the following records: (1) monthly quantity of beer (bbl) packaged and (2) annual quantity of beer (bbl) packaged. Annual VOC emissions will be calculated using emission factors based on actual beer packaged. Anheuser-Busch will calculate and record on a monthly basis the pounds of VOC per thousand barrels of beer packaged.
 - e. An annual VOC emission report will be submitted for each year by April 15 of the following year.
7. On August 17, 1998, Anheuser-Busch submitted supporting documentation of RACT determinations made for similar breweries. Supporting documentation included the following:

- a. Application to New Jersey Department of Environmental Protection for Anheuser-Busch, Incorporated Newark brewery's cellars and fillers.
 - b. RACT determination by New Jersey Department of Environmental Protection for the Newark brewery.
 - c. RACT determination by Colorado Department of Health, Air Pollution Control Division for Coors brewery in Golden Colorado.
8. On September 10, 1998, DES met with the facility to observe the malt beverage production process and discuss options for developing a VOC RACT Order.
 9. On September 30, 1998, DES and Anheuser-Busch conducted a conference call to discuss additional options for developing a VOC RACT Order for the facility. DES requested additional information from Anheuser-Busch regarding Reasonably Available Control Technology (RACT), Best Available Control Technology (BACT), and Lowest Achievable Emission Rate (LAER) determinations made by state and federal regulatory agencies for breweries similar to the Merrimack facility.
 10. On February 24, 1999, Anheuser-Busch submitted the additional information requested by DES on September 30, 1998 which included the following:
 - a. Technical Review Document for Anheuser-Busch's Fort Collins, Colorado brewery summarizing pollution prevention and efficient operations represent BACT.
 - b. Background information regarding other regulatory agencies evaluation of pollution prevention and efficient operations at malt beverage production facilities as LAER and RACT.
 11. On March 2, 1999, DES conducted an inspection of the Anheuser-Busch Merrimack facility to observe pollution prevention practices and loss minimization techniques, which will be evaluated as RACT.
 12. On March 5, 1999, DES and EPA held a meeting with representatives of Anheuser-Busch to discuss the classification of current operating practices, which implement pollution prevention and loss minimization techniques at the facility as RACT. DES and EPA requested information from Anheuser-Busch on previous analyses done on similar plants showing the technical infeasibility of installing add on controls to reduce emissions. In addition, DES and EPA requested information detailing the support calculations used to determine the facility's maximum potential production rate in barrels of beer per year as presented in the September 24, 1996 "VOC RACT Compliance Plan".
 13. On February 16, 2000, Anheuser-Busch submitted additional information requested by DES, which explains the pollution prevention activities in more detail.

D. Order

Based on the above findings and determinations, DES hereby orders Anheuser-Busch Incorporated, Merrimack Brewery to implement the following as RACT:

1. Implementation and maintenance of process loss reduction activities, including the following:
 - a. Development of information management systems that enhance operator and supervisor involvement in planning, quality assurance, and maintenance. These systems shall provide production schedules, efficiencies, product losses, trends, and product availability directly to operators and supervisors. Upon request, these systems shall be available for review by DES and/or EPA.
 - b. Enhanced training for equipment operators (production employees). The enhanced training shall consist of implementation of structured training programs, establishment of written standard operating procedures (SOPs), establishment of a Plant Training Manager and departmental Training Coordinators, or equivalent positions, and utilization of an apprenticeship program or similar program for new production employees and production employees changing responsibilities. Documentation of such training shall be kept on file at the facility and shall be made available to DES and/or EPA upon request. Anheuser-Busch shall conduct operator training for the following reasons, at a minimum:
 - i. New equipment installation;
 - ii. New production employee or production employee changing responsibilities or cross-training;
 - iii. Equipment or technical upgrades;
 - iv. Recurring problems with equipment or inefficient operation of equipment due to a lack of operator skills or knowledge, or;
 - v. Gap analysis reveals the need.
 - c. Development of performance objectives and metrics for each stage of the malt beverage production process on an annual basis. Anheuser-Busch shall measure performance by comparing volumetric measurements taken as the product progresses through a series of accounting cost centers. The difference in volume entering and leaving a cost center represents process loss. Anheuser-Busch shall document the process loss as a percentage of the cost center throughput and shall monitor variances from the standards.

Anheuser-Busch shall maintain the daily production data in the Beer Process & Analysis system for Brewing and the Production Activity Reporting System for

Packaging or equivalent systems. These systems shall share the data with the accounting Cost Management System or an equivalent system. Anheuser-Busch shall also measure and monitor all pertinent material inputs, including the ink and associated solvents used to apply date codes on packaging materials, glue used to apply the bottle labels, and hot melt adhesives used for case sealing. These systems and records shall be available for review by DES and/or EPA upon request.

- d. Integration of state-of-the-art packaging equipment improvements that result in reduced bottle breakage and emissions. Anheuser-Busch will maintain its existing state-of-the-art packaging equipment and will integrate additional pertinent equipment improvements, if any, as existing equipment is replaced. Existing (as of February 2002) state-of-the-art packaging equipment includes, but is not limited to, the following:
- i. **Fillers** - bottle, can, & keg fillers that precisely meter the correct quantity of product into containers and employ special valving to maintain a counterpressure during the filling process. Filling under counterpressure minimizes product foaming and its associated process loss.
 - ii. **Fill-Level Detectors** - instruments that continuously monitor the liquid fill levels in containers thereby enabling filling problems to be quickly detected and corrected. Early detection minimizes the quantity of product rejected later and its associated product loss.
 - iii. **Crown Inspectors** - instruments that continuously monitor the condition of applied bottle crowns/caps so that leaking crowns/caps can be quickly detected and corrective crowner equipment adjustments made. Early detection minimizes the quantity of product rejected later and its associated product loss.
 - iv. **Ink-Coders** - precision coding equipment that uses ink to print production date codes on containers. These closed systems apply a minimal quantity of ink when a container is in the target area and use less ink than roller-based coders.
 - v. **Laser Coders** – coders that use laser technology to etch production date codes onto the paper and foil bottle labels. Emissions from laser coders are minimized via activated carbon fume scrubbers and result in fewer emissions than similar ink-based coders.
 - vi. **Labelers** - variable speed bottle labelers that apply only that quantity of label glue deemed necessary to adhere the label to the container.

- vii. **Case/Carton Sealers** – sealers that apply a minimal quantity of hot melt adhesive to cases or cartons to seal their flaps closed. The adhesive is melted in a closed melt pot to minimize emissions.
 - viii. **Container Handling Equipment** - smooth glide rails, lubricated conveyors, and variable speed equipment drives that minimize bottle and can damage as the containers are moved about the production line.
- e. Development and implementation of enhanced maintenance programs. Anheuser-Busch shall use a computer-based maintenance planning and tracking system, such as SAP (Systems Application Product) or an equivalent system. The system shall enable Anheuser-Busch to establish a formal preventive maintenance program and to manage the storeroom parts availability more efficiently. Anheuser-Busch shall conduct the preventative maintenance tasks specified by the maintenance planning and tracking system at intervals determined to be sufficient and reasonable. Anheuser-Busch shall maintain records of the maintenance conducted. These records shall be available for review by DES and/or EPA upon request.
2. Implementation of pollution prevention measures to minimize VOC emissions from malt beverage production. These measures will include efficient operation of equipment, process loss minimization, and use of state-of-the-art equipment.
 3. Anheuser-Busch shall be limited to 37.6 pounds of VOC per thousand barrels of beer packaged per calendar month.
 4. Compliance with the VOC performance standard shall be demonstrated via record keeping and reporting. The facility shall keep the following records:
 - a. Monthly quantity of beer packaged (barrels) and annual quantity of beer packaged (barrels).
 - b. Monthly and annual VOC emissions shall be calculated based upon actual barrels of beer packaged, using available EPA-approved emission factors. Where EPA emission factors are not available, emissions shall be calculated using the best information available. Actual beer packaged shall account for all beer produced, including all losses associated with the production and reclamation of malt beverages.
 - c. Anheuser-Busch shall calculate and record on a monthly basis the pounds of VOC per thousand barrels of beer packaged.
 - d. Anheuser-Busch shall submit an annual VOC emission report for each year by April 15 of the following year.

5. Any records kept to demonstrate compliance with this Order shall be available for review by DES and/or EPA upon request.

Please address any correspondence and communication in reference to this Order to the following individual:

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