ATC EQUIPMENT DESCRIPTIONS

Application No.	ATC EQUIPMENT DESCRIPTION
N-2321 - 601 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1611 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 602 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1612 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 603 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1625 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 604 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1626 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 605 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1627 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 606 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1628 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 607 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1629 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 608 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1630 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 609 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1631 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 610 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1632 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 611 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1633 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 612 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1634 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 613 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1635 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.

ATC EQUIPMENT DESCRIPTIONS

Application No.	ATC EQUIPMENT DESCRIPTION
N-2321 - 614 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1636 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 615 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1649 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 616 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1650 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 617 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1651 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 618 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1652 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 619 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1653 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 620 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1654 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 621 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1655 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 622 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1656 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 623 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1657 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 624 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1658 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 625 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1659 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 626 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 1660 WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.

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Application No.	ATC EQUIPMENT DESCRIPTION
N-2321 - 629 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP WINE STORAGE TANK 1661 WITH PRESSURE/VACUUM VALVE, INSULATION AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS; INCREASE DAILY STORAGE THROUGHPUT LIMIT; REMOVE ANNUAL STORAGE THROUGHPUT LIMIT; MODIFY USE TO PERMIT FERMENTATION OF RED AND WHITE WINE.
N-2321 - 630 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP WINE STORAGE TANK 1661 WITH PRESSURE/VACUUM VALVE, INSULATION AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS; INCREASE DAILY STORAGE THROUGHPUT LIMIT; REMOVE ANNUAL STORAGE THROUGHPUT LIMIT; MODIFY USE TO PERMIT FERMENTATION OF RED AND WHITE WINE.
N-2321 - 631 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP WINE STORAGE TANK 1661 WITH PRESSURE/VACUUM VALVE, INSULATION AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS; INCREASE DAILY STORAGE THROUGHPUT LIMIT; REMOVE ANNUAL STORAGE THROUGHPUT LIMIT; MODIFY USE TO PERMIT FERMENTATION OF RED AND WHITE WINE.
N-2321 - 632 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP WINE STORAGE TANK 1661 WITH PRESSURE/VACUUM VALVE, INSULATION AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS; INCREASE DAILY STORAGE THROUGHPUT LIMIT; REMOVE ANNUAL STORAGE THROUGHPUT LIMIT; MODIFY USE TO PERMIT FERMENTATION OF RED AND WHITE WINE.
N-2321 - 633 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP WINE STORAGE TANK 1661 WITH PRESSURE/VACUUM VALVE, INSULATION AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS; INCREASE DAILY STORAGE THROUGHPUT LIMIT; REMOVE ANNUAL STORAGE THROUGHPUT LIMIT; MODIFY USE TO PERMIT FERMENTATION OF RED AND WHITE WINE.
N-2321 - 634 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP WINE STORAGE TANK 1661 WITH PRESSURE/VACUUM VALVE, INSULATION AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS; INCREASE DAILY STORAGE THROUGHPUT LIMIT; REMOVE ANNUAL STORAGE THROUGHPUT LIMIT; MODIFY USE TO PERMIT FERMENTATION OF RED AND WHITE WINE.
N-2321 - 635 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP WINE STORAGE TANK 1661 WITH PRESSURE/VACUUM VALVE, INSULATION AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS; INCREASE DAILY STORAGE THROUGHPUT LIMIT; REMOVE ANNUAL STORAGE THROUGHPUT LIMIT; MODIFY USE TO PERMIT FERMENTATION OF RED AND WHITE WINE.
N-2321 - 636 - 2	MODIFICATION OF 62,554 GALLON STAINLESS STEEL ENCLOSED TOP WINE STORAGE TANK 1661 WITH PRESSURE/VACUUM VALVE, INSULATION AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS; INCREASE DAILY STORAGE THROUGHPUT LIMIT; REMOVE ANNUAL STORAGE THROUGHPUT LIMIT; MODIFY USE TO PERMIT FERMENTATION OF RED AND WHITE WINE.
N-2321 - 637 - 2	MODIFICATION OF 3,070 GALLON STAINLESS STEEL ENCLOSED TOP WHITE WINE FERMENTATION AND WINE STORAGE TANK LT-1 WITH PRESSURE/VACUUM VALVE AND INSULATION ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 638 - 2	MODIFICATION OF 3,070 GALLON STAINLESS STEEL ENCLOSED TOP WHITE WINE FERMENTATION AND WINE STORAGE TANK LT-2 WITH PRESSURE/VACUUM VALVE AND INSULATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.

ATC EQUIPMENT DESCRIPTIONS

Application No.	ATC EQUIPMENT DESCRIPTION
N-2321 - 639 - 2	MODIFICATION OF 3,070 GALLON STAINLESS STEEL ENCLOSED TOP WHITE WINE FERMENTATION AND WINE STORAGE TANK LT-3 WITH PRESSURE/VACUUM VALVE AND INSULATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 640 - 2	MODIFICATION OF 3,070 GALLON STAINLESS STEEL ENCLOSED TOP WHITE WINE FERMENTATION AND WINE STORAGE TANK LT-4 WITH PRESSURE/VACUUM VALVE AND INSULATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 641 - 2	MODIFICATION OF 3,070 GALLON STAINLESS STEEL ENCLOSED TOP WHITE WINE FERMENTATION AND WINE STORAGE TANK LT-5 WITH PRESSURE/VACUUM VALVE AND INSULATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 642 - 2	MODIFICATION OF 18,000 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK GANI WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 643 - 2	MODIFICATION OF 9,247 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK ROTO WITH PRESSURE/VACUUM VALVE AND REFRIGERATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS.
N-2321 - 644 - 2	MODIFICATION OF 6,287 GALLON STAINLESS STEEL ENCLOSED TOP WINE STORAGE TANK 941 WITH PRESSURE/VACUUM VALVE AND INSULATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS; INCREASE DAILY STORAGE THROUGHPUT LIMIT; REMOVE ANNUAL STORAGE THROUGHPUT LIMIT; MODIFY USE TO PERMIT FERMENTATION OF RED AND WHITE WINE.
N-2321 - 645 - 2	MODIFICATION OF 12,067 GALLON STAINLESS STEEL ENCLOSED TOP WINE STORAGE TANK 942 WITH PRESSURE/VACUUM VALVE AND INSULATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS; INCREASE DAILY STORAGE THROUGHPUT LIMIT; REMOVE ANNUAL STORAGE THROUGHPUT LIMIT; MODIFY USE TO PERMIT FERMENTATION OF RED AND WHITE WINE.
N-2321 - 646 - 2	MODIFICATION OF 12,067 GALLON STAINLESS STEEL ENCLOSED TOP WINE STORAGE TANK 943 WITH PRESSURE/VACUUM VALVE AND INSULATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS; INCREASE DAILY STORAGE THROUGHPUT LIMIT; REMOVE ANNUAL STORAGE THROUGHPUT LIMIT; MODIFY USE TO PERMIT FERMENTATION OF RED AND WHITE WINE.
N-2321 - 647 - 2	MODIFICATION OF 12,067 GALLON STAINLESS STEEL ENCLOSED TOP WINE STORAGE TANK 944 WITH PRESSURE/VACUUM VALVE AND INSULATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS; INCREASE DAILY STORAGE THROUGHPUT LIMIT; REMOVE ANNUAL STORAGE THROUGHPUT LIMIT; MODIFY USE TO PERMIT FERMENTATION OF RED AND WHITE WINE.
N-2321 - 648 - 2	MODIFICATION OF 12,067 GALLON STAINLESS STEEL ENCLOSED TOP WINE STORAGE TANK 945 WITH PRESSURE/VACUUM VALVE AND INSULATION: ADD SPECIFIC LIMITING CONDITION FOR WINE PRODUCTION OPERATIONS; INCREASE DAILY STORAGE THROUGHPUT LIMIT; REMOVE ANNUAL STORAGE THROUGHPUT LIMIT; MODIFY USE TO PERMIT FERMENTATION OF RED AND WHITE WINE.
N-2321 - 652 - 0	500 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 653 - 0	500 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.

ATC EQUIPMENT DESCRIPTIONS

Application No.	ATC EQUIPMENT DESCRIPTION
N-2321 - 654 - 0	500 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 655 - 0	500 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 656 - 0	500 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 657 - 0	500 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 658 - 0	500 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 659 - 0	500 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 660 - 0	500 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 661 - 0	543 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 662 - 0	543 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 663 - 0	543 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 664 - 0	543 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 665 - 0	790 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 666 - 0	1,000 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 667 - 0	1,000 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 668 - 0	1,000 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 669 - 0	1,000 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 670 - 0	1,100 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 671 - 0	3,980 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 672 - 0	3,980 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 673 - 0	3,980 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.

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Application No.	ATC EQUIPMENT DESCRIPTION
N-2321 - 674 - 0	3,980 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 675 - 0	3,980 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 676 - 0	3,980 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 677 - 0	6,050 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 678 - 0	6,050 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 679 - 0	6,284 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 680 - 0	6,284 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 681 - 0	6,284 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 682 - 0	6,284 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 683 - 0	6,284 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 684 - 0	6,284 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 685 - 0	8,050 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 686 - 0	8,050 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 687 - 0	8,050 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 688 - 0	9,372 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 689 - 0	9,372 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 690 - 0	9,372 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 691 - 0	9,372 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 692 - 0	9,372 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 693 - 0	9,372 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.

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Application No.	ATC EQUIPMENT DESCRIPTION
N-2321 - 694 - 0	9,372 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 695 - 0	9,372 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 696 - 0	12,049 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 697 - 0	12,049 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 698 - 0	12,049 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 699 - 0	12,049 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 700 - 0	12,049 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 701 - 0	12,049 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 702 - 0	12,049 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 703 - 0	12,049 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 704 - 0	12,049 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 705 - 0	12,049 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 706 - 0	12,049 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 707 - 0	12,049 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 708 - 0	12,049 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 709 - 0	12,049 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 710 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 711 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 712 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 713 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.

ATC EQUIPMENT DESCRIPTIONS

Application No.	ATC EQUIPMENT DESCRIPTION
N-2321 - 714 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 715 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 716 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 717 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 718 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 719 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 720 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 721 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 722 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 723 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 724 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 725 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 726 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 727 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 728 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 729 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 730 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 731 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 732 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 733 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.

ATC EQUIPMENT DESCRIPTIONS

Application No.	ATC EQUIPMENT DESCRIPTION
N-2321 - 734 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 735 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 736 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 737 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 738 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 739 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 740 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 741 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 742 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 743 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 744 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 745 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 746 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 747 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 748 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 749 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 750 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 751 - 0	17,893 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 752 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 753 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.

ATC EQUIPMENT DESCRIPTIONS

Application No.	ATC EQUIPMENT DESCRIPTION
N-2321 - 754 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 755 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 756 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 757 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 758 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 759 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 760 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 761 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 762 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 763 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 764 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 765 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 766 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 767 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 768 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 769 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 770 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 771 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 772 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 773 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.

ATC EQUIPMENT DESCRIPTIONS

Application No.	ATC EQUIPMENT DESCRIPTION
N-2321 - 774 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 775 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 776 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 777 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 778 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 779 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 780 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 781 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 782 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 783 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 784 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 785 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 786 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 787 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 788 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 789 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 790 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 791 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.
N-2321 - 792 - 0	25,395 GALLON STAINLESS STEEL ENCLOSED TOP RED AND WHITE WINE FERMENTATION AND STORAGE TANK WITH PRESSURE/VACUUM VALVE AND REFRIGERATION.

Appendix D

Draft Policy for Calculation of Winery Emissions

DRAFT

TO: Permit Services Division Staff

FROM: Dennis Roberts

DATE: June 30, 2009

SUBJECT: Calculation of the Potential to Emit for VOC Emissions from Wine Fermentation and Storage Operations

Purpose

The purpose of this policy is to establish a framework for calculating the collective Potential to Emit for VOCs from wine fermentation and storage tanks which have been previously permitted by in-house Permits to Operate based on loss-of-exemption. Such calculation is primarily performed for purposes of establishing the collective Pre-Project Potential to Emit (PE1) to form the basis for a Specific Limiting Condition (SLC) on all wine tanks at a facility which limits PE2 = PE1.

Applicability

This policy applies to all wine fermentation and storage operations.

Background

The District began issuing permits for wine fermentation and storage tanks on August 21, 2005. In-house PTO's were issued for existing tanks based on a loss or exemption and therefore the tank permits were not subject to New Source Review. Currently, majority of all wine tank permits in the San Joaquin Valley are still in-house PTO's and thus do not contain emission limits such as they would have if subjected to New Source Review (NSR).

Due to changing consumer tastes, the wine industry in the San Joaquin Valley is changing from the production of wines typically made in large tanks to the production of wine in smaller tanks, using smaller batches of select grapes and smaller fermentation batch sizes, with the objective of producing higher quality wines. To produce the same volume of wine in this manner requires more tanks and smaller tanks. Permitting of additional new, smaller wine fermentation and storage tanks could require the purchase of emissions offsets, even in those cases when a winery is just changing to smaller lot production and overall production is not increasing. Where all tanks meet the requirements for Best Available Control Technology (BACT), a potential permitting approach for adding tanks to a facility, for purposes of product flexibility and without triggering offsets, is to establish an SLC on all the tanks which limits the collective annual PE2 to the calculated collective PE1 for all the existing tanks. Since all units meet BACT, Baseline Emissions (BE) are equal to PE1 and calculated offsets are thus zero pursuant to Rule 2201.

The tanks at a winery are highly interdependent in operation and in the absence of a pre-established permit limit they cannot be considered as independent emissions units. By their nature, the various tank operations which convert crushed grapes into finished wine (fermentation, pressing, racking, filtration, etc.) cannot be all conducted in a single tank. In addition, other associated equipment such as that required for

crushing and pressing may serve to limit wine production by the facility. Therefore, a calculation of the PE for wine tanks requires that the tanks be considered in terms of a collective wine production capacity and that other production bottlenecks such as crushing and pressing limitations also be considered. This policy provides a theoretical basis and methodology for performing such a calculation.

Wine Production Process Description

- The VOC emissions associated with winemaking are produced from two separate operations:
  1. Wine Fermentation (a chemical reaction process which converts sugar into ethanol)
  2. Storage Tank Operations during which post-fermentation operations such as racking, cold stabilization, filtration, etc., are also conducted.

  Typically, all tanks in a winery are used for both purposes; thus a wine tank commonly consists of two separate emissions units.
- A general process description for wine production is given in U.S. EPA AP-42 Section 9.12.2. There are many variations to the basic process that reflect the individuality of the winemaking and which may be considered proprietary at most facilities. Some additions to the AP-42 description: White wines are fermented without the grape solids, which minimizes the amount of solids settling out in the fermentation tank, allowing white wine to potentially be fermented in any wine tank.
- Red wine is generally fermented with the grape solids which give the red color and other distinctive characteristics to the wine. Because of the solids settling out with red wine fermentation, specialized red wine fermentation tanks with sloped bottoms or constructed as a horizontal rotating drums are generally used to ease solids removal during tank cleaning.
- The tanks in a winery are highly interdependent in operation and therefore must be considered in terms of the collective production capacity. The fermentation capacity of a facility is not only a function of the capacity of the tanks actually performing fermentation but is also a function of the downstream storage tank capacity which may serve to bottleneck the upstream fermentation operation. The wine production process flow diagram in U.S. EPA AP-42 Figure 9.12.2.-1 is illustrative. Post fermentation operations such as cold stabilization, filtration, malolactic fermentation, etc., have historically required a post fermentation residence time in storage tanks of 40 days or less.
- The facility's grape crushing/destemming and pressing equipment may serve to bottleneck the overall operation, establishing the PE by limiting daily throughput of the facility or of individual fermentation tanks.
- Wine production in the San Joaquin Valley is a seasonal event, coinciding with the grape harvest season ("crush season"). Wine production typically occurs in the months of August through December. Fermentation is at its peak during

September through October; about 74% of wine fermentation occurs within those months in the San Joaquin Valley.

Basis and Assumptions for PE Calculation

- Since the annual emissions from a winery operation are proportional to the annual wine production, the basic approach for calculating the PE for a winery operation is to determine the limiting factor for wine production at the facility and base the calculation on this factor. The following items are considered in determination of the actual "bottleneck" to wine production at a facility:

  Grape Crushing/Destemming Capacity: Daily production is limited by the facility's capacity to receive and crush grapes. This capacity is established by the manufacturer's rated crushing capacity in tons per hour for the crushing equipment actually located at the facility.

  Wine Pressing Capacity: Following crushing, the grape skins must be separated from the wine in the presses. For white wines, this occurs immediately after crushing. For red wines, pressing is performed after the fermentation step. This capacity is established by the manufacturer's rated pressing capacity in tons per hour for the pressing equipment actually located at the facility.

  Winery Tank Capacity: Due to the highly inter-related operation of winery tanks, the collective production capacity of winery tankage, in terms of a required collective "minimum residence time" for wine processing, is the basis for the calculation rather than a consideration of the sum of individual theoretical production capacities for each tank. The capacity of the available tankage to produce both red and white wines is considered separately and the scenario which produces the highest potential emissions is considered to be the facility's basis for calculating the PE based on storage tanks limitations.

- The crushing of grapes is assumed to produce 200 gallons of produced wine based on data provided by The Wine Institute.
- Batch fermentation processing is assumed to require a 5 day turnaround for a red wine fermentation tank and a 10 day turnaround for white wine, i.e., a red wine fermenter can produce a batch every 5 days while a white wine fermenter can produce a batch every 10 days. These durations were previously established as a result of information provided by the Wine Institute during development of District Rule 4694 – *Wine Fermentation and Storage Tanks.*
- Post-fermentation processing is assumed to require a maximum of 40 days of retention time based on estimates by The Wine Institute (this duration may be less at some facilities depending upon the products and operating philosophy). This retention time accounts for the tank residence time required for post-fermentation processing such as malolactic fermentation, bentonite addition, filtration(s), blending(s), tartrate stabilization, bottling/packaging or bulk shipping.

- Maximum batch size in a red wine fermenter is 80% of nominal tank capacity due to potential expansion of the fermentation mass during operation as a result of rapid evolution of CO2 from the fermentation reaction. White wine fermentation batches are assumed to be 100% of the tank's nominal capacity.
- Emission factors for wine fermentation are taken from District Rule 4694 as follows:

  6.2 lb-VOC/1000 gallons produced red wine
  2.5 lb-VOC/1000 gallons produced white wine

- Emissions from post-fermentation storage tank operations will be calculated based on 8 inter-tank transfers during post-fermentation operations. The number of inter-tank transfers is at least 8 for wine fermented on-site per information provided by the Wine Institute. Each batch of wine is moved for the following processing operations at a minimum : 1) from fermentation to storage; 2) coarse filtration, 3) special processing (ex: ion exchange, centrifugation, addition of fining agents), 4) initial blending, 5) fine filtration, 6) final blending, 7) tartrate stabilization, 8) packaging or bulk shipping. (NOTE: The processing may not occur in this order for all wineries).
- Maximum average ethanol content for wine handled in the storage tank operations is 16 volume % (based on Wine Institute estimate for a typical winery).
- The emission factor for wine storage operations is taken from District FYI-114, *Estimating VOC Emissions from Wine Storage Tanks.* Since all tanks are assumed to meet BACT for wine storage, it will be assumed that breathing losses from the storage tanks are negligible since, pursuant to the current District BACT guideline, the tanks must be insulated or have equivalent isolation from significant diurnal impacts. Based on this assumption, the emission factor from FYI-114 is 0.23 lb-VOC/1000 gallons of tank throughput.
- Fermentation is assumed to occur only during the crush season. Based on documentation provided by the Wine institute, the duration of both the red and white wine crush seasons in the San Joaquin Valley is potentially 120 days each.
- Generally, in the absence of other restrictions, all tanks at a facility may be used for white wine fermentation. However, in some wineries, some tanks may have been added to the facility as storage-only tanks through an NSR permitting action subsequent to the initial in-house PTO's. These would not be available for white wine fermentation and their volume must be subtracted from the total tankage capacity to determine the actual white fermenter capacity. White wine production capacity is then calculated by the following general method:

  Given total white fermenter capacity V_w and the 10-day batch turnaround for white fermenters as stated above, the daily white fermenter capacity limit W_{w1} (gallons per day) during crush season is:

  $W_{w1} = V_w \div 10$

To determine the potential limitation due to storage tank capacity, the limiting daily white wine production capacity for a collection of fermentation & storage tanks with a total "effective" capacity V_t gallons may be calculated by considering a total wine residence time = 10 days fermentation + 50 days post-fermentation processing = 50 days total retention time (grape to finished wine). Where the facility does not include storage-only tanks with an NSR throughput limitation as mentioned above, the "effective" total tank capacity is equal to the total capacity of all tanks at the facility. Where the facility has NSR limited storage tanks, an effective total volume is calculated as outlined in Appendix A. The total tank production capacity for white wine W_{w2} (gallons per day) during crush season is then calculated as,

$W_{w2} = V_t \div 50$

The actual facility limit for white wine production W_W is then taken as the least of either the white fermenter capacity limit W_{w1} or the total tank capacity for white wine production W_{w2}

- Since the fermentation of red wine requires specialized fermenters, the consideration of the capacity of the winery tankage to produce red wine must consider the fermentation capacity of these specialized red fermenters separately from the total processing capacity of the tanks. The smallest of either the red fermenter capacity or the total red wine processing capacity of the tanks is taken to be the red wine production limit for the facility:

  Given total red fermenter capacity V_r and the 5-day batch turnaround for red fermenters as stated above, the daily red fermenter capacity limit W_{r1} (gallons per day) during crush season is:

  $W_{r1} = V_r \div 5$

  To determine the potential limitation due to storage tank capacity, the limiting daily red wine production capacity for a collection of fermentation & storage tanks with a total "effective" capacity V_t gallons may be calculated by considering a total wine residence time = 10 days fermentation + 50 days post-fermentation processing = 50 days total retention time (grape to finished wine). Note that the total tank volume is an "effective" volume as described above for white wine. The total tank production capacity for red wine W_{r2} (gallons per day) during crush season is then calculated as,

  $W_{r2} = V_t \div 45$

  The actual maximum daily capacity for red wine production W_r is then taken as the least of either the red fermenter capacity limit W_{r1} or the total tank capacity for red wine production W_{r2}

Calculation Model Sequence:

The Potentials to Emit for both a facility's wine fermentation operations and for the facility's storage tank operations are determined in the following sequence:

1. Potential fermentation emissions from a 100% white wine production scenario are first determined:

White wine production capacity is determined as the lesser of the production capacities of either the crushing, pressing or tankage.

W_W = White wine production capacity (gallons per year as measured immediately after pressing) and is the lesser of the following three calculations:

W1 = C x D_w x M (limited by crusher capacity)

W2 = P x D_w x M (limited by pressing capacity)

W3 = (V_{FW} x D_w) / W_{FW} (limited by white fermenter volume)

W4 = (V_T x D_w) / R_{TW} (limited by overall tank processing)

C = grape crushing capacity, tons/day
D_w = days in a white wine crush season = 120 days
M = gallons of grape juice produced per ton of grapes = 200 gallons/ton
P = pressing capacity, tons per day
W_{FW} = White fermentation period = 10 days
R_{TW} = Total winery retention time for white wine, 40 + 10 = 50 days
V_{FW} = total volume of white wine fermenters
V_T = Effective Total Winery Cooperage (gal) for white wine – see Appendix A

Potential white wine fermentation emissions are then determined by applying the white fermentation emission factor to the production capacity determined above:

$PE_{whitefermentation} = E_{fw} \times W_W$

where,

E_{fw} = white wine emission factor = 2.5 lb-VOC/1000 gal (District Rule 4694)

2. Potential fermentation emissions from a 100% red wine production scenario are then determined:

Red wine production capacity is determined as the lesser of the production capacities of either the crushing, pressing or tankage.

W_R = Red wine production capacity (gallons per year as measured immediately after pressing) and is the lesser of the following four calculations:

W1 = C x D_r x M (limited by crusher capacity)

W2 = P x D_r x M (limited by pressing capacity)

W3 = (V_{FR} x F x D_r) / R_{FR} (limited by red fermenter volume)

W4 = (V_T x D_r) / R_{TS} (limited by overall tank processing)

C = grape crushing capacity, tons/day
D_r = days in a red wine crush season = 100 days
F = Fill factor for red wine fermentation = 80%
M = gallons of grape juice produced per ton of grapes = 200 gallons/ton
P = pressing capacity, tons per day

R_{FR} = Red fermentation period = 5 days
R_{TS} = Total winery retention time for red wine, 40 + 5 = 45 days
V_{FR} = total volume of red wine fermenters
V_T = Effective Total Winery Cooperage (gal) for red wine – see Appendix A

Potential red wine fermentation emissions are then determined by applying the red fermentation emission factor to the production capacity determined above:

$PE_{redfermentation} = E_{fr} \times W_R$

where,
E_{fr} = red wine emission factor = 6.2 lb-VOC/1000 gal (District Rule 4694)

3. The facility's PE for fermentation operations is then taken to be the greater of either the white or red PE's determined above.

   $PE_{fermentation}$ = greater of $PE_{whitefermentation}$ and $PE_{redfermentation}$

4. Emissions from storage tank operations are then determined for both the red and white wine production cases by applying the factors described above.

   $PE_{whitestorage} = E_s \times T \times W_W$

   $PE_{redstorage} = E_s \times T \times W_R$

   E_s = wine storage emission factor based on District FYI-114 = 0.230 lb-VOC/1000 gallons of wine transferred
   T = Total post fermentation inter-tank transfers per batch of wine = 8

   The facility's PE for storage tank operations is taken to be the larger of the PE's for either red or white wine production.

   $PE_{storage}$ = greater of $PE_{whitestorage}$ and $PE_{redstorage}$

Example:

The wine production Potentials to Emit for VOCs will be determined for a hypothetical Winery. The hypothetical winery has in-house Permits to Operate for all its wine tanks for operation as both fermenters and storage tanks except for eight (8) 60,000 gallon wine storage-only tanks (480,000 gallons total) which were permitted by an NSR action subsequent to the initial permitting. The eight storage-only tanks are limited by an SLC to a total annual throughput of 2,000,000 gallons per year with a maximum ethanol content of 14%. All fermentation and storage tanks meet Achieved-in-Practice BACT. Crushing and pressing equipment ratings are 150 and 100 tons per hour respectively.

The effective tank capacities and the wine grape processing equipment are summarized as follows:

- Effective Total Tankage Capacity = 14,625,000 and 14,614,000 gallons for white and red wine respectively = V_T (see Appendix A)
- Red Fermenter Capacity = 2,000,000 gallons = V_{FR}
- White Fermenter Capacity = total cooperage – storage only tanks = 14,520,000 gallons

- All storage tanks are insulated and equipped with PVRV's (storage tank breathing losses may be ignored).
- Crushing Capacity = 3,600 tons per day (150 tons/hour) = C
- Pressing Capacity = 2,400 tons per day (100 tons per hour) = P

1. Scenario 1 (all white):

   $W1 = C \times D_w \times M = 3,600 \times 120 \times 200 = 72.0$ MG/yr (million gallons per year)

   $W2 = P \times D_w \times M = 2,400 \times 120 \times 200 = 48.0$ MG/yr

   $W3 = (V_{FW} \times D_w) / W_{FW} = (14,520,000 \times 120)/10$

   $=174$ MG/yr

   $W4 = (V_T \times D_w) / R_{TW} = (14,625,000 \times 120)/50$

   $= 35.1$ MG/yr

   Taking the lesser of the four:

   $W_W = W2 = 35.1$ MG/yr

   Then,

   $PE_{whitefermentation} = E_{fw} \times W/1,000 = 2.5 \times 35.1 \times 10^6/1000 = 87,750$ lb-VOC/year

2. Scenario 2 (all red)

   - $W1 = C \times D_r \times M = 3,600 \times 120 \times 200 = 72.0$ MG/yr
   - $W2 = P \times D_r \times M = 2,400 \times 120 \times 200 = 48.0$ MG/yr
   - $W3 = (V_{FR} \times F \times D_r) / R_{FR} = (2,000,000 \times 80\% \times 120)/5 = 38.4$ MG/yr
   - $W4 = V_T \times D_r / R_S = 14,614,000 \times 120/45 = 39.0$ MG/yr

   Taking the lesser of the four:

   $W_R = W2 = 38.4$ MG/yr

   Then,

   $PE_{redfermentation} = E_{fr} \times W/1,000 = 6.2 \times 38.4 \times 10^6/1000 = 238,080$ lb-VOC/year

3. Establish PE for fermentation

   $PE_{fermentation}$ = greater of $PE_{whitefermentation}$ and $PE_{redfermentation}$
   $PE_{fermentation} = 238,080$ lb-VOC/year

4. Calculate PE for Storage Operations

   Since the calculated wine production rates have already considered the limitation introduced by the NSR limit on the storage-only tanks, no further consideration of throughput capacity is required for calculation the PE for storage operations. However, the storage-only tanks are limited to 14% ethanol for their maximum throughput of 2,000,000 gallons which requires a different emission factor. Per FYI-114, an emission factor of 0.198 lb-VOC/1000 gallons is applicable. Since the potential production of red wine is

greater than that of white as calculated above, storage throughput will be based on this production value (38.4 MG/yr) and a minimum of 8 transfers per gallon of wine:

$$PE_{storage} = E_s \times T \times W_R = 0.23/1000 \times (8 \times 38.4 - 2.0) \times 10^6 + (0.198/1000) \times 2.0 \times 10^6 = 70{,}592 \text{ lb-VOC/year}$$

Appendix A

Calculation of Effective Tank Volume

Most wine tanks in the District have been permitted as in-house PTO's and thus have no NSR limitations on their operation. However, subsequent to the initial permitting action, some wineries may have added storage tanks, permitted under NSR, either as Routine Replacements or as Fully Offset Units. These tanks are subject to throughput limits and thus may have an impact on the overall production capacity of the winery. To evaluate this impact within the calculation model presented in this policy, it is necessary to determine an "effective volume" which represents the total volume of the tankage at the facility and allows the calculation model to account for any limitation on production capacity resulting from the NSR limit on these additional tanks. The correction procedure is based on comparing the maximum number of annual tank turns (throughput expressed as the number of tank volumes per year) allowed for the NSR-limited tanks with the average minimum number of tank turns required to process the facility throughput based on residence time considerations only. Note that when a minimum of eight wine transfers during storage (per the calculation model) are considered for each gallon of wine produced, the minimum average number of tank turns is independent of the total capacity of the tanks and is established from the tank production capacity equation as follows:

White Wine:

$W4 = (8 \times (V_T \times D_w) / R_{TW}) \div V_T = (8 \times D_w / R_{TW}) = 8 \times 120/50 = 19.2$ turns

Red Wine:

$W4 = (8 \times (V_T \times D_r) / R_{TR}) \div V_T = (8 \times D_r / R_{TR}) = 8 \times 120/45 = 21.3$ turns

When the maximum number of turns allowed for certain NSR-permitted storage tanks is less than this average, these tanks are assumed to limit production capacity and an effective volume for these tanks, used for purposes of determining production capacity, must be determined. The actual volume of the NSR-limited tanks is adjusted by the ratio of the maximum allowed number of turns to the average minimum number of tank turns. This adjusted volume is used, in turn, to determine the effective volume of all tankage at the facility. The following example illustrates the correction:

Volume Correction Example

Using the example PE calculation presented in this policy, total tankage capacity is 15,000,000 gallons which includes 480,000 gallons of storage tanks limited to 2,000,000 gallons per year. The 2,000,000 gallon per year limitation for the NSR-limited tanks limits the number of turns for these tanks to:

2,000,000 gal/yr ÷ 480,000 gal/turn = 4.2 turns

The effective capacity for wine production for the NSR-limited tanks is considered to be limited to the extent that the maximum allowable number of turns is less than the minimum average number of turns required for wine production. Therefore, the effective volume for these tanks is considered to be:

(4.2/19.2) x 480,000 = 105,000 gallons for white wine production

(4.2/21.3) x 480,000 = 94,600 gallons for red wine production

Total tank capacity for the facility is then adjusted to an effective value by deducting the storage-only tanks from the total and then adding back the effective volume of the storage-only tanks, or

$V_{effective}$ = 15,000,000 – 480,000 + 105,000 = 14,625,000 gallons for white wine

$V_{effective}$ = 15,000,000 – 480,000 + 94,600 = 14,614,000 gallons for red wine

Appendix E

Daily PE1 for Fermentation Tank Emissions Units

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	14	-1	26,470	1.62	42.9
N-2321-	15	-1	26,470	1.62	42.9
N-2321-	16	-1	26,470	1.62	42.9
N-2321-	17	-1	26,470	1.62	42.9
N-2321-	18	-1	30,129	1.62	48.8
N-2321-	19	-1	30,129	1.62	48.8
N-2321-	20	-1	30,129	1.62	48.8
N-2321-	21	-1	30,129	1.62	48.8
N-2321-	22	-1	30,129	1.62	48.8
N-2321-	23	-1	30,129	1.62	48.8
N-2321-	24	-1	30,129	1.62	48.8
N-2321-	25	-1	30,129	1.62	48.8
N-2321-	26	-1	30,129	1.62	48.8
N-2321-	27	-1	30,129	1.62	48.8
N-2321-	28	-1	30,129	1.62	48.8
N-2321-	29	-1	30,129	1.62	48.8
N-2321-	30	-1	20,093	1.62	32.6
N-2321-	31	-1	29,740	1.62	48.2
N-2321-	32	-1	20,093	1.62	32.6
N-2321-	33	-1	29,741	1.62	48.2
N-2321-	34	-1	20,093	1.62	32.6
N-2321-	35	-1	29,741	1.62	48.2
N-2321-	36	-1	20,093	1.62	32.6
N-2321-	37	-1	29,741	1.62	48.2
N-2321-	38	-1	20,093	1.62	32.6
N-2321-	39	-1	29,741	1.62	48.2
N-2321-	40	-1	29,741	1.62	48.2
N-2321-	41	-1	29,741	1.62	48.2
N-2321-	42	-1	29,741	1.62	48.2
N-2321-	43	-1	29,741	1.62	48.2
N-2321-	44	-1	29,741	1.62	48.2
N-2321-	45	-1	29,741	1.62	48.2
N-2321-	46	-1	29,741	1.62	48.2
N-2321-	47	-1	11,204	1.62	18.2
N-2321-	48	-1	20,518	1.62	33.2
N-2321-	49	-1	20,518	1.62	33.2
N-2321-	50	-1	20,518	1.62	33.2
N-2321-	51	-1	29,741	1.62	48.2

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	52	-1	19,683	1.62	31.9
N-2321-	53	-1	29,741	1.62	48.2
N-2321-	54	-1	19,683	1.62	31.9
N-2321-	55	-1	29,741	1.62	48.2
N-2321-	56	-1	19,683	1.62	31.9
N-2321-	57	-1	29,741	1.62	48.2
N-2321-	58	-1	19,683	1.62	31.9
N-2321-	59	-1	19,683	1.62	31.9
N-2321-	60	-1	5,180	1.62	8.4
N-2321-	61	-1	5,180	1.62	8.4
N-2321-	62	-1	10,156	1.62	16.5
N-2321-	63	-1	10,156	1.62	16.5
N-2321-	64	-1	10,156	1.62	16.5
N-2321-	65	-1	10,156	1.62	16.5
N-2321-	66	-1	10,156	1.62	16.5
N-2321-	67	-1	10,156	1.62	16.5
N-2321-	69	-1	20,518	1.62	33.2
N-2321-	70	-1	19,683	1.62	31.9
N-2321-	71	-1	39,000	3.46	134.9
N-2321-	72	-1	39,000	3.46	134.9
N-2321-	73	-1	39,000	3.46	134.9
N-2321-	74	-1	39,000	3.46	134.9
N-2321-	75	-1	39,000	3.46	134.9
N-2321-	76	-1	39,000	3.46	134.9
N-2321-	77	-1	39,000	3.46	134.9
N-2321-	78	-1	39,000	3.46	134.9
N-2321-	79	-1	39,000	3.46	134.9
N-2321-	80	-1	39,000	3.46	134.9
N-2321-	81	-1	39,000	3.46	134.9
N-2321-	82	-1	39,000	3.46	134.9
N-2321-	83	-1	39,000	3.46	134.9
N-2321-	84	-1	39,000	3.46	134.9
N-2321-	85	-1	39,000	3.46	134.9
N-2321-	86	-1	39,000	3.46	134.9
N-2321-	87	-1	60,259	1.62	97.6
N-2321-	88	-1	60,259	1.62	97.6
N-2321-	89	-1	60,259	1.62	97.6
N-2321-	90	-1	60,259	1.62	97.6

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	91	-1	60,259	1.62	97.6
N-2321-	92	-1	60,259	1.62	97.6
N-2321-	93	-1	60,259	1.62	97.6
N-2321-	94	-1	60,259	1.62	97.6
N-2321-	95	-1	60,259	1.62	97.6
N-2321-	96	-1	60,259	1.62	97.6
N-2321-	97	-1	6,969	1.62	11.3
N-2321-	98	-1	6,969	1.62	11.3
N-2321-	99	-1	6,969	1.62	11.3
N-2321-	100	-1	6,969	1.62	11.3
N-2321-	101	-1	6,969	1.62	11.3
N-2321-	102	-1	6,969	1.62	11.3
N-2321-	103	-1	6,969	1.62	11.3
N-2321-	104	-1	6,969	1.62	11.3
N-2321-	105	-1	6,969	1.62	11.3
N-2321-	106	-1	6,969	1.62	11.3
N-2321-	107	-1	6,969	1.62	11.3
N-2321-	108	-1	6,969	1.62	11.3
N-2321-	109	-1	6,969	1.62	11.3
N-2321-	110	-1	6,969	1.62	11.3
N-2321-	111	-1	6,969	1.62	11.3
N-2321-	112	-1	6,969	1.62	11.3
N-2321-	113	-1	6,969	1.62	11.3
N-2321-	114	-1	6,969	1.62	11.3
N-2321-	115	-1	6,969	1.62	11.3
N-2321-	116	-1	6,969	1.62	11.3
N-2321-	117	-1	6,969	1.62	11.3
N-2321-	118	-1	6,969	1.62	11.3
N-2321-	119	-1	6,969	1.62	11.3
N-2321-	120	-1	6,969	1.62	11.3
N-2321-	121	-1	1,122	1.62	1.8
N-2321-	123	-1	1,122	1.62	1.8
N-2321-	124	-1	1,122	1.62	1.8
N-2321-	125	-1	1,122	1.62	1.8
N-2321-	126	-1	1,122	1.62	1.8
N-2321-	127	-1	165,616	1.62	268.3
N-2321-	128	-1	165,616	1.62	268.3
N-2321-	129	-1	165,616	1.62	268.3

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	130	-1	166,340	1.62	269.5
N-2321-	131	-1	166,340	1.62	269.5
N-2321-	132	-1	5,063	1.62	8.2
N-2321-	133	-1	5,063	1.62	8.2
N-2321-	134	-1	5,063	1.62	8.2
N-2321-	135	-1	5,063	1.62	8.2
N-2321-	136	-1	5,063	1.62	8.2
N-2321-	137	-1	5,063	1.62	8.2
N-2321-	138	-1	5,063	1.62	8.2
N-2321-	139	-1	11,150	3.46	38.6
N-2321-	140	-1	1,030	3.46	3.6
N-2321-	141	-1	3,240	3.46	11.2
N-2321-	142	-1	3,240	3.46	11.2
N-2321-	143	-1	3,358	3.46	11.6
N-2321-	144	-1	3,358	3.46	11.6
N-2321-	145	-1	3,358	3.46	11.6
N-2321-	146	-1	3,358	3.46	11.6
N-2321-	147	-1	3,358	3.46	11.6
N-2321-	148	-1	3,358	3.46	11.6
N-2321-	149	-1	3,358	3.46	11.6
N-2321-	150	-1	3,358	3.46	11.6
N-2321-	151	-1	216,830	1.62	351.3
N-2321-	152	-1	216,830	1.62	351.3
N-2321-	153	-1	216,830	1.62	351.3
N-2321-	154	-1	216,830	1.62	351.3
N-2321-	155	-1	216,830	1.62	351.3
N-2321-	156	-1	216,830	1.62	351.3
N-2321-	157	-1	216,830	1.62	351.3
N-2321-	158	-1	216,830	1.62	351.3
N-2321-	159	-1	216,830	1.62	351.3
N-2321-	161	-1	216,830	1.62	351.3
N-2321-	162	-1	108,774	1.62	176.2
N-2321-	164	-1	108,774	1.62	176.2
N-2321-	165	-1	16,118	1.62	26.1
N-2321-	166	-1	16,118	1.62	26.1
N-2321-	167	-1	16,118	1.62	26.1
N-2321-	168	-1	16,118	1.62	26.1
N-2321-	169	-1	16,118	1.62	26.1

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	170	-1	16,118	1.62	26.1
N-2321-	171	-1	16,118	1.62	26.1
N-2321-	172	-1	16,118	1.62	26.1
N-2321-	173	-1	16,118	1.62	26.1
N-2321-	174	-1	16,118	1.62	26.1
N-2321-	175	-1	16,118	1.62	26.1
N-2321-	176	-1	16,118	1.62	26.1
N-2321-	177	-1	16,118	1.62	26.1
N-2321-	178	-1	16,118	1.62	26.1
N-2321-	179	-1	16,118	1.62	26.1
N-2321-	180	-1	16,118	1.62	26.1
N-2321-	181	-1	16,118	1.62	26.1
N-2321-	182	-1	16,118	1.62	26.1
N-2321-	183	-1	16,118	1.62	26.1
N-2321-	184	-1	16,118	1.62	26.1
N-2321-	185	-1	16,118	1.62	26.1
N-2321-	186	-1	16,118	1.62	26.1
N-2321-	187	-1	16,118	1.62	26.1
N-2321-	188	-1	16,118	1.62	26.1
N-2321-	189	-1	16,118	1.62	26.1
N-2321-	190	-1	16,118	1.62	26.1
N-2321-	191	-1	16,118	1.62	26.1
N-2321-	192	-1	16,118	1.62	26.1
N-2321-	193	-1	16,118	1.62	26.1
N-2321-	194	-1	16,118	1.62	26.1
N-2321-	195	-1	16,118	1.62	26.1
N-2321-	196	-1	16,118	1.62	26.1
N-2321-	197	-1	16,118	1.62	26.1
N-2321-	198	-1	16,118	1.62	26.1
N-2321-	199	-1	16,118	1.62	26.1
N-2321-	200	-1	16,118	1.62	26.1
N-2321-	201	-1	16,118	1.62	26.1
N-2321-	202	-1	16,118	1.62	26.1
N-2321-	203	-1	16,118	1.62	26.1
N-2321-	204	-1	16,118	1.62	26.1
N-2321-	205	-1	16,118	1.62	26.1
N-2321-	206	-1	16,118	1.62	26.1
N-2321-	207	-1	16,118	1.62	26.1

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	208	-1	16,118	1.62	26.1
N-2321-	209	-1	16,118	1.62	26.1
N-2321-	210	-1	16,118	1.62	26.1
N-2321-	211	-1	16,118	1.62	26.1
N-2321-	212	-1	16,118	1.62	26.1
N-2321-	213	-1	39,798	3.46	137.7
N-2321-	214	-1	39,798	3.46	137.7
N-2321-	215	-1	39,798	3.46	137.7
N-2321-	216	-1	39,798	3.46	137.7
N-2321-	217	-1	39,798	3.46	137.7
N-2321-	218	-1	39,798	3.46	137.7
N-2321-	219	-1	39,798	3.46	137.7
N-2321-	220	-1	39,798	3.46	137.7
N-2321-	221	-1	39,798	3.46	137.7
N-2321-	222	-1	39,798	3.46	137.7
N-2321-	223	-1	39,798	3.46	137.7
N-2321-	224	-1	39,798	3.46	137.7
N-2321-	225	-1	216,830	1.62	351.3
N-2321-	226	-1	216,830	1.62	351.3
N-2321-	227	-1	216,830	1.62	351.3
N-2321-	228	-1	216,830	1.62	351.3
N-2321-	229	-1	216,830	1.62	351.3
N-2321-	230	-1	216,830	1.62	351.3
N-2321-	231	-1	216,830	1.62	351.3
N-2321-	232	-1	216,830	1.62	351.3
N-2321-	233	-1	216,830	1.62	351.3
N-2321-	234	-1	216,830	1.62	351.3
N-2321-	235	-1	16,118	3.46	55.8
N-2321-	236	-1	16,118	3.46	55.8
N-2321-	237	-1	16,118	3.46	55.8
N-2321-	238	-1	16,118	3.46	55.8
N-2321-	239	-1	16,118	3.46	55.8
N-2321-	240	-1	16,118	3.46	55.8
N-2321-	241	-1	2,977	3.46	10.3
N-2321-	242	-1	2,977	3.46	10.3
N-2321-	243	-1	2,977	3.46	10.3
N-2321-	244	-1	2,977	3.46	10.3
N-2321-	245	-1	2,977	3.46	10.3

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	246	-1	2,977	3.46	10.3
N-2321-	247	-1	2,977	3.46	10.3
N-2321-	248	-1	2,977	3.46	10.3
N-2321-	249	-1	2,977	3.46	10.3
N-2321-	250	-1	2,977	3.46	10.3
N-2321-	251	-1	6,934	3.46	24
N-2321-	252	-1	6,934	3.46	24
N-2321-	253	-1	6,934	3.46	24
N-2321-	254	-1	6,934	3.46	24
N-2321-	255	-1	6,934	3.46	24
N-2321-	256	-1	6,934	3.46	24
N-2321-	257	-1	53,546	1.62	86.7
N-2321-	258	-1	53,546	1.62	86.7
N-2321-	259	-1	53,546	1.62	86.7
N-2321-	260	-1	53,546	1.62	86.7
N-2321-	261	-1	53,546	1.62	86.7
N-2321-	262	-1	53,546	1.62	86.7
N-2321-	263	-1	53,546	1.62	86.7
N-2321-	264	-1	53,546	1.62	86.7
N-2321-	265	-1	53,546	1.62	86.7
N-2321-	266	-1	53,546	1.62	86.7
N-2321-	267	-1	53,546	1.62	86.7
N-2321-	268	-1	53,546	1.62	86.7
N-2321-	269	-1	40,697	1.62	65.9
N-2321-	270	-1	40,697	1.62	65.9
N-2321-	271	-1	40,697	1.62	65.9
N-2321-	272	-1	40,697	1.62	65.9
N-2321-	273	-1	40,697	1.62	65.9
N-2321-	274	-1	40,697	1.62	65.9
N-2321-	275	-1	40,697	1.62	65.9
N-2321-	276	-1	40,697	1.62	65.9
N-2321-	277	-1	40,697	1.62	65.9
N-2321-	278	-1	40,697	1.62	65.9
N-2321-	279	-1	40,697	1.62	65.9
N-2321-	280	-1	40,697	1.62	65.9
N-2321-	281	-1	40,697	1.62	65.9
N-2321-	282	-1	40,697	1.62	65.9
N-2321-	283	-1	11,150	1.62	18.1

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	284	-1	11,150	1.62	18.1
N-2321-	285	-1	11,150	1.62	18.1
N-2321-	286	-1	11,150	1.62	18.1
N-2321-	287	-1	11,150	1.62	18.1
N-2321-	288	-1	11,150	1.62	18.1
N-2321-	289	-1	11,150	1.62	18.1
N-2321-	290	-1	11,150	1.62	18.1
N-2321-	291	-1	11,150	1.62	18.1
N-2321-	292	-1	11,150	1.62	18.1
N-2321-	293	-1	11,150	1.62	18.1
N-2321-	294	-1	11,150	1.62	18.1
N-2321-	295	-1	11,150	1.62	18.1
N-2321-	296	-1	11,150	1.62	18.1
N-2321-	297	-1	11,150	1.62	18.1
N-2321-	298	-1	11,150	1.62	18.1
N-2321-	299	-1	11,150	1.62	18.1
N-2321-	300	-1	11,150	1.62	18.1
N-2321-	301	-1	11,150	1.62	18.1
N-2321-	302	-1	11,150	1.62	18.1
N-2321-	303	-1	19,700	1.62	31.9
N-2321-	304	-1	19,700	1.62	31.9
N-2321-	305	-1	19,700	1.62	31.9
N-2321-	306	-1	19,700	1.62	31.9
N-2321-	307	-1	19,700	1.62	31.9
N-2321-	308	-1	19,700	1.62	31.9
N-2321-	309	-1	19,700	1.62	31.9
N-2321-	310	-1	19,700	1.62	31.9
N-2321-	311	-1	19,700	1.62	31.9
N-2321-	312	-1	19,700	1.62	31.9
N-2321-	313	-1	19,700	1.62	31.9
N-2321-	314	-1	19,700	1.62	31.9
N-2321-	315	-1	25,968	1.62	42.1
N-2321-	316	-1	25,968	1.62	42.1
N-2321-	317	-1	25,968	1.62	42.1
N-2321-	318	-1	25,968	1.62	42.1
N-2321-	319	-1	25,968	1.62	42.1
N-2321-	320	-1	25,968	1.62	42.1
N-2321-	321	-1	25,968	1.62	42.1

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	322	-1	25,968	1.62	42.1
N-2321-	323	-1	25,968	1.62	42.1
N-2321-	324	-1	25,968	1.62	42.1
N-2321-	325	-1	216,830	1.62	351.3
N-2321-	326	-1	216,830	1.62	351.3
N-2321-	327	-1	216,830	1.62	351.3
N-2321-	328	-1	216,830	1.62	351.3
N-2321-	329	-1	216,830	1.62	351.3
N-2321-	330	-1	216,830	1.62	351.3
N-2321-	331	-1	216,830	1.62	351.3
N-2321-	332	-1	216,830	1.62	351.3
N-2321-	333	-1	216,830	1.62	351.3
N-2321-	334	-1	216,830	1.62	351.3
N-2321-	335	-1	216,830	1.62	351.3
N-2321-	336	-1	216,830	1.62	351.3
N-2321-	337	-1	216,830	1.62	351.3
N-2321-	338	-1	216,830	1.62	351.3
N-2321-	339	-1	216,830	1.62	351.3
N-2321-	340	-1	216,830	1.62	351.3
N-2321-	341	-1	216,830	1.62	351.3
N-2321-	342	-1	216,830	1.62	351.3
N-2321-	343	-1	216,830	1.62	351.3
N-2321-	344	-1	216,830	1.62	351.3
N-2321-	345	-1	216,830	1.62	351.3
N-2321-	346	-1	216,830	1.62	351.3
N-2321-	347	-1	216,830	1.62	351.3
N-2321-	348	-1	216,830	1.62	351.3
N-2321-	349	-1	216,830	1.62	351.3
N-2321-	350	-1	216,830	1.62	351.3
N-2321-	351	-1	216,830	1.62	351.3
N-2321-	352	-1	216,830	1.62	351.3
N-2321-	353	-1	216,830	1.62	351.3
N-2321-	354	-1	216,830	1.62	351.3
N-2321-	355	-1	216,830	1.62	351.3
N-2321-	356	-1	216,830	1.62	351.3
N-2321-	357	-1	216,830	1.62	351.3
N-2321-	358	-1	216,830	1.62	351.3
N-2321-	359	-1	216,830	1.62	351.3

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	360	-1	216,830	1.62	351.3
N-2321-	361	-1	216,830	1.62	351.3
N-2321-	362	-1	216,830	1.62	351.3
N-2321-	363	-1	216,830	1.62	351.3
N-2321-	364	-1	216,830	1.62	351.3
N-2321-	365	-1	216,830	1.62	351.3
N-2321-	366	-1	216,830	1.62	351.3
N-2321-	367	-1	216,830	1.62	351.3
N-2321-	368	-1	216,830	1.62	351.3
N-2321-	369	-1	216,830	1.62	351.3
N-2321-	370	-1	216,830	1.62	351.3
N-2321-	371	-1	216,830	1.62	351.3
N-2321-	372	-1	216,830	1.62	351.3
N-2321-	373	-1	108,774	1.62	176.2
N-2321-	374	-1	108,774	1.62	176.2
N-2321-	375	-1	108,774	1.62	176.2
N-2321-	376	-1	108,774	1.62	176.2
N-2321-	377	-1	108,774	1.62	176.2
N-2321-	378	-1	108,774	1.62	176.2
N-2321-	379	-1	108,774	1.62	176.2
N-2321-	380	-1	108,774	1.62	176.2
N-2321-	381	-1	108,774	1.62	176.2
N-2321-	382	-1	108,774	1.62	176.2
N-2321-	383	-1	108,774	1.62	176.2
N-2321-	384	-1	108,774	1.62	176.2
N-2321-	385	-1	108,774	1.62	176.2
N-2321-	386	-1	108,774	1.62	176.2
N-2321-	387	-1	108,774	1.62	176.2
N-2321-	388	-1	108,774	1.62	176.2
N-2321-	389	-1	108,774	1.62	176.2
N-2321-	390	-1	108,774	1.62	176.2
N-2321-	391	-1	108,774	1.62	176.2
N-2321-	392	-1	108,774	1.62	176.2
N-2321-	393	-1	108,774	1.62	176.2
N-2321-	394	-1	108,774	1.62	176.2
N-2321-	395	-1	108,774	1.62	176.2
N-2321-	396	-1	108,774	1.62	176.2
N-2321-	397	-1	216,830	1.62	351.3

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	398	-1	216,830	1.62	351.3
N-2321-	399	-1	216,830	1.62	351.3
N-2321-	400	-1	216,830	1.62	351.3
N-2321-	401	-1	216,830	1.62	351.3
N-2321-	402	-1	216,830	1.62	351.3
N-2321-	403	-1	216,830	1.62	351.3
N-2321-	404	-1	216,830	1.62	351.3
N-2321-	405	-1	216,830	1.62	351.3
N-2321-	406	-1	216,830	1.62	351.3
N-2321-	407	-1	216,830	1.62	351.3
N-2321-	408	-1	216,830	1.62	351.3
N-2321-	409	-1	216,830	1.62	351.3
N-2321-	410	-1	216,830	1.62	351.3
N-2321-	411	-1	216,830	1.62	351.3
N-2321-	412	-1	216,830	1.62	351.3
N-2321-	413	-1	216,830	1.62	351.3
N-2321-	414	-1	216,830	1.62	351.3
N-2321-	415	-1	216,830	1.62	351.3
N-2321-	416	-1	216,830	1.62	351.3
N-2321-	417	-1	216,830	1.62	351.3
N-2321-	418	-1	216,830	1.62	351.3
N-2321-	419	-1	216,830	1.62	351.3
N-2321-	420	-1	216,830	1.62	351.3
N-2321-	421	-1	31,538	3.46	109.1
N-2321-	422	-1	62,554	3.46	216.4
N-2321-	423	-1	31,538	3.46	109.1
N-2321-	424	-1	62,554	3.46	216.4
N-2321-	425	-1	31,538	3.46	109.1
N-2321-	426	-1	62,554	3.46	216.4
N-2321-	427	-1	31,538	3.46	109.1
N-2321-	428	-1	62,554	3.46	216.4
N-2321-	429	-1	31,538	3.46	109.1
N-2321-	430	-1	62,554	3.46	216.4
N-2321-	431	-1	31,538	3.46	109.1
N-2321-	432	-1	62,554	3.46	216.4
N-2321-	433	-1	31,538	3.46	109.1
N-2321-	435	-1	31,538	3.46	109.1
N-2321-	447	-1	62,554	3.46	216.4

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	448	-1	62,554	3.46	216.4
N-2321-	449	-1	62,554	3.46	216.4
N-2321-	450	-1	62,554	3.46	216.4
N-2321-	451	-1	62,554	3.46	216.4
N-2321-	452	-1	62,554	3.46	216.4
N-2321-	453	-1	62,554	3.46	216.4
N-2321-	454	-1	62,554	3.46	216.4
N-2321-	455	-1	62,554	3.46	216.4
N-2321-	456	-1	62,554	3.46	216.4
N-2321-	457	-1	62,554	3.46	216.4
N-2321-	458	-1	62,554	3.46	216.4
N-2321-	459	-1	62,554	3.46	216.4
N-2321-	460	-1	62,554	3.46	216.4
N-2321-	461	-1	62,554	3.46	216.4
N-2321-	462	-1	62,554	3.46	216.4
N-2321-	463	-1	62,554	3.46	216.4
N-2321-	464	-1	62,554	3.46	216.4
N-2321-	465	-1	62,554	3.46	216.4
N-2321-	466	-1	62,554	3.46	216.4
N-2321-	467	-1	62,554	3.46	216.4
N-2321-	468	-1	62,554	3.46	216.4
N-2321-	469	-1	62,554	3.46	216.4
N-2321-	470	-1	62,554	3.46	216.4
N-2321-	471	-1	62,554	3.46	216.4
N-2321-	472	-1	62,554	3.46	216.4
N-2321-	473	-1	62,554	3.46	216.4
N-2321-	474	-1	62,554	3.46	216.4
N-2321-	475	-1	62,554	3.46	216.4
N-2321-	476	-1	62,554	3.46	216.4
N-2321-	477	-1	62,554	3.46	216.4
N-2321-	478	-1	62,554	3.46	216.4
N-2321-	479	-1	62,554	3.46	216.4
N-2321-	480	-1	62,554	3.46	216.4
N-2321-	481	-1	62,554	3.46	216.4
N-2321-	482	-1	62,554	3.46	216.4
N-2321-	483	-1	62,554	3.46	216.4
N-2321-	484	-1	62,554	3.46	216.4
N-2321-	485	-1	62,554	3.46	216.4

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	486	-1	62,554	3.46	216.4
N-2321-	487	-1	62,554	3.46	216.4
N-2321-	488	-1	62,554	3.46	216.4
N-2321-	489	-1	62,554	3.46	216.4
N-2321-	490	-1	62,554	3.46	216.4
N-2321-	491	-1	62,554	3.46	216.4
N-2321-	492	-1	62,554	3.46	216.4
N-2321-	493	-1	62,554	3.46	216.4
N-2321-	494	-1	62,554	3.46	216.4
N-2321-	495	-1	62,554	3.46	216.4
N-2321-	496	-1	62,554	3.46	216.4
N-2321-	497	-1	62,554	3.46	216.4
N-2321-	498	-1	62,554	3.46	216.4
N-2321-	499	-1	62,554	3.46	216.4
N-2321-	500	-1	62,554	3.46	216.4
N-2321-	501	-1	62,554	3.46	216.4
N-2321-	502	-1	62,554	3.46	216.4
N-2321-	503	-1	62,554	3.46	216.4
N-2321-	504	-1	62,554	3.46	216.4
N-2321-	505	-1	62,554	3.46	216.4
N-2321-	506	-1	62,554	3.46	216.4
N-2321-	507	-1	216,830	1.62	351.3
N-2321-	508	-1	216,830	1.62	351.3
N-2321-	509	-1	216,830	1.62	351.3
N-2321-	510	-1	216,830	1.62	351.3
N-2321-	511	-1	216,830	1.62	351.3
N-2321-	512	-1	216,830	1.62	351.3
N-2321-	513	-1	216,830	1.62	351.3
N-2321-	514	-1	216,830	1.62	351.3
N-2321-	515	-1	216,830	1.62	351.3
N-2321-	516	-1	216,830	1.62	351.3
N-2321-	517	-1	216,830	1.62	351.3
N-2321-	518	-1	216,830	1.62	351.3
N-2321-	519	-1	216,830	1.62	351.3
N-2321-	520	-1	216,830	1.62	351.3
N-2321-	521	-1	216,830	1.62	351.3
N-2321-	522	-1	216,830	1.62	351.3
N-2321-	523	-1	216,830	1.62	351.3

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	524	-1	216,830	1.62	351.3
N-2321-	525	-1	216,830	1.62	351.3
N-2321-	526	-1	216,830	1.62	351.3
N-2321-	527	-1	216,830	1.62	351.3
N-2321-	528	-1	216,830	1.62	351.3
N-2321-	529	-1	216,830	1.62	351.3
N-2321-	530	-1	216,830	1.62	351.3
N-2321-	531	-1	216,830	1.62	351.3
N-2321-	532	-1	216,830	1.62	351.3
N-2321-	533	-1	216,830	1.62	351.3
N-2321-	534	-1	216,830	1.62	351.3
N-2321-	535	-1	216,830	1.62	351.3
N-2321-	536	-1	216,830	1.62	351.3
N-2321-	537	-1	216,830	1.62	351.3
N-2321-	538	-1	216,830	1.62	351.3
N-2321-	539	-1	108,774	1.62	176.2
N-2321-	540	-1	108,774	1.62	176.2
N-2321-	541	-1	108,774	1.62	176.2
N-2321-	542	-1	108,774	1.62	176.2
N-2321-	543	-1	108,774	1.62	176.2
N-2321-	544	-1	108,774	1.62	176.2
N-2321-	545	-1	108,774	1.62	176.2
N-2321-	546	-1	108,774	1.62	176.2
N-2321-	547	-1	108,774	1.62	176.2
N-2321-	548	-1	108,774	1.62	176.2
N-2321-	549	-1	108,774	1.62	176.2
N-2321-	550	-1	108,774	1.62	176.2
N-2321-	551	-1	108,774	1.62	176.2
N-2321-	552	-1	108,774	1.62	176.2
N-2321-	553	-1	108,774	1.62	176.2
N-2321-	554	-1	108,774	1.62	176.2
N-2321-	555	-1	108,774	1.62	176.2
N-2321-	556	-1	108,774	1.62	176.2
N-2321-	557	-1	108,774	1.62	176.2
N-2321-	558	-1	108,774	1.62	176.2
N-2321-	559	-1	216,830	1.62	351.3
N-2321-	560	-1	216,830	1.62	351.3
N-2321-	561	-1	216,830	1.62	351.3

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	562	-1	216,830	1.62	351.3
N-2321-	563	-1	216,830	1.62	351.3
N-2321-	564	-1	216,830	1.62	351.3
N-2321-	565	-1	216,830	1.62	351.3
N-2321-	566	-1	216,830	1.62	351.3
N-2321-	567	-1	216,830	1.62	351.3
N-2321-	568	-1	216,830	1.62	351.3
N-2321-	569	-1	216,830	1.62	351.3
N-2321-	570	-1	216,830	1.62	351.3
N-2321-	571	-1	216,830	1.62	351.3
N-2321-	572	-1	216,830	1.62	351.3
N-2321-	573	-1	216,830	1.62	351.3
N-2321-	574	-1	216,830	1.62	351.3
N-2321-	575	-1	216,830	1.62	351.3
N-2321-	576	-1	216,830	1.62	351.3
N-2321-	577	-1	216,830	1.62	351.3
N-2321-	578	-1	216,830	1.62	351.3
N-2321-	579	-1	216,830	1.62	351.3
N-2321-	580	-1	216,830	1.62	351.3
N-2321-	581	-1	216,830	1.62	351.3
N-2321-	582	-1	216,830	1.62	351.3
N-2321-	583	-1	216,830	1.62	351.3
N-2321-	584	-1	216,830	1.62	351.3
N-2321-	585	-1	216,830	1.62	351.3
N-2321-	586	-1	216,830	1.62	351.3
N-2321-	587	-1	216,830	1.62	351.3
N-2321-	588	-1	216,830	1.62	351.3
N-2321-	589	-1	216,830	1.62	351.3
N-2321-	590	-1	216,830	1.62	351.3
N-2321-	591	-1	62,554	3.46	216.4
N-2321-	592	-1	62,554	3.46	216.4
N-2321-	593	-1	62,554	3.46	216.4
N-2321-	594	-1	62,554	3.46	216.4
N-2321-	595	-1	62,554	3.46	216.4
N-2321-	596	-1	62,554	3.46	216.4
N-2321-	597	-1	62,554	3.46	216.4
N-2321-	598	-1	62,554	3.46	216.4
N-2321-	599	-1	62,554	3.46	216.4

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	600	-1	62,554	3.46	216.4
N-2321-	601	-1	62,554	3.46	216.4
N-2321-	602	-1	62,554	3.46	216.4
N-2321-	603	-1	62,554	3.46	216.4
N-2321-	604	-1	62,554	3.46	216.4
N-2321-	605	-1	62,554	3.46	216.4
N-2321-	606	-1	62,554	3.46	216.4
N-2321-	607	-1	62,554	3.46	216.4
N-2321-	608	-1	62,554	3.46	216.4
N-2321-	609	-1	62,554	3.46	216.4
N-2321-	610	-1	62,554	3.46	216.4
N-2321-	611	-1	62,554	3.46	216.4
N-2321-	612	-1	62,554	3.46	216.4
N-2321-	613	-1	62,554	3.46	216.4
N-2321-	614	-1	62,554	3.46	216.4
N-2321-	615	-1	62,554	3.46	216.4
N-2321-	616	-1	62,554	3.46	216.4
N-2321-	617	-1	62,554	3.46	216.4
N-2321-	618	-1	62,554	3.46	216.4
N-2321-	619	-1	62,554	3.46	216.4
N-2321-	620	-1	62,554	3.46	216.4
N-2321-	621	-1	62,554	3.46	216.4
N-2321-	622	-1	62,554	3.46	216.4
N-2321-	623	-1	62,554	3.46	216.4
N-2321-	624	-1	62,554	3.46	216.4
N-2321-	625	-1	62,554	3.46	216.4
N-2321-	626	-1	62,554	3.46	216.4
N-2321-	629	0	62,554	0	0.0
N-2321-	630	0	62,554	0	0.0
N-2321-	631	0	62,554	0	0.0
N-2321-	632	0	62,554	0	0.0
N-2321-	633	0	62,554	0	0.0
N-2321-	634	0	62,554	0	0.0
N-2321-	635	0	62,554	0	0.0
N-2321-	636	0	62,554	0	0.0
N-2321-	637	-1	3,070	1.62	5
N-2321-	638	-1	3,070	1.62	5
N-2321-	639	-1	3,070	1.62	5

Daily Pre-Project Potential to Emit for Fermentation Emissions Units

Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	640	-1	3,070	1.62	5
N-2321-	641	-1	3,070	1.62	5
N-2321-	642	-1	18,000	3.46	62.3
N-2321-	643	-1	9,247	3.46	32.0
N-2321-	644	-1	6,287	0	0.0
N-2321-	645	-1	12,067	0	0.0
N-2321-	646	-1	12,067	0	0.0
N-2321-	647	-1	12,067	0	0.0
N-2321-	648	-1	12,067	0	0.0

Appendix F

Daily PE1 for Storage Tank Emissions Units

Daily Pre-Project Potential to Emit for Storage Emissions Units

Basis:
-Daily emission Factor is 0.432 lb-VOC/1000 gal for 20% alcohol wine
-Daily emission Factor is 0.335 lb-VOC/1000 gal for 16% alcohol wine
-Daily emission Factor is 0.289 lb-VOC/1000 gal for 14% alcohol wine
-all tanks are insulated - hence all emissions are due to working losses
- where no daily throughput is listed on the permit, throughput is assumed to be four times the maximum tank capacity

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	14	-1	105,880	0.432	45.7
N-2321-	15	-1	105,880	0.432	45.7
N-2321-	16	-1	105,880	0.432	45.7
N-2321-	17	-1	105,880	0.432	45.7
N-2321-	18	-1	120,516	0.432	52.1
N-2321-	19	-1	120,516	0.432	52.1
N-2321-	20	-1	120,516	0.432	52.1
N-2321-	21	-1	120,516	0.432	52.1
N-2321-	22	-1	120,516	0.432	52.1
N-2321-	23	-1	120,516	0.432	52.1
N-2321-	24	-1	120,516	0.432	52.1
N-2321-	25	-1	120,516	0.432	52.1
N-2321-	26	-1	120,516	0.432	52.1
N-2321-	27	-1	120,516	0.432	52.1
N-2321-	28	-1	120,516	0.432	52.1
N-2321-	29	-1	120,516	0.432	52.1
N-2321-	30	-1	80,372	0.432	34.7
N-2321-	31	-1	118,960	0.432	51.4
N-2321-	32	-1	80,372	0.432	34.7
N-2321-	33	-1	118,964	0.432	51.4
N-2321-	34	-1	80,372	0.432	34.7
N-2321-	35	-1	118,964	0.432	51.4
N-2321-	36	-1	80,372	0.432	34.7
N-2321-	37	-1	118,964	0.432	51.4
N-2321-	38	-1	80,372	0.432	34.7
N-2321-	39	-1	118,964	0.432	51.4
N-2321-	40	-1	118,964	0.432	51.4
N-2321-	41	-1	118,964	0.432	51.4
N-2321-	42	-1	118,964	0.432	51.4
N-2321-	43	-1	118,964	0.432	51.4
N-2321-	44	-1	118,964	0.432	51.4
N-2321-	45	-1	118,964	0.432	51.4
N-2321-	46	-1	118,964	0.432	51.4
N-2321-	47	-1	44,816	0.432	19.4
N-2321-	48	-1	82,072	0.432	35.5

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	49	-1	82,072	0.432	35.5
N-2321-	50	-1	82,072	0.432	35.5
N-2321-	51	-1	118,964	0.432	51.4
N-2321-	52	-1	78,732	0.432	34.0
N-2321-	53	-1	118,964	0.432	51.4
N-2321-	54	-1	78,732	0.432	34.0
N-2321-	55	-1	118,964	0.432	51.4
N-2321-	56	-1	78,732	0.432	34.0
N-2321-	57	-1	118,964	0.432	51.4
N-2321-	58	-1	78,732	0.432	34.0
N-2321-	59	-1	78,732	0.432	34.0
N-2321-	60	-1	20,720	0.432	9.0
N-2321-	61	-1	20,720	0.432	9.0
N-2321-	62	-1	40,624	0.432	17.5
N-2321-	63	-1	40,624	0.432	17.5
N-2321-	64	-1	40,624	0.432	17.5
N-2321-	65	-1	40,624	0.432	17.5
N-2321-	66	-1	40,624	0.432	17.5
N-2321-	67	-1	40,624	0.432	17.5
N-2321-	69	-1	82,072	0.432	35.5
N-2321-	70	-1	78,732	0.432	34.0
N-2321-	71	-1	0	0	0.0
N-2321-	72	-1	0	0	0.0
N-2321-	73	-1	0	0	0.0
N-2321-	74	-1	0	0	0.0
N-2321-	75	-1	0	0	0.0
N-2321-	76	-1	0	0	0.0
N-2321-	77	-1	0	0	0.0
N-2321-	78	-1	0	0	0.0
N-2321-	79	-1	0	0	0.0
N-2321-	80	-1	0	0	0.0
N-2321-	81	-1	0	0	0.0
N-2321-	82	-1	0	0	0.0
N-2321-	83	-1	0	0	0.0
N-2321-	84	-1	0	0	0.0
N-2321-	85	-1	0	0	0.0
N-2321-	86	-1	0	0	0.0
N-2321-	87	-1	241,036	0.432	104.1
N-2321-	88	-1	241,036	0.432	104.1
N-2321-	89	-1	241,036	0.432	104.1
N-2321-	90	-1	241,036	0.432	104.1
N-2321-	91	-1	241,036	0.432	104.1
N-2321-	92	-1	241,036	0.432	104.1
N-2321-	93	-1	241,036	0.432	104.1

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	94	-1	241,036	0.432	104.1
N-2321-	95	-1	241,036	0.432	104.1
N-2321-	96	-1	241,036	0.432	104.1
N-2321-	97	-1	27,876	0.432	12.0
N-2321-	98	-1	27,876	0.432	12.0
N-2321-	99	-1	27,876	0.432	12.0
N-2321-	100	-1	27,876	0.432	12.0
N-2321-	101	-1	27,876	0.432	12.0
N-2321-	102	-1	27,876	0.432	12.0
N-2321-	103	-1	27,876	0.432	12.0
N-2321-	104	-1	27,876	0.432	12.0
N-2321-	105	-1	27,876	0.432	12.0
N-2321-	106	-1	27,876	0.432	12.0
N-2321-	107	-1	27,876	0.432	12.0
N-2321-	108	-1	27,876	0.432	12.0
N-2321-	109	-1	27,876	0.432	12.0
N-2321-	110	-1	27,876	0.432	12.0
N-2321-	111	-1	27,876	0.432	12.0
N-2321-	112	-1	27,876	0.432	12.0
N-2321-	113	-1	27,876	0.432	12.0
N-2321-	114	-1	27,876	0.432	12.0
N-2321-	115	-1	27,876	0.432	12.0
N-2321-	116	-1	27,876	0.432	12.0
N-2321-	117	-1	27,876	0.432	12.0
N-2321-	118	-1	27,876	0.432	12.0
N-2321-	119	-1	27,876	0.432	12.0
N-2321-	120	-1	27,876	0.432	12.0
N-2321-	121	-1	4,488	0.432	1.9
N-2321-	123	-1	4,488	0.432	1.9
N-2321-	124	-1	4,488	0.432	1.9
N-2321-	125	-1	4,488	0.432	1.9
N-2321-	126	-1	4,488	0.432	1.9
N-2321-	127	-1	662,464	0.432	286.2
N-2321-	128	-1	662,464	0.432	286.2
N-2321-	129	-1	662,464	0.432	286.2
N-2321-	130	-1	665,360	0.432	287.4
N-2321-	131	-1	665,360	0.432	287.4
N-2321-	132	-1	20,252	0.432	8.7
N-2321-	133	-1	20,252	0.432	8.7
N-2321-	134	-1	20,252	0.432	8.7
N-2321-	135	-1	20,252	0.432	8.7
N-2321-	136	-1	20,252	0.432	8.7
N-2321-	137	-1	20,252	0.432	8.7
N-2321-	138	-1	20,252	0.432	8.7

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	139	-1	44,600	0.432	19.3
N-2321-	140	-1	4,120	0.432	1.8
N-2321-	141	-1	12,960	0.432	5.6
N-2321-	142	-1	12,960	0.432	5.6
N-2321-	143	-1	13,432	0.432	5.8
N-2321-	144	-1	13,432	0.432	5.8
N-2321-	145	-1	13,432	0.432	5.8
N-2321-	146	-1	13,432	0.432	5.8
N-2321-	147	-1	13,432	0.432	5.8
N-2321-	148	-1	13,432	0.432	5.8
N-2321-	149	-1	13,432	0.432	5.8
N-2321-	150	-1	13,432	0.432	5.8
N-2321-	151	-1	867,320	0.432	374.7
N-2321-	152	-1	867,320	0.432	374.7
N-2321-	153	-1	867,320	0.432	374.7
N-2321-	154	-1	867,320	0.432	374.7
N-2321-	155	-1	867,320	0.432	374.7
N-2321-	156	-1	867,320	0.432	374.7
N-2321-	157	-1	867,320	0.432	374.7
N-2321-	158	-1	867,320	0.432	374.7
N-2321-	159	-1	867,320	0.432	374.7
N-2321-	161	-1	867,320	0.432	374.7
N-2321-	162	-1	435,096	0.432	188.0
N-2321-	164	-1	435,096	0.432	188.0
N-2321-	165	-1	64,472	0.432	27.9
N-2321-	166	-1	64,472	0.432	27.9
N-2321-	167	-1	64,472	0.432	27.9
N-2321-	168	-1	64,472	0.432	27.9
N-2321-	169	-1	64,472	0.432	27.9
N-2321-	170	-1	64,472	0.432	27.9
N-2321-	171	-1	64,472	0.432	27.9
N-2321-	172	-1	64,472	0.432	27.9
N-2321-	173	-1	64,472	0.432	27.9
N-2321-	174	-1	64,472	0.432	27.9
N-2321-	175	-1	64,472	0.432	27.9
N-2321-	176	-1	64,472	0.432	27.9
N-2321-	177	-1	64,472	0.432	27.9
N-2321-	178	-1	64,472	0.432	27.9
N-2321-	179	-1	64,472	0.432	27.9
N-2321-	180	-1	64,472	0.432	27.9
N-2321-	181	-1	64,472	0.432	27.9
N-2321-	182	-1	64,472	0.432	27.9
N-2321-	183	-1	64,472	0.432	27.9
N-2321-	184	-1	64,472	0.432	27.9

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	185	-1	64,472	0.432	27.9
N-2321-	186	-1	64,472	0.432	27.9
N-2321-	187	-1	64,472	0.432	27.9
N-2321-	188	-1	64,472	0.432	27.9
N-2321-	189	-1	64,472	0.432	27.9
N-2321-	190	-1	64,472	0.432	27.9
N-2321-	191	-1	64,472	0.432	27.9
N-2321-	192	-1	64,472	0.432	27.9
N-2321-	193	-1	64,472	0.432	27.9
N-2321-	194	-1	64,472	0.432	27.9
N-2321-	195	-1	64,472	0.432	27.9
N-2321-	196	-1	64,472	0.432	27.9
N-2321-	197	-1	64,472	0.432	27.9
N-2321-	198	-1	64,472	0.432	27.9
N-2321-	199	-1	64,472	0.432	27.9
N-2321-	200	-1	64,472	0.432	27.9
N-2321-	201	-1	64,472	0.432	27.9
N-2321-	202	-1	64,472	0.432	27.9
N-2321-	203	-1	64,472	0.432	27.9
N-2321-	204	-1	64,472	0.432	27.9
N-2321-	205	-1	64,472	0.432	27.9
N-2321-	206	-1	64,472	0.432	27.9
N-2321-	207	-1	64,472	0.432	27.9
N-2321-	208	-1	64,472	0.432	27.9
N-2321-	209	-1	64,472	0.432	27.9
N-2321-	210	-1	64,472	0.432	27.9
N-2321-	211	-1	64,472	0.432	27.9
N-2321-	212	-1	64,472	0.432	27.9
N-2321-	213	-1	159,192	0.432	68.8
N-2321-	214	-1	159,192	0.432	68.8
N-2321-	215	-1	159,192	0.432	68.8
N-2321-	216	-1	159,192	0.432	68.8
N-2321-	217	-1	159,192	0.432	68.8
N-2321-	218	-1	159,192	0.432	68.8
N-2321-	219	-1	159,192	0.432	68.8
N-2321-	220	-1	159,192	0.432	68.8
N-2321-	221	-1	159,192	0.432	68.8
N-2321-	222	-1	159,192	0.432	68.8
N-2321-	223	-1	159,192	0.432	68.8
N-2321-	224	-1	159,192	0.432	68.8
N-2321-	225	-1	867,320	0.432	374.7
N-2321-	226	-1	867,320	0.432	374.7
N-2321-	227	-1	867,320	0.432	374.7
N-2321-	228	-1	867,320	0.432	374.7

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	229	-1	867,320	0.432	374.7
N-2321-	230	-1	867,320	0.432	374.7
N-2321-	231	-1	867,320	0.432	374.7
N-2321-	232	-1	867,320	0.432	374.7
N-2321-	233	-1	867,320	0.432	374.7
N-2321-	234	-1	867,320	0.432	374.7
N-2321-	235	-1	64,472	0.432	27.9
N-2321-	236	-1	64,472	0.432	27.9
N-2321-	237	-1	64,472	0.432	27.9
N-2321-	238	-1	64,472	0.432	27.9
N-2321-	239	-1	64,472	0.432	27.9
N-2321-	240	-1	64,472	0.432	27.9
N-2321-	241	-1	11,908	0.432	5.1
N-2321-	242	-1	11,908	0.432	5.1
N-2321-	243	-1	11,908	0.432	5.1
N-2321-	244	-1	11,908	0.432	5.1
N-2321-	245	-1	11,908	0.432	5.1
N-2321-	246	-1	11,908	0.432	5.1
N-2321-	247	-1	11,908	0.432	5.1
N-2321-	248	-1	11,908	0.432	5.1
N-2321-	249	-1	11,908	0.432	5.1
N-2321-	250	-1	11,908	0.432	5.1
N-2321-	251	-1	27,736	0.432	12.0
N-2321-	252	-1	27,736	0.432	12.0
N-2321-	253	-1	27,736	0.432	12.0
N-2321-	254	-1	27,736	0.432	12.0
N-2321-	255	-1	27,736	0.432	12.0
N-2321-	256	-1	27,736	0.432	12.0
N-2321-	257	-1	214,184	0.432	92.5
N-2321-	258	-1	214,184	0.432	92.5
N-2321-	259	-1	214,184	0.432	92.5
N-2321-	260	-1	214,184	0.432	92.5
N-2321-	261	-1	214,184	0.432	92.5
N-2321-	262	-1	214,184	0.432	92.5
N-2321-	263	-1	214,184	0.432	92.5
N-2321-	264	-1	214,184	0.432	92.5
N-2321-	265	-1	214,184	0.432	92.5
N-2321-	266	-1	214,184	0.432	92.5
N-2321-	267	-1	214,184	0.432	92.5
N-2321-	268	-1	214,184	0.432	92.5
N-2321-	269	-1	162,788	0.432	70.3
N-2321-	270	-1	162,788	0.432	70.3
N-2321-	271	-1	162,788	0.432	70.3
N-2321-	272	-1	162,788	0.432	70.3

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	273	-1	162,788	0.432	70.3
N-2321-	274	-1	162,788	0.432	70.3
N-2321-	275	-1	162,788	0.432	70.3
N-2321-	276	-1	162,788	0.432	70.3
N-2321-	277	-1	162,788	0.432	70.3
N-2321-	278	-1	162,788	0.432	70.3
N-2321-	279	-1	162,788	0.432	70.3
N-2321-	280	-1	162,788	0.432	70.3
N-2321-	281	-1	162,788	0.432	70.3
N-2321-	282	-1	162,788	0.432	70.3
N-2321-	283	-1	44,600	0.432	19.3
N-2321-	284	-1	44,600	0.432	19.3
N-2321-	285	-1	44,600	0.432	19.3
N-2321-	286	-1	44,600	0.432	19.3
N-2321-	287	-1	44,600	0.432	19.3
N-2321-	288	-1	44,600	0.432	19.3
N-2321-	289	-1	44,600	0.432	19.3
N-2321-	290	-1	44,600	0.432	19.3
N-2321-	291	-1	44,600	0.432	19.3
N-2321-	292	-1	44,600	0.432	19.3
N-2321-	293	-1	44,600	0.432	19.3
N-2321-	294	-1	44,600	0.432	19.3
N-2321-	295	-1	44,600	0.432	19.3
N-2321-	296	-1	44,600	0.432	19.3
N-2321-	297	-1	44,600	0.432	19.3
N-2321-	298	-1	44,600	0.432	19.3
N-2321-	299	-1	44,600	0.432	19.3
N-2321-	300	-1	44,600	0.432	19.3
N-2321-	301	-1	44,600	0.432	19.3
N-2321-	302	-1	44,600	0.432	19.3
N-2321-	303	-1	78,800	0.432	34.0
N-2321-	304	-1	78,800	0.432	34.0
N-2321-	305	-1	78,800	0.432	34.0
N-2321-	306	-1	78,800	0.432	34.0
N-2321-	307	-1	78,800	0.432	34.0
N-2321-	308	-1	78,800	0.432	34.0
N-2321-	309	-1	78,800	0.432	34.0
N-2321-	310	-1	78,800	0.432	34.0
N-2321-	311	-1	78,800	0.432	34.0
N-2321-	312	-1	78,800	0.432	34.0
N-2321-	313	-1	78,800	0.432	34.0
N-2321-	314	-1	78,800	0.432	34.0
N-2321-	315	-1	103,872	0.432	44.9
N-2321-	316	-1	103,872	0.432	44.9

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	317	-1	103,872	0.432	44.9
N-2321-	318	-1	103,872	0.432	44.9
N-2321-	319	-1	103,872	0.432	44.9
N-2321-	320	-1	103,872	0.432	44.9
N-2321-	321	-1	103,872	0.432	44.9
N-2321-	322	-1	103,872	0.432	44.9
N-2321-	323	-1	103,872	0.432	44.9
N-2321-	324	-1	103,872	0.432	44.9
N-2321-	325	-1	867,320	0.432	374.7
N-2321-	326	-1	867,320	0.432	374.7
N-2321-	327	-1	867,320	0.432	374.7
N-2321-	328	-1	867,320	0.432	374.7
N-2321-	329	-1	867,320	0.432	374.7
N-2321-	330	-1	867,320	0.432	374.7
N-2321-	331	-1	867,320	0.432	374.7
N-2321-	332	-1	867,320	0.432	374.7
N-2321-	333	-1	867,320	0.432	374.7
N-2321-	334	-1	867,320	0.432	374.7
N-2321-	335	-1	867,320	0.432	374.7
N-2321-	336	-1	867,320	0.432	374.7
N-2321-	337	-1	867,320	0.432	374.7
N-2321-	338	-1	867,320	0.432	374.7
N-2321-	339	-1	867,320	0.432	374.7
N-2321-	340	-1	867,320	0.432	374.7
N-2321-	341	-1	867,320	0.432	374.7
N-2321-	342	-1	867,320	0.432	374.7
N-2321-	343	-1	867,320	0.432	374.7
N-2321-	344	-1	867,320	0.432	374.7
N-2321-	345	-1	867,320	0.432	374.7
N-2321-	346	-1	867,320	0.432	374.7
N-2321-	347	-1	867,320	0.432	374.7
N-2321-	348	-1	867,320	0.432	374.7
N-2321-	349	-1	867,320	0.432	374.7
N-2321-	350	-1	867,320	0.432	374.7
N-2321-	351	-1	867,320	0.432	374.7
N-2321-	352	-1	867,320	0.432	374.7
N-2321-	353	-1	867,320	0.432	374.7
N-2321-	354	-1	867,320	0.432	374.7
N-2321-	355	-1	867,320	0.432	374.7
N-2321-	356	-1	867,320	0.432	374.7
N-2321-	357	-1	867,320	0.432	374.7
N-2321-	358	-1	867,320	0.432	374.7
N-2321-	359	-1	867,320	0.432	374.7
N-2321-	360	-1	867,320	0.432	374.7

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	361	-1	867,320	0.432	374.7
N-2321-	362	-1	867,320	0.432	374.7
N-2321-	363	-1	867,320	0.432	374.7
N-2321-	364	-1	867,320	0.432	374.7
N-2321-	365	-1	867,320	0.432	374.7
N-2321-	366	-1	867,320	0.432	374.7
N-2321-	367	-1	867,320	0.432	374.7
N-2321-	368	-1	867,320	0.432	374.7
N-2321-	369	-1	867,320	0.432	374.7
N-2321-	370	-1	867,320	0.432	374.7
N-2321-	371	-1	867,320	0.432	374.7
N-2321-	372	-1	867,320	0.432	374.7
N-2321-	373	-1	435,096	0.432	188.0
N-2321-	374	-1	435,096	0.432	188.0
N-2321-	375	-1	435,096	0.432	188.0
N-2321-	376	-1	435,096	0.432	188.0
N-2321-	377	-1	435,096	0.432	188.0
N-2321-	378	-1	435,096	0.432	188.0
N-2321-	379	-1	435,096	0.432	188.0
N-2321-	380	-1	435,096	0.432	188.0
N-2321-	381	-1	435,096	0.432	188.0
N-2321-	382	-1	435,096	0.432	188.0
N-2321-	383	-1	435,096	0.432	188.0
N-2321-	384	-1	435,096	0.432	188.0
N-2321-	385	-1	435,096	0.432	188.0
N-2321-	386	-1	435,096	0.432	188.0
N-2321-	387	-1	435,096	0.432	188.0
N-2321-	388	-1	435,096	0.432	188.0
N-2321-	389	-1	435,096	0.432	188.0
N-2321-	390	-1	435,096	0.432	188.0
N-2321-	391	-1	435,096	0.432	188.0
N-2321-	392	-1	435,096	0.432	188.0
N-2321-	393	-1	435,096	0.432	188.0
N-2321-	394	-1	435,096	0.432	188.0
N-2321-	395	-1	435,096	0.432	188.0
N-2321-	396	-1	435,096	0.432	188.0
N-2321-	397	-1	867,320	0.432	374.7
N-2321-	398	-1	867,320	0.432	374.7
N-2321-	399	-1	867,320	0.432	374.7
N-2321-	400	-1	867,320	0.432	374.7
N-2321-	401	-1	867,320	0.432	374.7
N-2321-	402	-1	867,320	0.432	374.7
N-2321-	403	-1	867,320	0.432	374.7
N-2321-	404	-1	867,320	0.432	374.7

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	405	-1	867,320	0.432	374.7
N-2321-	406	-1	867,320	0.432	374.7
N-2321-	407	-1	867,320	0.432	374.7
N-2321-	408	-1	867,320	0.432	374.7
N-2321-	409	-1	867,320	0.432	374.7
N-2321-	410	-1	867,320	0.432	374.7
N-2321-	411	-1	867,320	0.432	374.7
N-2321-	412	-1	867,320	0.432	374.7
N-2321-	413	-1	867,320	0.432	374.7
N-2321-	414	-1	867,320	0.432	374.7
N-2321-	415	-1	867,320	0.432	374.7
N-2321-	416	-1	867,320	0.432	374.7
N-2321-	417	-1	867,320	0.432	374.7
N-2321-	418	-1	867,320	0.432	374.7
N-2321-	419	-1	867,320	0.432	374.7
N-2321-	420	-1	867,320	0.432	374.7
N-2321-	421	-1	126,152	0.432	54.5
N-2321-	422	-1	250,216	0.432	108.1
N-2321-	423	-1	126,152	0.432	54.5
N-2321-	424	-1	250,216	0.432	108.1
N-2321-	425	-1	126,152	0.432	54.5
N-2321-	426	-1	250,216	0.432	108.1
N-2321-	427	-1	126,152	0.432	54.5
N-2321-	428	-1	250,216	0.432	108.1
N-2321-	429	-1	126,152	0.432	54.5
N-2321-	430	-1	250,216	0.432	108.1
N-2321-	431	-1	126,152	0.432	54.5
N-2321-	432	-1	250,216	0.432	108.1
N-2321-	433	-1	126,152	0.432	54.5
N-2321-	435	-1	126,152	0.432	54.5
N-2321-	447	-1	250,216	0.432	108.1
N-2321-	448	-1	250,216	0.432	108.1
N-2321-	449	-1	250,216	0.432	108.1
N-2321-	450	-1	250,216	0.432	108.1
N-2321-	451	-1	250,216	0.432	108.1
N-2321-	452	-1	250,216	0.432	108.1
N-2321-	453	-1	250,216	0.432	108.1
N-2321-	454	-1	250,216	0.432	108.1
N-2321-	455	-1	250,216	0.432	108.1
N-2321-	456	-1	250,216	0.432	108.1
N-2321-	457	-1	250,216	0.432	108.1
N-2321-	458	-1	250,216	0.432	108.1
N-2321-	459	-1	250,216	0.432	108.1
N-2321-	460	-1	250,216	0.432	108.1

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	461	-1	250,216	0.432	108.1
N-2321-	462	-1	250,216	0.432	108.1
N-2321-	463	-1	250,216	0.432	108.1
N-2321-	464	-1	250,216	0.432	108.1
N-2321-	465	-1	250,216	0.432	108.1
N-2321-	466	-1	250,216	0.432	108.1
N-2321-	467	-1	250,216	0.432	108.1
N-2321-	468	-1	250,216	0.432	108.1
N-2321-	469	-1	250,216	0.432	108.1
N-2321-	470	-1	250,216	0.432	108.1
N-2321-	471	-1	250,216	0.432	108.1
N-2321-	472	-1	250,216	0.432	108.1
N-2321-	473	-1	250,216	0.432	108.1
N-2321-	474	-1	250,216	0.432	108.1
N-2321-	475	-1	250,216	0.432	108.1
N-2321-	476	-1	250,216	0.432	108.1
N-2321-	477	-1	250,216	0.432	108.1
N-2321-	478	-1	250,216	0.432	108.1
N-2321-	479	-1	250,216	0.432	108.1
N-2321-	480	-1	250,216	0.432	108.1
N-2321-	481	-1	250,216	0.432	108.1
N-2321-	482	-1	250,216	0.432	108.1
N-2321-	483	-1	250,216	0.432	108.1
N-2321-	484	-1	250,216	0.432	108.1
N-2321-	485	-1	250,216	0.432	108.1
N-2321-	486	-1	250,216	0.432	108.1
N-2321-	487	-1	250,216	0.432	108.1
N-2321-	488	-1	250,216	0.432	108.1
N-2321-	489	-1	250,216	0.432	108.1
N-2321-	490	-1	250,216	0.432	108.1
N-2321-	491	-1	250,216	0.432	108.1
N-2321-	492	-1	250,216	0.432	108.1
N-2321-	493	-1	250,216	0.432	108.1
N-2321-	494	-1	250,216	0.432	108.1
N-2321-	495	-1	250,216	0.432	108.1
N-2321-	496	-1	250,216	0.432	108.1
N-2321-	497	-1	250,216	0.432	108.1
N-2321-	498	-1	250,216	0.432	108.1
N-2321-	499	-1	250,216	0.432	108.1
N-2321-	500	-1	250,216	0.432	108.1
N-2321-	501	-1	250,216	0.432	108.1
N-2321-	502	-1	250,216	0.432	108.1
N-2321-	503	-1	250,216	0.432	108.1
N-2321-	504	-1	250,216	0.432	108.1

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	505	-1	250,216	0.432	108.1
N-2321-	506	-1	250,216	0.432	108.1
N-2321-	507	-1	867,320	0.432	374.7
N-2321-	508	-1	867,320	0.432	374.7
N-2321-	509	-1	867,320	0.432	374.7
N-2321-	510	-1	867,320	0.432	374.7
N-2321-	511	-1	867,320	0.432	374.7
N-2321-	512	-1	867,320	0.432	374.7
N-2321-	513	-1	867,320	0.432	374.7
N-2321-	514	-1	867,320	0.432	374.7
N-2321-	515	-1	867,320	0.432	374.7
N-2321-	516	-1	867,320	0.432	374.7
N-2321-	517	-1	867,320	0.432	374.7
N-2321-	518	-1	867,320	0.432	374.7
N-2321-	519	-1	867,320	0.432	374.7
N-2321-	520	-1	867,320	0.432	374.7
N-2321-	521	-1	867,320	0.432	374.7
N-2321-	522	-1	867,320	0.432	374.7
N-2321-	523	-1	867,320	0.432	374.7
N-2321-	524	-1	867,320	0.432	374.7
N-2321-	525	-1	867,320	0.432	374.7
N-2321-	526	-1	867,320	0.432	374.7
N-2321-	527	-1	867,320	0.432	374.7
N-2321-	528	-1	867,320	0.432	374.7
N-2321-	529	-1	867,320	0.432	374.7
N-2321-	530	-1	867,320	0.432	374.7
N-2321-	531	-1	867,320	0.432	374.7
N-2321-	532	-1	867,320	0.432	374.7
N-2321-	533	-1	867,320	0.432	374.7
N-2321-	534	-1	867,320	0.432	374.7
N-2321-	535	-1	867,320	0.432	374.7
N-2321-	536	-1	867,320	0.432	374.7
N-2321-	537	-1	867,320	0.432	374.7
N-2321-	538	-1	867,320	0.432	374.7
N-2321-	539	-1	435,096	0.432	188.0
N-2321-	540	-1	435,096	0.432	188.0
N-2321-	541	-1	435,096	0.432	188.0
N-2321-	542	-1	435,096	0.432	188.0
N-2321-	543	-1	435,096	0.432	188.0
N-2321-	544	-1	435,096	0.432	188.0
N-2321-	545	-1	435,096	0.432	188.0
N-2321-	546	-1	435,096	0.432	188.0
N-2321-	547	-1	435,096	0.432	188.0
N-2321-	548	-1	435,096	0.432	188.0

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	549	-1	435,096	0.432	188.0
N-2321-	550	-1	435,096	0.432	188.0
N-2321-	551	-1	435,096	0.432	188.0
N-2321-	552	-1	435,096	0.432	188.0
N-2321-	553	-1	435,096	0.432	188.0
N-2321-	554	-1	435,096	0.432	188.0
N-2321-	555	-1	435,096	0.432	188.0
N-2321-	556	-1	435,096	0.432	188.0
N-2321-	557	-1	435,096	0.432	188.0
N-2321-	558	-1	435,096	0.432	188.0
N-2321-	559	-1	867,320	0.432	374.7
N-2321-	560	-1	867,320	0.432	374.7
N-2321-	561	-1	867,320	0.432	374.7
N-2321-	562	-1	867,320	0.432	374.7
N-2321-	563	-1	867,320	0.432	374.7
N-2321-	564	-1	867,320	0.432	374.7
N-2321-	565	-1	867,320	0.432	374.7
N-2321-	566	-1	867,320	0.432	374.7
N-2321-	567	-1	867,320	0.432	374.7
N-2321-	568	-1	867,320	0.432	374.7
N-2321-	569	-1	867,320	0.432	374.7
N-2321-	570	-1	867,320	0.432	374.7
N-2321-	571	-1	867,320	0.432	374.7
N-2321-	572	-1	867,320	0.432	374.7
N-2321-	573	-1	867,320	0.432	374.7
N-2321-	574	-1	867,320	0.432	374.7
N-2321-	575	-1	867,320	0.432	374.7
N-2321-	576	-1	867,320	0.432	374.7
N-2321-	577	-1	867,320	0.432	374.7
N-2321-	578	-1	867,320	0.432	374.7
N-2321-	579	-1	867,320	0.432	374.7
N-2321-	580	-1	867,320	0.432	374.7
N-2321-	581	-1	867,320	0.432	374.7
N-2321-	582	-1	867,320	0.432	374.7
N-2321-	583	-1	867,320	0.432	374.7
N-2321-	584	-1	867,320	0.432	374.7
N-2321-	585	-1	867,320	0.432	374.7
N-2321-	586	-1	867,320	0.432	374.7
N-2321-	587	-1	867,320	0.432	374.7
N-2321-	588	-1	867,320	0.432	374.7
N-2321-	589	-1	867,320	0.432	374.7
N-2321-	590	-1	867,320	0.432	374.7
N-2321-	591	-1	250,216	0.432	108.1
N-2321-	592	-1	250,216	0.432	108.1

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	593	-1	250,216	0.432	108.1
N-2321-	594	-1	250,216	0.432	108.1
N-2321-	595	-1	250,216	0.432	108.1
N-2321-	596	-1	250,216	0.432	108.1
N-2321-	597	-1	250,216	0.432	108.1
N-2321-	598	-1	250,216	0.432	108.1
N-2321-	599	-1	250,216	0.432	108.1
N-2321-	600	-1	250,216	0.432	108.1
N-2321-	601	-1	250,216	0.432	108.1
N-2321-	602	-1	250,216	0.432	108.1
N-2321-	603	-1	250,216	0.432	108.1
N-2321-	604	-1	250,216	0.432	108.1
N-2321-	605	-1	250,216	0.432	108.1
N-2321-	606	-1	250,216	0.432	108.1
N-2321-	607	-1	250,216	0.432	108.1
N-2321-	608	-1	250,216	0.432	108.1
N-2321-	609	-1	250,216	0.432	108.1
N-2321-	610	-1	250,216	0.432	108.1
N-2321-	611	-1	250,216	0.432	108.1
N-2321-	612	-1	250,216	0.432	108.1
N-2321-	613	-1	250,216	0.432	108.1
N-2321-	614	-1	250,216	0.432	108.1
N-2321-	615	-1	250,216	0.432	108.1
N-2321-	616	-1	250,216	0.432	108.1
N-2321-	617	-1	250,216	0.432	108.1
N-2321-	618	-1	250,216	0.432	108.1
N-2321-	619	-1	250,216	0.432	108.1
N-2321-	620	-1	250,216	0.432	108.1
N-2321-	621	-1	250,216	0.432	108.1
N-2321-	622	-1	250,216	0.432	108.1
N-2321-	623	-1	250,216	0.432	108.1
N-2321-	624	-1	250,216	0.432	108.1
N-2321-	625	-1	250,216	0.432	108.1
N-2321-	626	-1	250,216	0.432	108.1
N-2321-	629	-0	62,554	0.335	21.0
N-2321-	630	-0	62,554	0.335	21.0
N-2321-	631	-0	62,554	0.335	21.0
N-2321-	632	-0	62,554	0.335	21.0
N-2321-	633	-0	62,554	0.335	21.0
N-2321-	634	-0	62,554	0.335	21.0
N-2321-	635	-0	62,554	0.335	21.0
N-2321-	636	-0	62,554	0.335	21.0
N-2321-	637	-1	12,280	0.432	5.3
N-2321-	638	-1	12,280	0.432	5.3

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	639	-1	12,280	0.432	5.3
N-2321-	640	-1	12,280	0.432	5.3
N-2321-	641	-1	12,280	0.432	5.3
N-2321-	642	-1	72,000	0.432	31.1
N-2321-	643	-1	36,988	0.432	16.0
N-2321-	644	-1	13,000	0.289	3.8
N-2321-	645	-1	26,000	0.289	7.5
N-2321-	646	-1	26,000	0.289	7.5
N-2321-	647	-1	26,000	0.289	7.5
N-2321-	648	-1	26,000	0.289	7.5

Appendix G

Daily PE2 for Fermentation Tank Emissions Units – New Tanks and Storage-Only Tanks Modified to Allow Fermentation

Daily Post-Project Potential to Emit for New and Modified Fermentation Emissions Units					
Basis: Daily emission Factor is 3.46 lb-VOC/1000 gal for red wine fermentation and 1.62 lb-VOC/1000 gal for white wine fermentation per FYI-114					
Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	629	-2	62,554	3.46	216.4
N-2321-	630	-2	62,554	3.46	216.4
N-2321-	631	-2	62,554	3.46	216.4
N-2321-	632	-2	62,554	3.46	216.4
N-2321-	633	-2	62,554	3.46	216.4
N-2321-	634	-2	62,554	3.46	216.4
N-2321-	635	-2	62,554	3.46	216.4
N-2321-	636	-2	62,554	3.46	216.4
N-2321-	644	-2	6,287	3.46	21.8
N-2321-	645	-2	12,067	3.46	41.8
N-2321-	646	-2	12,067	3.46	41.8
N-2321-	647	-2	12,067	3.46	41.8
N-2321-	648	-2	12,067	3.46	41.8
N-2321-	652	-0	500	3.46	1.7
N-2321-	653	-0	500	3.46	1.7
N-2321-	654	-0	500	3.46	1.7
N-2321-	655	-0	500	3.46	1.7
N-2321-	656	-0	500	3.46	1.7
N-2321-	657	-0	500	3.46	1.7
N-2321-	658	-0	500	3.46	1.7
N-2321-	659	-0	500	3.46	1.7
N-2321-	660	-0	500	3.46	1.7
N-2321-	661	-0	543	3.46	1.9
N-2321-	662	-0	543	3.46	1.9
N-2321-	663	-0	543	3.46	1.9
N-2321-	664	-0	543	3.46	1.9
N-2321-	665	-0	790	3.46	2.7
N-2321-	666	-0	1,000	3.46	3.5
N-2321-	667	-0	1,000	3.46	3.5
N-2321-	668	-0	1,000	3.46	3.5
N-2321-	669	-0	1,000	3.46	3.5
N-2321-	670	-0	1,100	3.46	3.8
N-2321-	671	-0	3,980	3.46	13.8
N-2321-	672	-0	3,980	3.46	13.8
N-2321-	673	-0	3,980	3.46	13.8
N-2321-	674	-0	3,980	3.46	13.8
N-2321-	675	-0	3,980	3.46	13.8
N-2321-	676	-0	3,980	3.46	13.8

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	677	-0	6,050	3.46	20.9
N-2321-	678	-0	6,050	3.46	20.9
N-2321-	679	-0	6,284	3.46	21.7
N-2321-	680	-0	6,284	3.46	21.7
N-2321-	681	-0	6,284	3.46	21.7
N-2321-	682	-0	6,284	3.46	21.7
N-2321-	683	-0	6,284	3.46	21.7
N-2321-	684	-0	6,284	3.46	21.7
N-2321-	685	-0	8,050	3.46	27.9
N-2321-	686	-0	8,050	3.46	27.9
N-2321-	687	-0	8,050	3.46	27.9
N-2321-	688	-0	9,372	3.46	32.4
N-2321-	689	-0	9,372	3.46	32.4
N-2321-	690	-0	9,372	3.46	32.4
N-2321-	691	-0	9,372	3.46	32.4
N-2321-	692	-0	9,372	3.46	32.4
N-2321-	693	-0	9,372	3.46	32.4
N-2321-	694	-0	9,372	3.46	32.4
N-2321-	695	-0	9,372	3.46	32.4
N-2321-	696	-0	12,049	3.46	41.7
N-2321-	697	-0	12,049	3.46	41.7
N-2321-	698	-0	12,049	3.46	41.7
N-2321-	699	-0	12,049	3.46	41.7
N-2321-	700	-0	12,049	3.46	41.7
N-2321-	701	-0	12,049	3.46	41.7
N-2321-	702	-0	12,049	3.46	41.7
N-2321-	703	-0	12,049	3.46	41.7
N-2321-	704	-0	12,049	3.46	41.7
N-2321-	705	-0	12,049	3.46	41.7
N-2321-	706	-0	12,049	3.46	41.7
N-2321-	707	-0	12,049	3.46	41.7
N-2321-	708	-0	12,049	3.46	41.7
N-2321-	709	-0	12,049	3.46	41.7
N-2321-	710	-0	17,893	3.46	61.9
N-2321-	711	-0	17,893	3.46	61.9
N-2321-	712	-0	17,893	3.46	61.9
N-2321-	713	-0	17,893	3.46	61.9
N-2321-	714	-0	17,893	3.46	61.9
N-2321-	715	-0	17,893	3.46	61.9
N-2321-	716	-0	17,893	3.46	61.9
N-2321-	717	-0	17,893	3.46	61.9
N-2321-	718	-0	17,893	3.46	61.9
N-2321-	719	-0	17,893	3.46	61.9

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	720	-0	17,893	3.46	61.9
N-2321-	721	-0	17,893	3.46	61.9
N-2321-	722	-0	17,893	3.46	61.9
N-2321-	723	-0	17,893	3.46	61.9
N-2321-	724	-0	17,893	3.46	61.9
N-2321-	725	-0	17,893	3.46	61.9
N-2321-	726	-0	17,893	3.46	61.9
N-2321-	727	-0	17,893	3.46	61.9
N-2321-	728	-0	17,893	3.46	61.9
N-2321-	729	-0	17,893	3.46	61.9
N-2321-	730	-0	17,893	3.46	61.9
N-2321-	731	-0	17,893	3.46	61.9
N-2321-	732	-0	17,893	3.46	61.9
N-2321-	733	-0	17,893	3.46	61.9
N-2321-	734	-0	17,893	3.46	61.9
N-2321-	735	-0	17,893	3.46	61.9
N-2321-	736	-0	17,893	3.46	61.9
N-2321-	737	-0	17,893	3.46	61.9
N-2321-	738	-0	17,893	3.46	61.9
N-2321-	739	-0	17,893	3.46	61.9
N-2321-	740	-0	17,893	3.46	61.9
N-2321-	741	-0	17,893	3.46	61.9
N-2321-	742	-0	17,893	3.46	61.9
N-2321-	743	-0	17,893	3.46	61.9
N-2321-	744	-0	17,893	3.46	61.9
N-2321-	745	-0	17,893	3.46	61.9
N-2321-	746	-0	17,893	3.46	61.9
N-2321-	747	-0	17,893	3.46	61.9
N-2321-	748	-0	17,893	3.46	61.9
N-2321-	749	-0	17,893	3.46	61.9
N-2321-	750	-0	17,893	3.46	61.9
N-2321-	751	-0	17,893	3.46	61.9
N-2321-	752	-0	25,395	3.46	87.9
N-2321-	753	-0	25,395	3.46	87.9
N-2321-	754	-0	25,395	3.46	87.9
N-2321-	755	-0	25,395	3.46	87.9
N-2321-	756	-0	25,395	3.46	87.9
N-2321-	757	-0	25,395	3.46	87.9
N-2321-	758	-0	25,395	3.46	87.9
N-2321-	759	-0	25,395	3.46	87.9
N-2321-	760	-0	25,395	3.46	87.9
N-2321-	761	-0	25,395	3.46	87.9
N-2321-	762	-0	25,395	3.46	87.9

Permit Number			Capacity (Gallons)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	763	-0	25,395	3.46	87.9
N-2321-	764	-0	25,395	3.46	87.9
N-2321-	765	-0	25,395	3.46	87.9
N-2321-	766	-0	25,395	3.46	87.9
N-2321-	767	-0	25,395	3.46	87.9
N-2321-	768	-0	25,395	3.46	87.9
N-2321-	769	-0	25,395	3.46	87.9
N-2321-	770	-0	25,395	3.46	87.9
N-2321-	771	-0	25,395	3.46	87.9
N-2321-	772	-0	25,395	3.46	87.9
N-2321-	773	-0	25,395	3.46	87.9
N-2321-	774	-0	25,395	3.46	87.9
N-2321-	775	-0	25,395	3.46	87.9
N-2321-	776	-0	25,395	3.46	87.9
N-2321-	777	-0	25,395	3.46	87.9
N-2321-	778	-0	25,395	3.46	87.9
N-2321-	779	-0	25,395	3.46	87.9
N-2321-	780	-0	25,395	3.46	87.9
N-2321-	781	-0	25,395	3.46	87.9
N-2321-	782	-0	25,395	3.46	87.9
N-2321-	783	-0	25,395	3.46	87.9
N-2321-	784	-0	25,395	3.46	87.9
N-2321-	785	-0	25,395	3.46	87.9
N-2321-	786	-0	25,395	3.46	87.9
N-2321-	787	-0	25,395	3.46	87.9
N-2321-	788	-0	25,395	3.46	87.9
N-2321-	789	-0	25,395	3.46	87.9
N-2321-	790	-0	25,395	3.46	87.9
N-2321-	791	-0	25,395	3.46	87.9
N-2321-	792	-0	25,395	3.46	87.9

Appendix H

Daily PE2 for Storage Tank Emissions Units – Modified and New Tanks

Daily Post-Project Potential to Emit for New and Modified Storage Emissions Units

Basis:
-Daily emission Factor is 0.432 lb-VOC/1000 gal for 20% alcohol wine
-all tanks are insulated - hence all emissions are due to working losses
- where no daily throughput is listed on the permit, throughput is assumed to be maximum tank capacity

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	629	-2	250,216	0.432	108.1
N-2321-	630	-2	250,216	0.432	108.1
N-2321-	631	-2	250,216	0.432	108.1
N-2321-	632	-2	250,216	0.432	108.1
N-2321-	633	-2	250,216	0.432	108.1
N-2321-	634	-2	250,216	0.432	108.1
N-2321-	635	-2	250,216	0.432	108.1
N-2321-	636	-2	250,216	0.432	108.1
N-2321-	644	-2	25,148	0.432	10.9
N-2321-	645	-2	48,268	0.432	20.9
N-2321-	646	-2	48,268	0.432	20.9
N-2321-	647	-2	48,268	0.432	20.9
N-2321-	648	-2	48,268	0.432	20.9
N-2321-	652	-0	2,000	0.432	0.9
N-2321-	653	-0	2,000	0.432	0.9
N-2321-	654	-0	2,000	0.432	0.9
N-2321-	655	-0	2,000	0.432	0.9
N-2321-	656	-0	2,000	0.432	0.9
N-2321-	657	-0	2,000	0.432	0.9
N-2321-	658	-0	2,000	0.432	0.9
N-2321-	659	-0	2,000	0.432	0.9
N-2321-	660	-0	2,000	0.432	0.9
N-2321-	661	-0	2,172	0.432	0.9
N-2321-	662	-0	2,172	0.432	0.9
N-2321-	663	-0	2,172	0.432	0.9
N-2321-	664	-0	2,172	0.432	0.9
N-2321-	665	-0	3,160	0.432	1.4
N-2321-	666	-0	4,000	0.432	1.7
N-2321-	667	-0	4,000	0.432	1.7
N-2321-	668	-0	4,000	0.432	1.7
N-2321-	669	-0	4,000	0.432	1.7
N-2321-	670	-0	4,400	0.432	1.9
N-2321-	671	-0	15,920	0.432	6.9
N-2321-	672	-0	15,920	0.432	6.9
N-2321-	673	-0	15,920	0.432	6.9
N-2321-	674	-0	15,920	0.432	6.9

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	675	-0	15,920	0.432	6.9
N-2321-	676	-0	15,920	0.432	6.9
N-2321-	677	-0	24,200	0.432	10.5
N-2321-	678	-0	24,200	0.432	10.5
N-2321-	679	-0	25,136	0.432	10.9
N-2321-	680	-0	25,136	0.432	10.9
N-2321-	681	-0	25,136	0.432	10.9
N-2321-	682	-0	25,136	0.432	10.9
N-2321-	683	-0	25,136	0.432	10.9
N-2321-	684	-0	25,136	0.432	10.9
N-2321-	685	-0	32,200	0.432	13.9
N-2321-	686	-0	32,200	0.432	13.9
N-2321-	687	-0	32,200	0.432	13.9
N-2321-	688	-0	37,488	0.432	16.2
N-2321-	689	-0	37,488	0.432	16.2
N-2321-	690	-0	37,488	0.432	16.2
N-2321-	691	-0	37,488	0.432	16.2
N-2321-	692	-0	37,488	0.432	16.2
N-2321-	693	-0	37,488	0.432	16.2
N-2321-	694	-0	37,488	0.432	16.2
N-2321-	695	-0	37,488	0.432	16.2
N-2321-	696	-0	48,196	0.432	20.8
N-2321-	697	-0	48,196	0.432	20.8
N-2321-	698	-0	48,196	0.432	20.8
N-2321-	699	-0	48,196	0.432	20.8
N-2321-	700	-0	48,196	0.432	20.8
N-2321-	701	-0	48,196	0.432	20.8
N-2321-	702	-0	48,196	0.432	20.8
N-2321-	703	-0	48,196	0.432	20.8
N-2321-	704	-0	48,196	0.432	20.8
N-2321-	705	-0	48,196	0.432	20.8
N-2321-	706	-0	48,196	0.432	20.8
N-2321-	707	-0	48,196	0.432	20.8
N-2321-	708	-0	48,196	0.432	20.8
N-2321-	709	-0	48,196	0.432	20.8
N-2321-	710	-0	71,572	0.432	30.9
N-2321-	711	-0	71,572	0.432	30.9
N-2321-	712	-0	71,572	0.432	30.9
N-2321-	713	-0	71,572	0.432	30.9
N-2321-	714	-0	71,572	0.432	30.9
N-2321-	715	-0	71,572	0.432	30.9
N-2321-	716	-0	71,572	0.432	30.9
N-2321-	717	-0	71,572	0.432	30.9
N-2321-	718	-0	71,572	0.432	30.9

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	719	-0	71,572	0.432	30.9
N-2321-	720	-0	71,572	0.432	30.9
N-2321-	721	-0	71,572	0.432	30.9
N-2321-	722	-0	71,572	0.432	30.9
N-2321-	723	-0	71,572	0.432	30.9
N-2321-	724	-0	71,572	0.432	30.9
N-2321-	725	-0	71,572	0.432	30.9
N-2321-	726	-0	71,572	0.432	30.9
N-2321-	727	-0	71,572	0.432	30.9
N-2321-	728	-0	71,572	0.432	30.9
N-2321-	729	-0	71,572	0.432	30.9
N-2321-	730	-0	71,572	0.432	30.9
N-2321-	731	-0	71,572	0.432	30.9
N-2321-	732	-0	71,572	0.432	30.9
N-2321-	733	-0	71,572	0.432	30.9
N-2321-	734	-0	71,572	0.432	30.9
N-2321-	735	-0	71,572	0.432	30.9
N-2321-	736	-0	71,572	0.432	30.9
N-2321-	737	-0	71,572	0.432	30.9
N-2321-	738	-0	71,572	0.432	30.9
N-2321-	739	-0	71,572	0.432	30.9
N-2321-	740	-0	71,572	0.432	30.9
N-2321-	741	-0	71,572	0.432	30.9
N-2321-	742	-0	71,572	0.432	30.9
N-2321-	743	-0	71,572	0.432	30.9
N-2321-	744	-0	71,572	0.432	30.9
N-2321-	745	-0	71,572	0.432	30.9
N-2321-	746	-0	71,572	0.432	30.9
N-2321-	747	-0	71,572	0.432	30.9
N-2321-	748	-0	71,572	0.432	30.9
N-2321-	749	-0	71,572	0.432	30.9
N-2321-	750	-0	71,572	0.432	30.9
N-2321-	751	-0	71,572	0.432	30.9
N-2321-	752	-0	101,580	0.432	43.9
N-2321-	753	-0	101,580	0.432	43.9
N-2321-	754	-0	101,580	0.432	43.9
N-2321-	755	-0	101,580	0.432	43.9
N-2321-	756	-0	101,580	0.432	43.9
N-2321-	757	-0	101,580	0.432	43.9
N-2321-	758	-0	101,580	0.432	43.9
N-2321-	759	-0	101,580	0.432	43.9
N-2321-	760	-0	101,580	0.432	43.9
N-2321-	761	-0	101,580	0.432	43.9
N-2321-	762	-0	101,580	0.432	43.9

Permit Number			Throughput (Gallons/day)	Emission Factor lb-VOC/1000 gal	Daily Emissions (lb-VOC/day)
N-2321-	763	-0	101,580	0.432	43.9
N-2321-	764	-0	101,580	0.432	43.9
N-2321-	765	-0	101,580	0.432	43.9
N-2321-	766	-0	101,580	0.432	43.9
N-2321-	767	-0	101,580	0.432	43.9
N-2321-	768	-0	101,580	0.432	43.9
N-2321-	769	-0	101,580	0.432	43.9
N-2321-	770	-0	101,580	0.432	43.9
N-2321-	771	-0	101,580	0.432	43.9
N-2321-	772	-0	101,580	0.432	43.9
N-2321-	773	-0	101,580	0.432	43.9
N-2321-	774	-0	101,580	0.432	43.9
N-2321-	775	-0	101,580	0.432	43.9
N-2321-	776	-0	101,580	0.432	43.9
N-2321-	777	-0	101,580	0.432	43.9
N-2321-	778	-0	101,580	0.432	43.9
N-2321-	779	-0	101,580	0.432	43.9
N-2321-	780	-0	101,580	0.432	43.9
N-2321-	781	-0	101,580	0.432	43.9
N-2321-	782	-0	101,580	0.432	43.9
N-2321-	783	-0	101,580	0.432	43.9
N-2321-	784	-0	101,580	0.432	43.9
N-2321-	785	-0	101,580	0.432	43.9
N-2321-	786	-0	101,580	0.432	43.9
N-2321-	787	-0	101,580	0.432	43.9
N-2321-	788	-0	101,580	0.432	43.9
N-2321-	789	-0	101,580	0.432	43.9
N-2321-	790	-0	101,580	0.432	43.9
N-2321-	791	-0	101,580	0.432	43.9
N-2321-	792	-0	101,580	0.432	43.9

Appendix I

BACT Guideline and Top-Down Analysis for Wine Fermentation Tanks

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 5.4.14*

Last Update: 10/6/2009

Wine Fermentation Tank

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Temperature-Controlled Open Top Tank with Maximum Average Fermentation Temperature of 95 deg F	1. Capture of VOCs and Thermal Oxidation or Equivalent (88% control) 2. Capture of VOCs and Carbon Adsorption or Equivalent (86% control) 3. Capture of VOCs and Absorption or Equivalent (81% control) 4. Capture of VOCs and Condensation or Equivalent (81% control)	

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is requried for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source - Permit Specific BACT Determinations on Next Page(s)**

Top-Down BACT Analysis for VOC Emissions from Wine Fermentation Tanks

Step 1 - Identify All Possible Control Technologies

The SJVUAPCD BACT Clearinghouse Guideline 5.4.14 identifies achieved-in-practice BACT for wine fermentation as 'Temperature-controlled open top tank with maximum average fermentation temperature of 95 deg. F'.

The following technologically feasible controls are identified in the BACT Guideline:

1. Capture of VOCs and Thermal Oxidation or Equivalent
2. Capture of VOCs and carbon adsorption or equivalent
3. Capture of VOCs and absorption or equivalent
4. Capture of VOCs and condensation or equivalent

There are no controls identified under the Alternate Basic Equipment category.

Step 2 - Eliminate Technologically Infeasible Options

All of the options listed above are considered to be technologically feasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

The options enumerated above can be ranked as follows:

Rank by Control Effectiveness			
Rank	Option	Control	Overall Capture & Control Efficiency(*)
1	1	Capture of VOCs and thermal oxidation	88 %(**)
2	2	Capture of VOCs and carbon adsorption	86 %
3	3	Capture of VOCs and absorption.	81 %
4	4	Capture of VOCs and condensation	81 %
5	Achieved in practice BACT		-

(*) Capture efficiency (90%) x removal efficiency for control device
(**) Following recent District practice, thermal and catalytic oxidation will be ranked together.

Step 4 - Cost Effectiveness Analysis

General Aproach for Cost Effectiveness Analysis

Due to differences in processing temperature, red wine has an emissions factor of 6.2-lb VOC/1,000 gallons whereas white wine has an emissions factor of 2.5-lb/1000 gallons of fermented wine. In addition, red wine fermentation batches are completed in 3 to 5 days versus 10 to 14 days for white wine fermentation. Therefore, a red wine fermentation tank of a given size will potentially operate at significantly higher throughput and produce significantly higher emissions per unit of throughput relative to a white wine fermentation tank of the same size. As a result of these differences in emission rates, the cost effectiveness for controlling emissions from red wine will be fundamentally better than that for white wine and thus the cost effectiveness analysis will be first performed for red wine only. In the event a technology is shown to be cost effective for red wine, that particular technology will be analyzed for white wine fermentation as well.

The following emission control technologies have been determined to be technologically feasible for control of VOC emissions from wine fermentation tanks:

- Thermal Oxidation (88% control)
- Carbon Adsorption (86% control)
- Refrigerated Condenser (81% control)
- Wet Scrubber (81% control)

Recognizing that "thermal oxidation" includes both recuperative and regenerative thermal oxidizers, the cost effectiveness of the following cases will be examined:

Case 1	Thermal oxidation with 0% heat recovery (low capital/high operating cost)
Case 2	Regenerative thermal oxidation with 95% heat recovery (high capital/low operating cost)
Case 3	Refrigerated Condensers
Case 4	Water scrubber
Case 5	Carbon adsorption

To establish a comparative physical scope of each of the above cases, the District took an industry-wide approach based of applying the five different control technology cases to red wine fermentation tanks located at the E & J Gallo Winery at Livingston, California. The rationale for this is based on the following:

- The Gallo facility at Livingston is sufficiently representative of typical red wine fermentation facilities located at major source wineries to allow it to serve as a general model for the physical scope requirements of such facilities including the O'Neill facility.
- The Gallo facility is currently the largest winery in the world, with average fermentation tank sizes larger than those used by smaller wineries. Any control technology found to not be cost effective for the Gallo facility can be assumed to be not cost effective to smaller

facilities due to economies of scale. If any technology is determined to be cost effective at Gallo, it will then be analyzed for other smaller facilities on a case-by-case basis to confirm cost effectiveness for the smaller operation.

- The Gallo facility was used as a basis for engineering and cost effectiveness studies in development of District Rule 4694 and substantial scope and cost information is available for this facility pertaining to the scope of control system requirements and that of the ancillary systems required to support the basic emission control units (such as ductwork and supports and the CIP systems for the ductwork). The Eichleay study details the potential application of VOC controls to this facility and addresses many of the technical issues and the general site specific factors for wineries. This study developed two separate estimates, one for the fermentation control system installation ("Base Estimate") and a second "Utilities Estimate" to cover the clean-in-place system, the expansion of the plant electric utility and the instrument air system. District staff has reviewed the estimating methodology employed in the Eichleay estimates and found that the estimating approach is fundamentally sound and follows accepted practice in the engineering and construction industry, applying reasonable unit rates and costs for materials and labor for development of direct costs. This information is available to use as a basis for this cost effectiveness analysis. The Eichleay Base and Utilities Estimates are attached as BACT Attachment A.

Estimating Basis

Estimates of Total Capital Investment (TCI), annual costs, potential emission reductions, and the resulting cost effectiveness have been prepared for each of the control technology cases above utilizing selected portions of the Direct Costs developed by the Eichleay study. The general approach and basis of the estimates is as follows:

1. Except for specific substitutions or modifications as listed below, EPA's cost template for VOC incineration systems, as presented in the EPA Control Cost Manual, Section 3.2, Tables 2.8 and 2.9, was used. Typical site specific factors and other required direct costs not covered by the template have been extracted from the Eichleay study and inserted in the template to cover all the scope elements required for installation of controls on fermentation tanks. To ensure that all estimate cases are comparative, the EPA cost template (with EPA cost factors) was used to develop the direct cost of installing the purchased control device for all estimate cases. The control device is taken to include the upstream separator vessel which is used to separate any entrained liquids from the fermentation tank vent stream before it enters the control device.
2. All estimates are based on the general facilities design prepared by Eichleay for the Gallo winery at Livingston, CA. Using this basis, the impact of substituting different control technologies will be examined. It is assumed that the basic scope of ductwork and supports, tank modifications, ancillary systems and site specific costs will be common to all technologies.
3. The Gallo facility consists of 60 red wine fermentation tanks with a combined nominal capacity of 6,850,000 gallons. In the general facilities design as prepared by Eichleay the tanks are grouped into four separate groups of tanks, each group separately manifolded together and ducted to a separate dedicated control device. The tank groupings are designated as follows:

VOC-1 Seventeen (17) 100,000 gallon tanks

VOC-2 Twelve (12) 200,000 gallon tanks

VOC-3 Ten (10) 100,000 gallon tanks and seven (7) 50,000 gallon tanks

VOC-4 Fourteen (14) 100,000 gallon tanks

4. Control device capacity (per the Eichleay study) is based on a peak vapor rate of 9.75 scfm/1000 gallons of wine fermenting at an 85 ^{0}F fermentation temperature. Since the Eichleay study was based solely on using a thermal incinerator as the control device, an additional 23.6 % flow capacity is included in the control device capacity to account for the combustion air which must be added since the vent stream from the tank contains only CO2, water and ethanol. Other non-combustion control technologies do no require additional air and may thus be rated at a lower flow capacity. On this basis, the four control devices have been determined to require the following capacities:

Red Fermentation Capture and Control Systems Proposed for Gallo-Livingston Per Eichleay Engineering Study

VOC Device Number	No. of Tanks	Fermentation Tank Capacity (gallons)	Total Capacity of Red Fermentation Tanks (gallons)	Combustion Control Device Flow Capacity per the Eichleay Study (SCFM)	Non-Combustion Control Device Flow Capacity (SCFM)
VOC-1	17	100,000	1,700,000	16,000	12,900
VOC-2	12	200,000	2,400,000	22,000	17,800
VOC-3	10	100,000	1,350,000	13,000	10,500
	7	50,000			
VOC-4	14	100,000	1,400,000	13,000	10,500
Total	60		6,850,000	64,000	51,700

5. Capacities and costs for control devices for each case were developed based on the capacities of the four VOC systems listed above. Sources for pricing of control devices were as follows:

Recuperative Thermal Oxidizers: EPA Cost Control Manual, Section 3.2, Chapter 2, Equation 2.29

Regenerative Thermal Oxidizers: Vendor quotations obtained by Eichleay Engineering

Carbon Adsorption System: Technical Assessment Document, p.17

Water Scrubbers: STI Study[1], Table 5

BACT Attachment B presents the developed capacities and estimated purchase prices for the control devices for each estimate case..

6. Purchased equipment costs for the knock out vessels (common to all estimate cases) have been extracted from the main Eichleay estimate. A purchased material cost of $148,000 for the knock out vessels was taken from page 15 of Eichleay's main estimate. Sizing criteria is presented in the Eichleay study and the pricing was developed based on Eichleay's in-house estimating data for this type of equipment derived from purchasing experience on previous projects.
7. Direct costs taken from the Eichleay study will be used for estimation of site specific and other costs not covered by the equipment factors in the EPA VOC incineration cost template. These costs include site preparation, ductwork, structural steel pipeway and associated foundations for ductwork support, clean-in-place (CIP) system, expansion of the plant electric utility, modification of fermentation tanks for duct connections, and the instrumentation system for control of tank foam over.
8. Site preparation costs to develop a plot area for the VOC control equipment have been extracted from page 4 of the main Eichleay estimate which the District considers to be typical of the requirements which would be encountered at most existing major wineries. Most wineries are constructed with the tanks located in tight groups with minimal spacing between the tanks, requiring that control devices be installed on the perimeter of the winery, typically undeveloped agricultural land. Extracted costs from the Eichleay include subcontract pricing for demolition of an existing road, installation and compaction of fill, and new pavement to develop a plot space sufficient to install four new control devices with upstream separators and associated piping and ducting. These costs total $1,254,000 and are based on budgetary subcontract pricing obtained by Eichleay.
9. The total direct cost for ductwork was extracted from the Eichleay study. A material cost of $1,104,800 and an installation labor cost of $940,500 for the ductwork has been extracted from pages 16 through 23 of the main Eichleay estimate. California sales tax of 8% and freight charges of 3% were added to the materials cost to arrive at a direct cost of $2,167,000 for the ductwork. Estimated ductwork quantities are based on Eichleay plan drawings and process flow diagrams. Unit costs for fabricated stainless steel ductwork were based on a budgetary quotation obtained by Eichleay from Viron International, a ductwork spool fabricator.
10. A material cost of $1,779,600 and an installation labor cost of $752,000 for structural steel to support the new ductwork system and associated piping has been extracted from the totals presented on page 8 of the Eichleay base estimate. California sales tax of 8% and freight charges of 3% were added to the materials cost to arrive at a direct cost of $2,727,000 for the structural steel. Steel design and quantities in this estimate are based on Eichleay plan drawings. Fabricated steel pricing was based on a quotation obtained by Eichleay from a structural steel fabricator in Bakersfield, CA.

[1] Sonoma Technology, Inc., Control Technology Evaluation: Wineries - Fermentation Processes, Control Measures Assessment STI-903340-2429a-CMA, October 21, 2003.

11. Costs for heavy lift equipment including heavy cranes and use of a helicopter operation to set steel structures and ductwork was taken from page 24 of the main Eichleay estimate. Pricing was obtained by Eichleay from a helicopter firm based out of the Fresno Airport.

12. The Eichleay utility estimate developed a total direct cost of $5,859,000 for both the CIP system and the expansion of the plant electric utility. Eichleay drawing SK-30892-004 provides a piping and instrumentation diagram for the CIP chemicals storage and supply system. Drawing SK-30892-006 illustrates the CIP spray header installation in the ductwork. Expansion of the electric utility included new 12 kV switchgear and 1500 kVA transformer to supply power from the existing switchyard to the project (see Eichleay drawings 30892-SK-E01 and E02). A direct allocated cost of $314,000 for the electric utility expansion was extracted from page 8 of the utilities estimate. Total Direct Cost for this item is taken as 391,000 after pro-rating the Contractor's Fee and other unallocated construction expense from the estimate. The balance of the Total Direct Cost (labeled "Field Cost" in the estimate summary sheet) is the direct cost of $5,468,000 for the CIP system (this figure includes a small amount for expansion of the plant instrument air system also).

13. The direct costs (materials, labor, and subcontracts) to modify the fermentation tanks for installation of new nozzles required for connection of ductwork includes costs for build and teardown of scaffolding in each tank, demolition of existing insulation, machine cutting of each tank, fabrication and installation of new nozzles, and post-weld passivation of the tank. These costs are taken from pages 15 and 16 of the main estimate and total $487,000.

14. The direct cost for an instrumentation system for control of tank foam over was taken from page 13 of the main Eichleay estimate. The materials cost of $514,800 for capacitance probes, actuated butterfly valves and switches to be installed on each tank was adjusted to include California sales tax and a 3% freight cost. Installation labor of $57,600 from page 13 was added to yield a total direct cost for this item of $629,000. Design basis for the system is presented in the Eichleay drawings. Unit material costs are based on budgetary vendor's pricing obtained by Eichleay. Unit labor factors and costs are based on Eichleay's in-house estimating data.

15. The EPA model cost factor for foundations and supports is 8% of purchased equipment cost which in this case is applicable to only the control device and the knock out vessel. It thus does not factor in the costs of foundations for the substantial steel structures required for this project. Therefore, this cost was extracted from the Eichleay study and added as a direct cost in the estimate. Foundation design for the pipeway consists of drilled concrete piers for support of pipeway structures which require a minimal footprint relative to conventional footers and for this reason are the standard approach for support under new steel columns when they are being installed in congested areas in existing industrial facilities. Direct costs (material + labor + subcontract) for concrete pier foundations have been extracted from page 5 of the estimate ($247,000) which covers drilling, rebar fabrication and setting, forming, pouring and finishing of the drilled piers. Estimated quantities are based on Eichleay plan drawing SK-30913-001 and the steel structure sections presented in Eichleay drawing SK-S12. The unit costs were based on Eichleay's historical experience with subcontract pricing for these items.

16. Construction Expense and Contractor's Fee have been included in the direct costs at 8% and 10 percent of all other direct costs respectively. These percentages reflect those used

in the Eichleay study and are typical based on District Staff's experience. For comparison, Peters & Timmerhaus[2] recommend 10% and 7% for the items respectively.

17. Annual natural gas usage of 67,412 therms was estimated for the Gallo Livingston design by Eichleay (Appendix G of the Eichleay study) based on a 12 week season and 95% thermally efficient RTO's operating 50% of the time with an ethanol concentration of 6,034 ppm for 50% of the time and in hot standby the other 50% with allowance for startups. This natural gas usage will be used as the basis for the cost effectiveness calculations, factored as required for the thermal efficiency basis of the proposed control unit.
18. Long term natural gas price is assumed to be $8.00 per MMBtu
19. Power consumption for the Gallo facility is estimated by Eichleay at 586 kW (Appendix G of the Eichleay study). Since essentially all this power is consumed by the induced draft fans at the VOC control unit, this power basis will be assumed to be the same for the induced draft fans associated with all control technologies, factored down as required for control units not requiring combustion air.
20. Power consumption will be based on a 120 day crush season and a power cost of $0.11/kWh.
21. BACT Attachment C presents a tabulation of the utilities and other annual costs for each estimate case as well as the details of the basis and calculations.
22. Escalation has been applied at a rate of 3% per year where applicable.
23. Engineering cost and construction management costs have been included at 15% and 3% of the Total Direct Cost based on the percentages applied in the Eichleay Study. These percentages reflect those used in the Eichleay study and are typical based on District Staff's experience. A value of 15% for engineering is generally less than that recommended by Peters & Timmerhaus[3] who indicate engineering costs typically are in the range of 4-21% of Total Capital Investment with a median value of 13%.
24. Calculated VOC emission reductions will be debited for collateral NOx and VOC production from firing of natural gas where applicable based on 1 lb NOX = 1 lb VOC. For natural gas, emissions are based on 0.1 lb-NOx/MMBtu and 0.0055 lb-VOC/MMBtu per AP-42. Calculated emissions from natural gas firing are presented in the following table:

Natural Gas Combustion Emissions

Item	Case 1 Thermal Ox	Case 2 RTO	Case 3 Refrigerated Condenser	Case 4 Water Scrubber	Case 5 Carbon Adsorption
Natural Gas Combustion MMBtu/year	134,820	6,741	0	0	0

[2] Peters,Max and Klaus Timmerhaus, Plant Design and Economics for Chemical Engineers, McGraw-Hill, New York, 1968, p. 115.
[3] Peters,Max and Klaus Timmerhaus, Plant Design and Economics for Chemical Engineers, McGraw-Hill, New York, 1968, p. 115.

Natural Gas Combustion Emissions					
Item	**Case 1 Thermal Ox**	**Case 2 RTO**	**Case 3 Refrigerated Condenser**	**Case 4 Water Scrubber**	**Case 5 Carbon Adsorption**
Annual NOx Emissions From Natural Gas tons-NOx/year	6.7	0.34	0	0	0
Annual VOC Emissions From Natural Gas tons-VOC/year	0.4	0.02	0	0	0
Total NOx + VOC from Natural Gas tons per year	**7.1**	**0.4**	**0**	**0**	**0**

25. Contingency has been included at 10% of the sum of Total Direct Cost and Total Indirect Cost. This value is given as typically 8-20% with an average of 10% by Peters and Timmerhaus[4]

26. Operating labor requirement was estimated one full time operator for all four VOC control systems with 3 shifts per day for the duration of the 120 day crush operation.

27. Maintenance labor requirement was estimated at 80 hours per week for all four control systems during a total of 20 weeks per year.

28. Operating and maintenance labor cost was included at $19.50/hour and $33.00 for year 2005 respectively per the Eichleay study and escalated at 4% to 2009.

29. Maintenance materials have been estimated at 3% of TCI. (Peters and Timmerhaus give a typical value of 6% for general process industries).

30. Total Capital Investment has been annualized based on a 10 year equipment life and a 10% opportunity cost for capital (CRF = 0.163).

31. Calculation of potential emissions from fermentation is based upon the red wine emission factor of 6.2 lb-ethanol per 1000 gallons of red wine and upon the maximum potential wine production capacity for the fermentation tanks. Maximum annual throughput capacity is calculated as follows:

    Red crush season duration of 120 days

    Five day batch processing period for red wine fermentation; maximum number of batches per season = 120 days/season ÷ 5 days/ batch = 24 batches per season

    Total red wine fermenter volume in this estimate = 6,850,000 gallons

    Maximum fill for red wine fermenter (due to foaming/expansion) = 80%

[4] Peters, Max and Klaus D. Timmerhaus, Plant Design and Economics for Chemical Engineers, McGraw-Hill, New York, 1968, p.116.

Maximum wine production capacity = working capacity of fermenters x # batches per season = 6,850,000 x 80% x 24 = 131,520,000 gallons per year

VOC Emissions = 131,520,000 gallons/year x 6.2 lb-VOC/1000 gallons

= 815,400 lb-VOC/year = **407.7 tons-VOC/year**

Cost Effectiveness Estimates

Table 1 presents the development of Total Capital Investment (TCI) for all capture and control cases based on the general facilities design prepared by Eichleay (including site specific costs and CIP) and Table 2 presents the associated annual costs, emission reductions, and cost effectiveness for each capture and control case.

Table 1
Total Capital Investment for VOC Control of Red Wine Fermentation

	Case 1 Thermal Ox	Case 2 RTO	Case 3 Refrigerated Condenser	Case 4 Water Scrub	Case 5 Carbon Adsorption
Direct Costs					
Purchased Equipment Costs					
Control Device	$745,000	$1,854,000	$3,003,000	$396,000	$1,667,000
Knock Out Vessels	$148,000	$148,000	$148,000	$148,000	$148,000
Subtotal Equipment (A)	$893,000	$2,002,000	$3,151,000	$544,000	$1,815,000
Instrumentation (0.10 x A)	$89,000	$200,000	$315,000	$54,000	$182,000
Sales Tax (0.08 x A)	$71,000	$160,000	$252,000	$44,000	$145,000
Freight (0.05 x A)	$45,000	$100,000	$158,000	$27,000	$91,000
Purchased Equipment Cost (PEC)	$1,098,000	$2,462,000	$3,876,000	$669,000	$2,233,000
Direct Installation Costs for Purchased Equipment					
Foundations and Supports	$88,000	$197,000	$310,000	$54,000	$179,000
Handling & Erection	$154,000	$345,000	$543,000	$94,000	$313,000
Electrical	$44,000	$98,000	$155,000	$27,000	$89,000
Piping	$22,000	$49,000	$78,000	$13,000	$45,000
Direct Costs Not Included Above					
Structural Steel Pipeway	$2,727,000	$2,727,000	$2,727,000	$2,727,000	$2,727,000
Ductwork	$2,167,000	$2,167,000	$2,167,000	$971,000	$971,000
Pipeway Foundations	$247,000	$247,000	$247,000	$247,000	$247,000
Site Prep	$1,254,000	$1,254,000	$1,254,000	$1,254,000	$1,254,000
CIP System	$5,468,000	$5,468,000	$5,468,000	$5,468,000	$5,468,000
Electrical Utility	$391,000	$391,000	$391,000	$391,000	$391,000
Tank Modifications	$487,000	$487,000	$487,000	$487,000	$487,000
Foam Over Control System	$629,000	$629,000	$629,000	$629,000	$629,000
Heavy Lift Equipment	$1,192,000	$1,192,000	$1,192,000	$1,192,000	$1,192,000
Subtotal	$15,968,000	$17,713,000	$19,524,000	$14,223,000	$16,225,000
Construction Expense	$1,277,000	$1,417,040	$1,561,920	$1,137,840	$1,298,000
Contractor's Fee	$1,597,000	$1,771,300	$1,952,400	$1,422,300	$1,622,500
Total Direct Costs	$18,842,000	$20,901,340	$23,038,320	$16,783,140	$19,145,500
Indirect Costs					
Engineering	$2,826,000	$3,135,000	$3,456,000	$2,517,000	$2,872,000
Construction Management Expense	$565,000	$627,000	$691,000	$503,000	$574,000
Start Up	$22,000	$49,000	$78,000	$13,000	$45,000
Performance Test	$11,000	$25,000	$39,000	$7,000	$22,000
Contingencies	$2,227,000	$2,474,000	$2,730,000	$1,982,000	$2,266,000
Total Indirect Costs	$5,651,000	$6,310,000	$6,994,000	$5,022,000	$5,779,000
Total Capital Investment	**$21,619,000**	**$24,023,000**	**$26,518,000**	**$19,245,000**	**$22,004,000**

EPA Cost Model

Table 2
Annual Costs for VOC Control of Red Wine Fermentation

Control Device	Case 1 Thermal Ox	Case 2 RTO	Case 3 Refrigerated Cond.	Case 4 Water Scrubber	Case 5 Carbon Adsorption
Total Capital Investment	$21,619,000	$24,023,000	$26,518,000	$19,245,000	$22,004,000
Direct Annual Costs					
Labor & Materials					
Operating Labor (.5 hr/shift-unit @ $22.81/hour)	$65,700	$65,700	$65,700	$65,700	$65,700
Supervisor (15% of operator cost)	$9,900	$9,900	$9,900	$9,900	$9,900
Operating Materials (15% of total maintenance cost)	$104,700	$112,500	$123,700	$91,000	$103,400
Maintenance Labor (0.5 hr/shift-unit@ $38.60/hour)	$49,400	$29,200	$29,200	$29,200	$29,200
Maintenance Materials (3% of TCI)	$648,600	$720,700	$795,500	$577,400	$660,100
Utilities	$1,263,600	$239,500	$399,600	$2,194,400	$407,200
Total Direct Annual Cost	**$2,141,900**	**$1,177,500**	**$1,423,600**	**$2,967,600**	**$1,275,500**
Indirect Annual Costs					
Overhead (60% of labor & Mat'ls)	$527,000	$562,800	$614,400	$463,900	$521,000
Administrative Charges (2% of TCI)	$432,400	$480,500	$530,400	$384,900	$440,100
Property Taxes (2% TCI)	$432,400	$480,500	$530,400	$384,900	$440,100
Insurance (1% TCI)	$216,200	$240,200	$265,200	$192,500	$220,000
Capital Recovery (CRF = 0.163)	$3,523,900	$3,915,700	$4,322,400	$3,136,900	$3,586,700
Total Indirect Annual Cost	**$5,131,900**	**$5,679,700**	**$6,262,800**	**$4,563,100**	**$5,207,900**
Total Annualized Cost	**$7,273,800**	**$6,857,200**	**$7,686,400**	**$7,530,700**	**$6,483,400**
Emission Reductions					
Uncontrolled Emissions tpy	407.70	407.70	407.70	407.70	407.70
Collection & Control Efficiency	88%	88%	81%	81%	86%
Annual Emission Reduction tpy	358.78	358.78	330.24	330.24	350.62
Natural Gas Emissions tpy	7.11	0.36	0.00	0.00	0.00
Net Emission Reduction tpy	351.67	358.42	330.24	330.24	350.62
Cost Effectiveness $/ton	**$20,700**	**$19,100**	**$23,300**	**$22,800**	**$18,500**

Step 5 – Select BACT

The lowest evaluated cost effectiveness of $18,500 per ton exceeds the District's cost effectiveness threshold of $17,500 per ton for VOC. Therefore, none of the technologically feasible controls is cost effective, and BACT is satisfied wth the achieved in practice option: Temperature-controlled open top tank with maximum average fermentation temperature of 95 deg. F.

Attachments:

BACT Attachment A:	Eichleay Estimates for Fermentation Controls at Gallo Livingston
BACT Attachment B:	Sizing and Purchase Costs for Control Devices
BACT Attachment C:	Utilities and other Annual Costs