UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
AIR QUALITY

Fact Sheet: Amendments to R307-328: Dripless Nozzles and Low Permeation Dispensing Hoses

Overview:
The Utah Division of Air Quality (UDAQ) is considering amendments to existing administrative rule R307-328 to further reduce volatile organic compound (VOC) emissions from gasoline dispensing stations. The proposed amendments are part of the state's efforts to reduce summertime pollution and comply with federal Clean Air Act[1] requirements as part of the Northern Wasatch Front ozone State Implementation Plan. This rule would apply to each gas dispensing station operating in counties located in and around the nonattainment area (NAA) including Salt Lake, Davis, Weber, Utah, and Tooele counties.

Exemptions:
The proposed amendments do not apply to gasoline dispensing equipment used on private agricultural lands with the sole use for agricultural operations.

Equipment:
The proposed amendments would require the installation of low permeation hoses[2] and dripless dispensing nozzles[3] at each gasoline dispensing pump located in the five applicable counties. The average lifespan of this equipment has been reported to be at least three years.
The proposed low emission technology results in a control efficiency of 92.9% representing a substantial reduction in ozone forming emissions.

Compliance Schedule:
Consistent with statutory compliance timelines as required by the Clean Air Act, the low emission equipment associated with the proposed amendments would be required to be installed by May 1, 2026.[4]

Emission Reductions:
The UDAQ has identified 581 businesses operating approximately 6,863 gasoline dispensing pumps in the applicable counties. As each gasoline dispensing pump typically houses two dispensing nozzles and corresponding hoses, the UDAQ estimates that there are 13,726 gasoline dispensing nozzles and associated hoses operating in the same area.

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[1] 42 U.S. Code § 7401
[2] https://vsthose.com/wp-content/uploads/2019/07/136_Low-Perm-Hose_031819.pdf. *Does not represent an endorsement of any particular brand or product, but serves as an example of compliant equipment currently available on the market.
[3] https://vsthose.com/wp-content/uploads/2019/07/128_ENVIRO-LOC-Nozzles_030119.pdf. *Does not represent an endorsement of any particular brand or product, but serves as an example of compliant equipment currently available on the market.
[4] 42 U.S. Code § 7511a

- Low Permeable Hoses: Reduction of 35.96 tons per year (tpy) VOC emissions.
- Dripless Nozzles: Reduction of 179.0 tpy VOC emissions.
- Total: **214.96 tpy**, or **0.59 tons per day**, of VOC emissions reductions is anticipated with the addition of the proposed amendments.

Capital Costs:
The UDAQ has identified the following capital costs associated with the proposed amendments as determined by the incremental costs difference of the proposed low emission equipment relative to standard nozzles and hoses:

- Incremental costs of low permeation hoses: $183 per eight feet of hose.
    - Total incremental cost of all hoses: $2,511,858.
- Incremental costs of dripless nozzles: $290 per certified nozzle.
    - Total incremental cost of nozzles: $3,980,540.
- Total incremental capital cost: **$6,492,398**.

Lifetime Cost Savings (3 years):
The UDAQ has identified a lifetime cost savings over the anticipated three-year lifetime of the dripless nozzles and low permeable hoses resulting from the reduction of lost gasoline products for consumers.

- Low Permeable Hoses: $103,737 lifetime savings[5] for consumers.
- Dripless Nozzles: $515,745 lifetime savings for consumers.
- Total lifetime savings to consumers: **$619,482**.

Secondary Benefits:

- Significant reduction in spilled and lost product from gas dispensing nozzles saving consumers money post purchase of gasoline.
- Reduced loss of gasoline products through evaporative losses through low permeation hoses saving consumers money.
- Cost savings to gas dispensing stations due to reported longer lifespan of dripless nozzles.

[5] All savings calculations assumed $3.00 per gallon of gasoline.