SUBJECT: Alternative leak detection technology for air contaminants

COMMITTEE: Environmental Regulation — committee substitute recommended

VOTE: 6 ayes — Bonnen, Hancock, Lucio, King, Kuempel, West

0 nays

1 absent — Driver

WITNESSES: For — Christina Wisdom, Texas Chemical Council (*Registered, but did not testify:* Lisa Anderson, Shell Oil; Darrin Hall, City of Houston - Office of Mayor Bill White; Debbie Hastings, Texas Oil and Gas Association; Steve Hazlewood, Dow Chemical; Mike Meroney, The Huntsman Corporation; Mary Miksa, Texas Association of Business; Steve Perry, Chevron USA; Shannon Ratliff, CITGO; Shayne Woodard, Sunoco Chemicals)

Against — Beth O'Brien, Public Citizen/Galveston-Houston Association for Smog Prevention

On — Jennifer Sidnell, Texas Commission on Environmental Quality

BACKGROUND: Certain facilities, such as chemical plants and petroleum refineries, emit hazardous air pollutants and also may exhibit leakages of volatile organic compounds (VOCs), known as fugitive emissions. Federal and state monitoring programs to detect such emissions are based on Method 21, as outlined by the U.S. Environmental Protection Agency (EPA). This leak detection and repair (LDAR) practice employs an organic vapor analyzer to quantify and typify emissions.

Facilities regulated by the Texas Commission on Environmental Quality (TCEQ) must follow this systematic LDAR program. As the commission's rules stipulate, facilities must inspect all flanges, valves, gaskets, and open ended lines using Method 21. Thereafter, identifiable leaks and emissions must be repaired.

DIGEST: HB 1526 would require TCEQ to establish a program allowing facility owners and operators voluntarily to use alternative leak detection

technology that has been incorporated and adopted by the EPA. The program would have to provide regulatory incentives to encourage the voluntary use of alternative leak detection technology capable of detecting leaks or emissions that may not be detected by methods or technology under TCEQ's current program for leak detection and repair. The incentives could include:

- on-site technical assistance;
- inclusion of the use of alternative leak detection technology in the facility's compliance history and summaries;
- consideration of alternative leak detection technology implementation in scheduling and conducting compliance inspections; and
- credits or offsets to the facility's emission reduction requirements based on reductions achieved through voluntary use of alternative leak detecting technology.

Facilities using alternative leak detection technology would have to repair and record air contaminant emissions or leaks from components subject to TCEQ's regulatory program for leak detection and repair. The correction of an emission or leak detected by the use of this technology could be confirmed using the same technology. As part of this incentives program, TCEQ would:

- ensure that facilities recorded and repaired any air contaminant leaks or emissions detected by voluntary use of alternative leak detection technology;
- establish a reasonable timeframe for the device's repair causing the leak or emission, with consideration for the size and complexity of the required repair;
- make devices that were not repairable within an established timeframe subject to TCEQ's reporting requirements; and
- make devices that were repairable within an established timeframe exempt from TCEQ's reporting requirements

Enforcement action against a facility would not be made if a leak or emission were detected with alternative technology and would not have been detected under TCEQ's regulatory program for leak detection and repair.

The program would be considered an innovative program, under section 5.752 (2) of the Water Code. Under this designation, the program would be administered by the coordinator of TCEQ's innovative programs. This coordinator would:

- administer, market, and evaluate the program;
- provide information and technical assistance to program participants or those interested in becoming program assistants; and
- work with the pollution prevention advisory committee to assist TCEQ in integrating the program into the commission's operations.

The bill would take immediate effect if finally passed by a two-thirds record vote of the membership of each house. Otherwise, it would take effect September 1, 2007.

SUPPORTERS SAY:

CSHB 1526 would encourage the use of optical gas imaging by establishing incentives for its use. It also would require TCEQ to exempt emissions discovered using optical gas imaging from enforcement. New reporting requirements and repair timeframes are designed to further encourage facility owners and operators to use optical gas imaging. The bill also would encourage the use of the new technology by creating an "innovative program." Such programs are designed to encourage the private sector to use an approach not required by law.

The current law discourages facilities from using this valuable new technology. This is because optical gas imaging is capable of detecting more leaks than Method 21, resulting in the imposition of more fines and enforcement action by TCEQ. As such, a facility may be penalized for violations it would not have discovered without the use of optical gas imaging. Also, the technology is costly, averaging $75,000 per camera.

In the process of inspecting facility components for leaks and emissions, Method 21 often is time-intensive and expensive. New technology, such as optical leak imaging, would eliminate the need manually to measure all potential leak sites as Method 21 requires. Optical leak imaging functions as a sort of "camera," enabling users to see otherwise invisible emissions and leaks. By showing the variation in temperature, this image device enables precise identification of the leak origin. This often-instantaneous visualization is essential in remediation, enabling facilities to identify leaks that otherwise would be undetected under Method 21. Optical gas

imaging represents the most innovative technology to emerge in the industry in recent decades.

As optical gas imaging remains an imperfect technology, its use currently is promoted but not required by the EPA. Under the bill, TCEQ would continue to determine the standards and process entailed in the LDAR process. The bill would not alter TCEQ's practices in requiring reports and repairs for emissions and leaks. Given that TCEQ retains its rule-making authority over LDAR, any concern that the term "alternative" would replace Method 21 is not valid.

OPPONENTS SAY:

This bill would go too far in exempting facilities for air contaminant leaks and emissions that would not have been discovered without the use of alternative leak detection technologies. The inclusion of incentives such as credits to a facility's reduction requirements are unwarranted, given that no assurance exists that the new technology reduces otherwise authorized emissions. Also, HB 1526 would not set forth provisions to ensure adequate verification of a leak or emission repair. Facility operators should be required to verify the repair using conventional leak detection methods.

Optical gas imaging should not displace the conventional leak detection processes. Unlike Method 21, optical gas imaging is not capable of determining the amount of a leaking substance nor the type of a leaking substance. This type of quantification is important in TCEQ's ability to report emissions reductions and establish permit limits. By making optical gas imaging an alternative technology as opposed to a supplemental technology, TCEQ may be limited in its ability to quantify emissions, specify emission type, and pursue enforcement action. To eliminate this concern, optical gas imaging should be used in a supplemental manner until it is capable of quantification and speciation.

NOTES:

The committee substitute:

- removed the inadvertent inclusion of "not" regarding advanced alternative leak detection technology approved by the EPA;
- allowed repairs to correct an emission or leak detected by the use of alternative leak detection technology to be confirmed using the same technology;
- established a reasonable timeframe for components that are not repairable to be reported to TCEQ; and

- removed the provision that TCEQ could not take an enforcement action for an air contaminant leak or emission if the EPA had not included the use of the alternative leak technology in its air contaminant leak or emission detections programs.