California Regional Water Quality Control Board
Santa Ana Region

STAFF REPORT

March 4, 2005

Item: 17

Subject: Issuance of a Variance to Chapter 6.7 of the California Health & Safety Code requiring regular testing of secondary containment system for fuel distribution network, Orange County Transit Authority, Santa Ana

DISCUSSION:

A site-specific variance has been requested by the Orange County Transit Authority (OCTA) to allow an alternative method of construction and monitoring to the secondary containment requirements for the aboveground portions of the fuel-piping network at the OCTA's new facility at 4301 W. MacArthur Boulevard. OCTA has incorporated many items within the piping design to reduce the potential for spillage, such as fuel control devices to minimize the volume of fuel within the piping runs, and demonstrating that the overall building design provides more than adequate containment of spilled liquids and/or fire-fighting waters.

Background:

Chapter 6.7 of the California Health & Safety Code includes requirements for underground storage tank (UST) installations. In general, these regulations address the standards for the design, installation and monitoring of UST fueling systems and require full secondary containment of tanks, piping and associated equipment, continuous monitoring of primary and secondary containment for leaks, and initial and periodic testing to demonstrate that the primary and secondary containment systems are tight. Specifically, Title 23, Division 3, Chapter 16, Article 3, Section 2637(a) of the California Code of Regulations requires testing of the secondary containment system upon installation, six months after installation, and every 36 months thereafter. Section 2637(c) of same Regulations indicates the preferred methods for secondary containment testing are either (1) per manufacturer's guidelines, (2) per industry code or engineering standard, or (3) per a test method approved by a state registered professional engineer. The Regional Board has the authority to grant site-specific variances to these requirements. Additionally, the California Fire Code Section 8003.1.3.3 requires buildings containing hazardous materials to contain a 20-minute flow of fire-fighting waters.

The OCTA fueling system includes single-walled, aboveground piping that is contained within a building. The OCTA's position is that the continued occupancy of the building, specific hardware and practices employed during fueling operations and the interior drainage design of the building will act together to minimize and contain any releases of fuel. The design of the building floor at the OCTA's facility meets the intent and requirements of Article 80 of the California Fire Code. Additionally, OCTA believes that the design and operational considerations at the facility provide adequate containment in the event of a piping leak. The underground portions of all fluid systems at the OCTA facility are equipped with secondary containment and will be tested according to existing regulations.

The City of Santa Ana Fire Department has provided written support for the variance request and has determined that the proposed alternative to double-walled secondary containment and regular testing meets the Department's expectations for satisfaction of the intent of both the Fire and Health & Safety Code provisions.

It should be noted that both U. S. EPA and California hazardous waste regulations allow buildings or vaults to serve as secondary containment.

Summary:

It is not uncommon in the State of California to utilize buildings or other structures as secondary containment for aboveground piping that can be visually inspected. Where feasible, aboveground piping is preferable due to the lack of corrosion effects and the ability to pinpoint the location of the leakage. In a 'Local Guidance' letter (LG-152) entitled "Aboveground Piping Associated with an Underground Storage Tank System", the State Water Resources Control Board indicates that, while under certain circumstances, the UST regulations apply to aboveground piping, visual monitoring can be acceptable as an means of monitoring aboveground piping, and utilizing buildings as secondary containment for aboveground piping volumes meets the intent of the secondary containment requirements of the regulations.

RECOMMENDATION:

Staff recommends the issuance of the requested variance to Orange County Transit Authority to allow for the use of visual monitoring and structural water containment in place of the required secondary containment and regular testing for the subject aboveground piping.

California Regional Water Quality Control Board
Santa Ana Region

Resolution No. R8-2005-0054

Resolution Granting a Variance to the Orange County Transit Authority (OCTA) From the Requirements for Secondary Containment and Monitoring of Fuel Piping Associated with an Underground Storage Tank System At its New Bus Maintenance and Operations Base

Whereas, the California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board) finds that:

1. OCTA has constructed a new bus maintenance and operations facility at 4301 W. MacArthur Boulevard in the City of Santa Ana. The facility includes underground storage tanks (UST) and associated fuel piping. Title 23, Division 3, Chapter 16, Underground Tank Regulations (UST Regulations) specify construction and monitoring requirements for the USTs and fuel piping systems. These regulations require the USTs and the piping to have secondary containment and leak detection systems. The USTs and the fuel piping system at the facility that are underground have secondary containment and leak detection systems. For fuel piping systems, the secondary containment may consist of a secondary pipe, vault or a lined trench.

2. Some of the fuel piping system at the OCTA facility is aboveground and is located within a building. This portion of the fuel piping system does not have a secondary pipe containment system. California's UST Regulations are applicable to both the underground and aboveground portions of the fuel piping systems. Sections 2636(e) and (f) of the UST Regulations require initial and periodic testing of the secondary containment and continuous monitoring of the system.

3. California Fire Code Section 8003.1.3.3 requires buildings containing hazardous materials to be constructed with a capacity to contain a 20-minute flow of fire-fighting water. The floor of the building where the OCTA aboveground fuel piping system is located is designed to contain a 20-minute flow of fire-fighting water. The building will also contain any fuel leaked from the aboveground piping. OCTA is proposing to use the building floor as a secondary containment and visual monitoring of the aboveground piping system in lieu of the monitoring requirements of the UST Regulations.

4. Section 2681 of the UST Regulations allows the Regional Board to consider site-specific variances from the Regulations. OCTA is requesting a site-specific variance from the UST Regulations to allow an alternative method of construction and monitoring of the aboveground fuel piping system. Section 2681 requires that the information regarding alternative construction and monitoring be first

submitted to the local agency. The local agency, the City of Santa Ana Fire Department, has reviewed this information and provided a letter in support of the variance.

5. Regional Board staff has reviewed the information provided by OCTA regarding the alternative construction and monitoring systems and has determined that the alternative systems as proposed would provide adequate environmental protection equivalent to the requirements specified in the UST Regulations.

6. The Board, in a public meeting, heard and considered all comments pertaining to OCTA's request for a site-specific variance from the UST Regulations.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. The Orange County Transit Authority is granted a site-specific variance from Title 23, Division 3, Chapter 16 of California Code of Regulations pertaining to the requirements for secondary containment and monitoring for the aboveground portions of the fuel distribution system at its new Bus Maintenance and Operations Facility located at 4301 W. MacArthur Boulevard in the City of Santa Ana.

2. The Orange County Transit Authority shall use the building floor for secondary containment of any fuel leaked from the aboveground piping system.

3. The Orange County Transit Authority shall visually inspect the aboveground fuel piping systems for leaks on a daily basis and record the findings in a permanent log.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of a resolution adopted by the California Regional Water Quality Control Board, Santa Ana Region, on March 4, 2005.

Gerard J. Thibeault
Executive Officer