

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER G-70-200-C

Relating to Site-Specific Certification of the Oldcastle Aboveground Below-Grade Fuel Vault with Balance Vapor Recovery System and Buried Vapor Return Piping

WHEREAS, the California Air Resources Board (ARB) has established, pursuant to California Health and Safety Code sections 39600, 39601 and 41954, certification procedures for systems designed for the control of gasoline vapor emissions during motor vehicle fueling operations in its **CP-205 Certification Procedure for Vapor Recovery Systems of Novel Facilities** (Certification Procedures) adopted April 12, 1996 and as last amended March 17, 1999, incorporated by reference into title 17, California Code of Regulations, section 94015;

WHEREAS, ARB has established, pursuant to California Health and Safety Code sections 39600, 39601 and 41954, test procedures for determining the compliance of vapor recovery systems with emission standards in its "Certification and Test Procedures for Vapor Recovery Systems," TP-205.1 and TP-205.2, respectively, (the Test Procedures) adopted April 12, 1996 and as amended March 17, 1999, incorporated by reference into title 17, California Code of Regulations, section 94015;

WHEREAS, Oldcastle Precast, Inc. (Oldcastle), for the locations shown in Exhibit 1, has applied for site-specific certification of its aboveground below-grade fuel vault vapor recovery system, which consists of an Oldcastle vaulted tank installation that uses ARB approved Phase I and Phase II vapor recovery components (the Oldcastle System);

WHEREAS, the Oldcastle System has been evaluated pursuant to Certification Procedure and the Certification Report documents successful performance of the system according to the performance standards, performance specifications and the Test Procedures;

WHEREAS, section 7 of the Certification Procedure provides that the Executive Officer shall issue an order of certification if he or she determines that the vapor recovery system conforms to all of the requirements set forth in sections 1 through 6 of the Certification Procedures;

WHEREAS, on July 24, 2001, in Executive Order G-01-032, ARB Executive Officer delegated to the Chief, Monitoring and Laboratory Division full authority to approve and grant Executive Orders certifying Phase I and Phase II vapor recovery systems for aboveground tank systems in accordance with CP-201 "Certification Procedure for Vapor Recovery Systems of Dispensing Facilities" and CP-205 "Certification of Vapor Recovery Systems for Novel Facilities," incorporated by reference into title 17, California Code of Regulations sections 94011 and 94015, respectively; and

WHEREAS, I, William V. Loscutoff, Chief of the Monitoring and Laboratory Division of the ARB, have determined that the Oldcastle Aboveground Below-Grade Fuel Vault vapor recovery system, when used with Phase I two-point or coaxial balance vapor recovery components and Phase II balance vapor recovery components approved by the ARB for use in certified vapor recovery systems, conforms with all the requirements set forth in Certification Procedure CP-205 and results in a vapor recovery system that is at least 95 percent effective when installed to meet the provisions of this Executive Order.

NOW, THEREFORE, IT IS ORDERED that the Oldcastle System is hereby certified to meet the applicable certification performance standards. **Compatibility of this system with the onboard refueling vapor recovery (ORVR) systems has been demonstrated based on evaluations of balance type Phase II vapor recovery systems used on aboveground below-grade fuel vault tanks. Fugitive emissions which may occur when the aboveground below-grade storage tanks are under positive pressure have not been quantified.**

NOW, THEREFORE, IT IS ORDERED that the Oldcastle System is certified for use only at the sites listed in Exhibit 1. Exhibit 2 shows sectional views of the Oldcastle FuelVault. Exhibit 3 shows a side view of the Oldcastle split FuelVault. Tank and vapor piping detail are shown in the site drawings filed at the district.

IT IS FURTHER ORDERED that the use of ARB approved Phase I two-point or coaxial balance system vapor recovery components and Phase II balance system vapor recovery components shall be a condition of the certification. ARB approved Phase I components are listed in Exhibits 1 through 3 of Executive Order G-70-97-A. ARB approved balance system Phase II components are listed in Executive Order G-70-52-AM. Other approved Phase I and Phase II components are listed in ARB's Approval Letters.

IT IS FURTHER ORDERED that the Phase I two-point or coaxial balance system components and piping configuration used to connect the cargo truck bulk delivery line and the vapor line to the storage tank fill adapter and vapor recovery adapter shall be consistent with ARB Executive Order G-70-97-A.

IT IS FURTHER ORDERED that any emergency vent installed on the tank be of a type with a seal and there shall be no indication of vapor leaks at a pressure of 2.0 inches H₂O when tested in accordance with ARB test procedures for determining a vapor leak as specified in the Board's D-200 Definitions for Vapor Recovery Procedures adopted April 12, 1996, as last amended October 8, 2003.

IT IS FURTHER ORDERED that in order to prevent spitback or condensate from blocking the vapor path between the vehicle fill pipe and the storage tank headspace, the routing of the coaxial hose shall be consistent with the configurations shown in Exhibits 5, 8, 9a, 9b, 9c, 10, 11 and 11a in ARB Executive Order G-70-52-AM. There shall be no liquid trap in the vapor path between the highest point in the vapor return path and the storage tank vapor head space unless a liquid trap and an automatic evacuation system are included in the system. A liquid removal device is required in the

vapor path between the vehicle fill pipe and the highest point in the vapor return path if the drape of the hose exceeds 10 inches below the base of the nozzle when hung on the dispenser.

IT IS FURTHER ORDERED that a P/V valve approved by ARB for use in certified vapor recovery systems shall be installed on the tank vent and that the valve have a rated pressure relief setting of 3.0 ± 0.5 inches H₂O positive pressure and 8.0 ± 2.0 inches H₂O negative pressure. The installed P/V valve shall extend to a minimum height of 12 feet above grade.

IT IS FURTHER ORDERED that the following requirements are made a condition of certification. The Oldcastle System shall demonstrate ongoing compliance with the vapor integrity requirements of TP-201.3 **“Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities”** (adopted April 12, 1996 and last amended March 17, 1999). The Oldcastle System shall demonstrate ongoing compliance with the dynamic pressure performance requirements of TP-201.4 **“Determination of Dynamic Pressure Performance of Vapor Recovery Systems of Dispensing Facilities”** (adopted April 12, 1996 and last amended July 3, 2002). The owner or operator of the installation shall conduct, and pass, the TP-201.3 and TP-201.4 tests at least once in each 12-month period. Shorter time periods may be specified in accordance with adopted district rules and regulations. Notification of testing and submittal of test results shall be done in accordance with local district rules and pursuant to the policies established by that district.

IT IS FURTHER ORDERED that the dispensing rate for the Oldcastle System shall not exceed ten gallons per minute (10.0 gpm) at any time. This is consistent with the flowrate limitation imposed by the United States Environmental Protection Agency as specified in the Federal Register, Volume 58, Number 55, page 16019. Exhibit 4 contains a procedure for verifying dispensing rate.

IT IS FURTHER ORDERED that the installation of the tank and associated piping and other equipment not specifically listed as Phase I and Phase II equipment approved by the ARB for use in certified vapor recovery systems in ARB Executive Orders shall comply with the requirements of local fire officials with jurisdiction where the system is installed.

IT IS FURTHER ORDERED that compliance with all applicable certification requirements and rules and regulations of the Division of Measurement Standards of Department of Food and Agriculture, the Office of the State Fire Marshal of the Department of Forestry and Fire Protection, and the Division of Occupational Safety and Health of the Department of Industrial Relations shall be made a condition of this certification.

IT IS FURTHER ORDERED that the Oldcastle System, as installed, shall comply with the procedures and performance standards the test installation was required to meet during certification testing.

IT IS FURTHER ORDERED that the Oldcastle FuelVault shall be installed in accordance with the manufacturer's recommended installation instructions and shall use the manufacturer's recommended operation and maintenance instructions as approved by ARB in the Oldcastle FuelVault LCV Owners Manual, dated October 26, 2001. Revisions to the Oldcastle FuelVault LCV Owners Manual shall be approved by ARB. The Executive Officer may add or delete instructions from the Owners Manual and distribute revised copies in accordance with CP-201.

IT IS FURTHER ORDERED that the Oldcastle System and/or component manufacturer shall provide an ARB approved copy of its operations and maintenance manual to each facility in which the system is installed. The manufacturer shall provide instructions in the proper use of the system, repair, and maintenance schedules and locations where system and/or component replacements can be readily obtained.

IT IS FURTHER ORDERED that a copy of this Executive Order shall be maintained at each facility in which the Oldcastle System is installed.


IT IS FURTHER ORDERED that the Oldcastle System and/or components contained herein shall be warranted for at least one year from the date of installation to the ultimate purchaser and each subsequent purchaser within the warranty period. The warranty shall specify that the vapor recovery system is designed, built and equipped so as to conform, at the time of original installation or sale, with the applicable regulations and is free from defects in materials and workmanship which would cause the vapor recovery system to fail to conform with applicable regulations. The manufacturer shall provide copies of the manufacturer's warranty for the system and/or components.

IT IS FURTHER ORDERED that any alteration of the equipment, parts design, or operation of the Oldcastle Systems certified hereby is prohibited unless such alteration has been approved by the Executive Officer or his or her designee. Any unapproved alteration shall void the certification for the specific installation where such alteration occurred.

IT IS FURTHER ORDERED that the certification of the Oldcastle Aboveground Below-Grade Fuel Vault Vapor Recovery System is valid through April 30, 2011 except as otherwise required by state law or regulation.

IT IS FURTHER ORDERED that this Executive Order shall supersede EO G-70-200-B dated April 27, 2006.

Executed at Sacramento, California this 5th day of April 2007.


William V. Loscutoff, Chief
Monitoring and Laboratory Division

Attachments:

Exhibit 1 Sites Certified to use Oldcastle Vapor Recovery System

Exhibit 2 Sectional Views of Oldcastle FuelVault

Exhibit 3 Side View of the Lake Arrowhead Oldcastle Split FuelVault

Exhibit 4 Ten Gallon Per Minute Limitation Compliance Verification Procedure

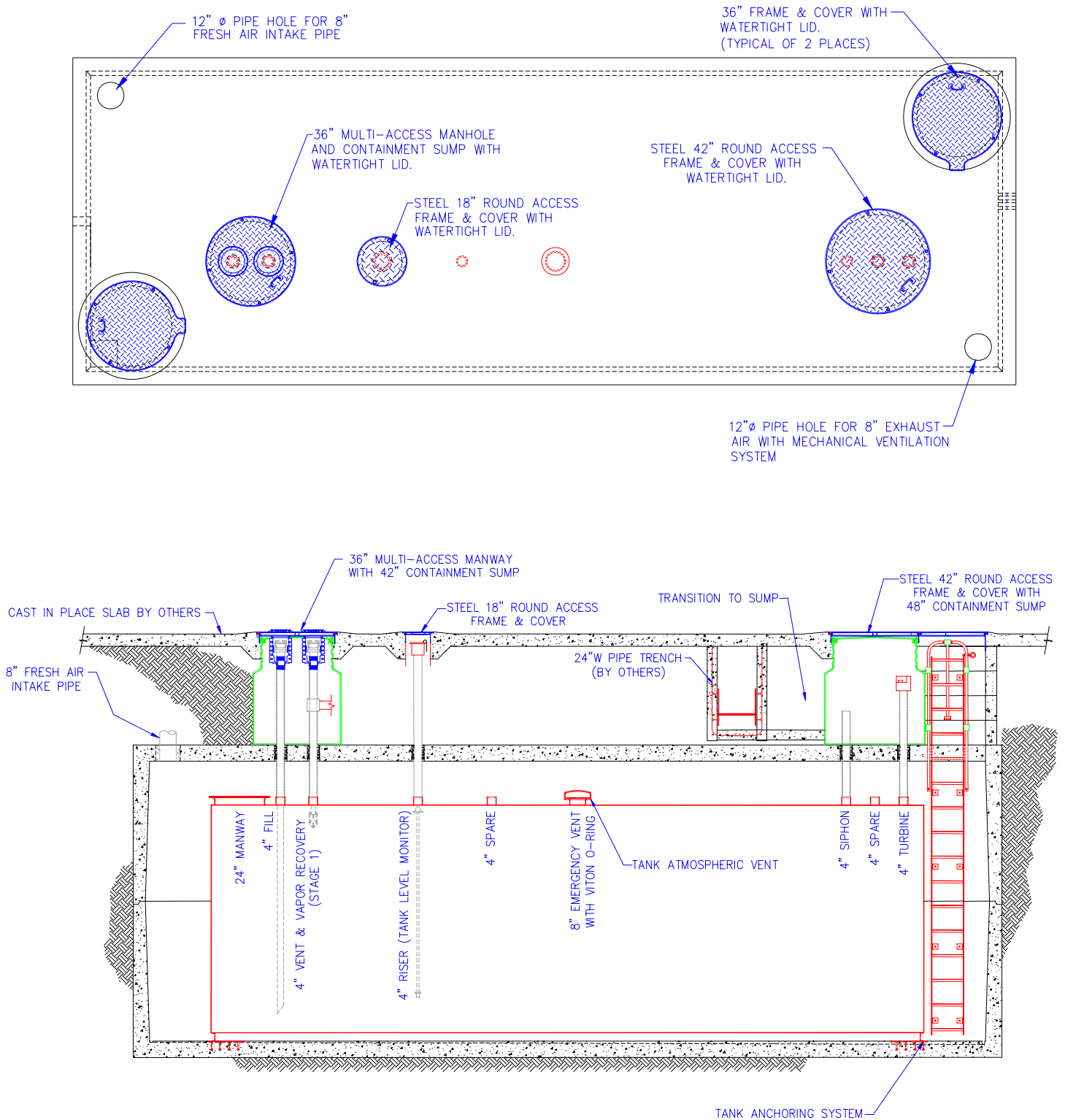
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Exhibit 1

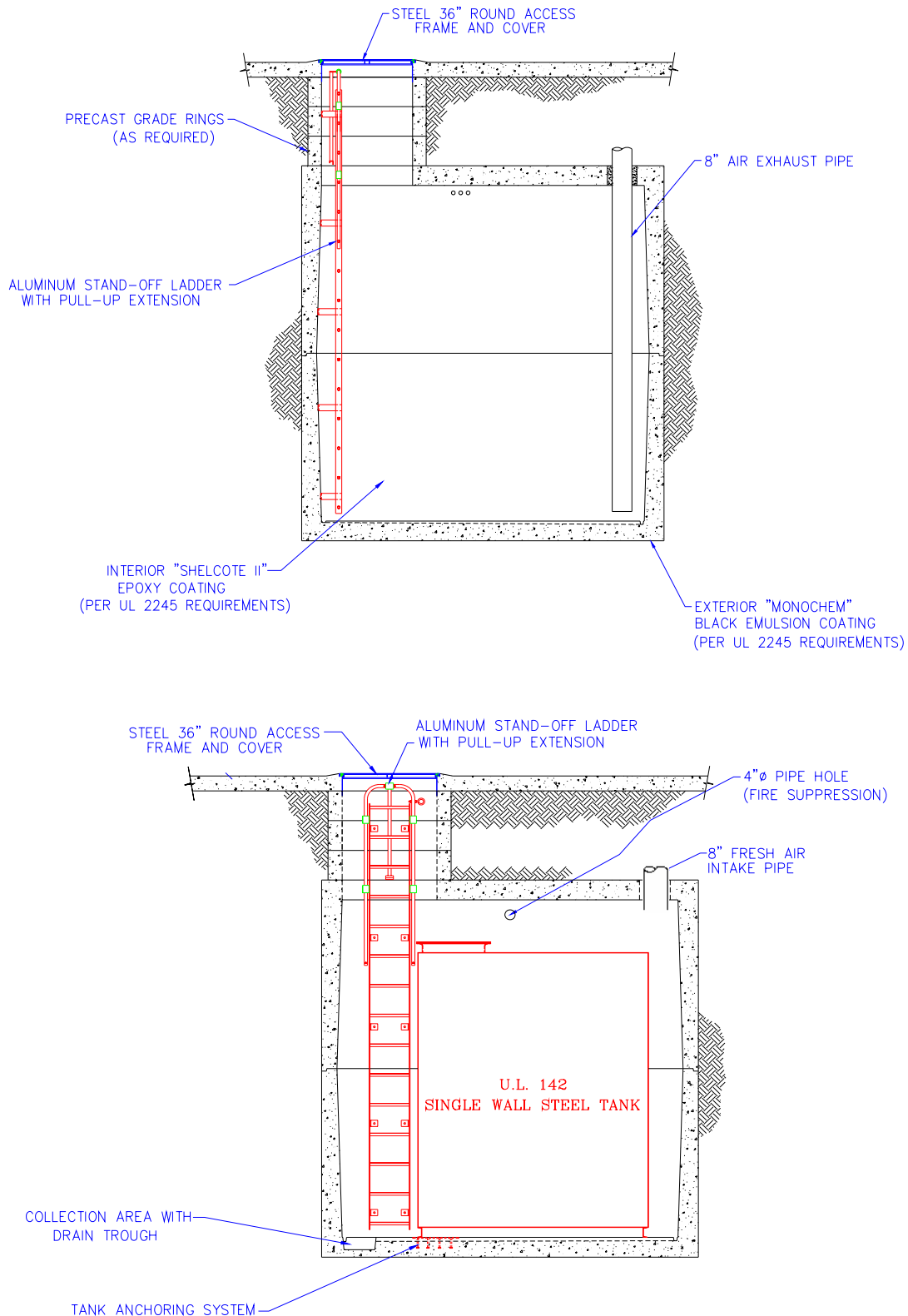
**Sites Certified to use Oldcastle Vapor Recovery System
(Balance System with Buried Vapor Return Piping)**

<u>Site Location</u>	<u>System Parameters</u>
1. 6639 N. Parkway Fresno, CA 93722	Gasoline Storage Tanks: Unleaded - 2 @ 12,000 gallons ea. Supreme - 1 @ 6,500 gallons Phase I System: Two-Point Phase II System: Balance
2. 8285 East Monte Vista Road Anaheim, CA 92808	Gasoline Storage Tanks: Split Tanks - 2 @ 11,690 gallons Unleaded – 5,845 gallons Supreme – 5,845 gallons Phase I System: Coaxial Phase II System: Balance
3. 10010 N. Torrey Pines Road La Jolla, CA 92037	Gasoline Storage Tanks: Split Tank – 1 @ 15,000 gallons Unleaded – 5,000 gallons Diesel - 10,000 gallons Phase I System: Two-Point Phase II System: Balance
4. 27400 Highway 18 Lake Arrowhead, CA 92352	Gasoline Storage Tanks: Split Tank – 1 @ 10,000 gallons Unleaded - 2,000 gallons Diesel - 8,000 gallons Phase I System: Coaxial Phase II System: Balance

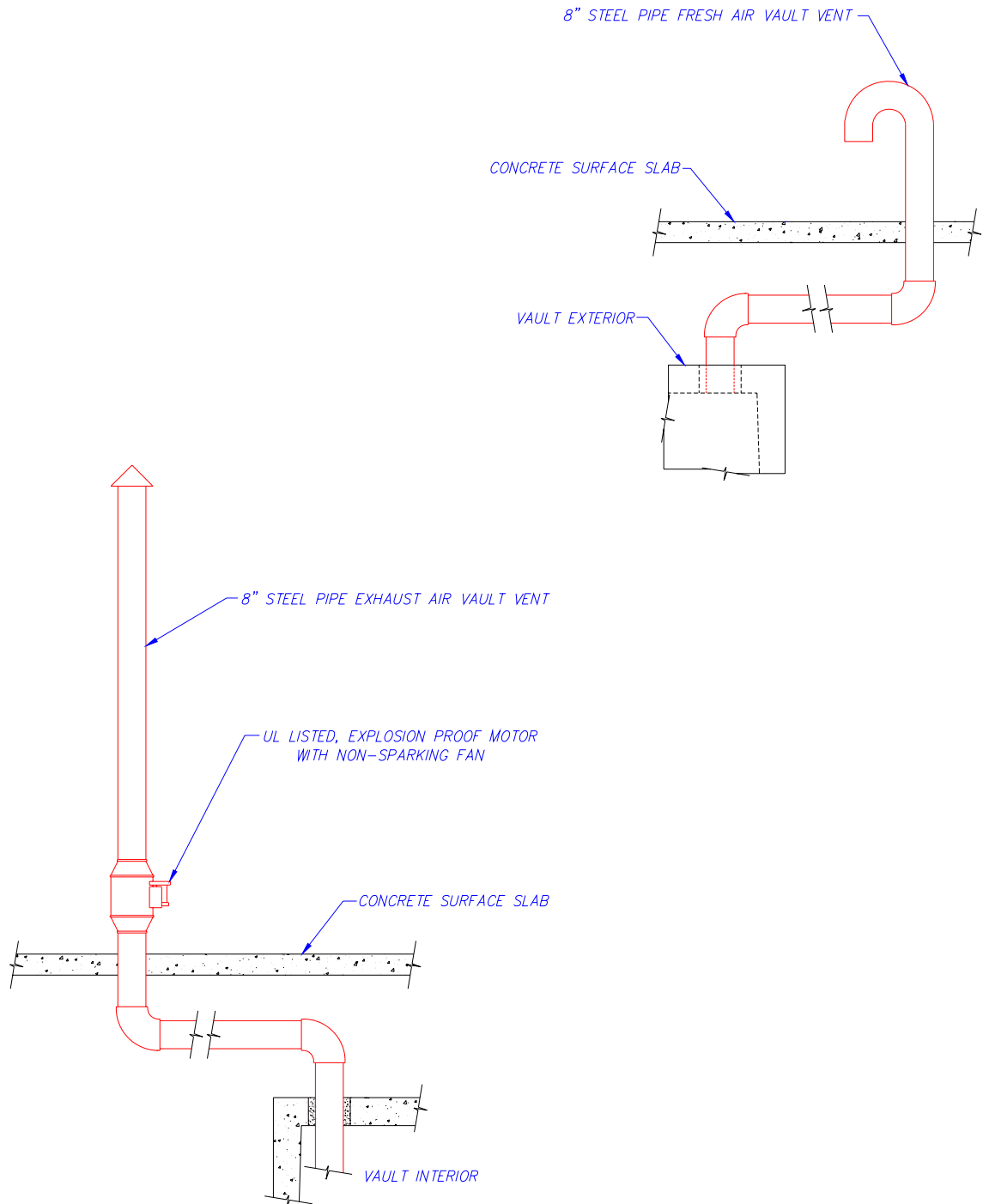
Executive Order G-70-200-C
Exhibit 2
Sectional Views of Oldcastle FuelVault (Top & Side View)



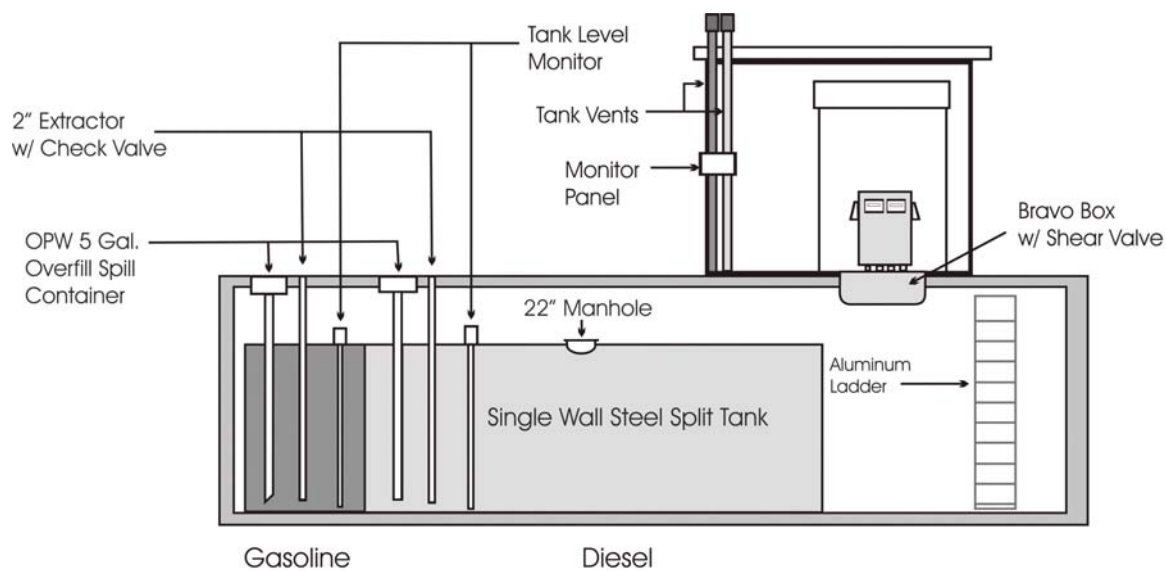
Executive Order G-70-200-C
Exhibit 2 (continued)
Sectional Views of Oldcastle FuelVault (End Views)



Executive Order G-70-200-C
Exhibit 2 (continued)
Sectional Views of Oldcastle Fuel Vault (Ventilation)



Executive Order G-70-200-C
Exhibit 3
Side View of the Lake Arrowhead Oldcastle Split Fuel Vault



Executive Order G-70-200-C
Exhibit 4
Ten Gallon Per Minute Limitation Compliance Verification Procedure

Compliance with the 10 gallon per minute flowrate limitation shall be determined with the following methodology. It is recommended that the maximum dispensing rate through each nozzle/hose assembly be verified. Maximum dispensing rates are achieved with no other dispensing occurring from the same submersible turbine pump.

1) The facility uses identical models of hoses, nozzles, and breakaways:

Dispense gas into a vehicle or approved container. Dispensing shall be conducted in the “hand-held, wide-open” mode. Using a stopwatch accurate to at least 0.2 seconds, begin timing the dispensing rate after at least one gallon has been dispensed. This one gallon buffer is necessary due to the “slow-start” nature of some dispensers. Determine the time required to dispense 2, 3, 4, or 5 gallons of gasoline. The facility shall be deemed in compliance with the 10 gallon per minute limitations if the elapsed time meets, or exceeds, the times shown in Table 1. If the dispensing rate exceeds the allowable limit, a ARB-certified flow limiting device shall be installed.

2) The facility uses different models of hoses, nozzles, or breakaways:

Due to potential differences in pressure drops through the various components, each of the nozzle/hose assemblies shall be tested for maximum dispensing rates. Using the same criteria as above, determine the maximum dispensing rate through each nozzle/hose assembly. If the maximum dispensing rate exceeds the 10 gpm limit, a ARB-certified flow limiting device shall be installed.

Table 1
Verification of 10 gpm

Product Dispensed (gallons)	Minimum Allowable Time (seconds)
2.0	11.8
3.0	17.7
4.0	23.6
5.0	29.5

Note: The times have been corrected to allow for the accuracy of the measurement.