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## State Water Resources Control Board

**JAN 10 2012**

Ms. Erin Faessler  
Vapor Systems Technologies, Inc.  
650 Pleasant Valley Drive  
Springboro, Ohio 45066

Dear Ms. Faessler:

### EVALUATION OF THE VST GREEN MACHINE FOR USE WITH VST BALANCE EVR DISPENSING HARDWARE

As you know, Assembly Bill 2955 (Statutes 2004, Chapter 649) added section 25290.1(a) to Chapter 6.7 of the Health and Safety Code (H&SC). This section requires the Air Resources Board (ARB) and the State Water Resources Control Board (State Water Board) to certify, to the best of their knowledge and using existing resources, that equipment meeting the ARB's Enhanced Vapor Recovery (EVR) requirements also meets underground storage tank (UST) statutory requirements.

We have received an information package regarding the VST Green Machine vapor processing unit which will be used in conjunction with ARB approved VST balance EVR dispensing hardware previously approved under ARB Executive Orders VR-203, VR-204 and VR-205. The vapor processor's purpose is to provide active vapor pressure management by capturing and processing excess vapors.

The design, construction, installation, and operation of the VST Green Machine used in conjunction with the VST balance EVR dispensing hardware has been reviewed by a California Registered Professional Engineer, as indicated in the enclosed signed statement. Based on this signed statement and the information that you provided we have found no evidence that the VST Green Machine conflicts with H&SC Chapter 6.7.

UST owners who intend to install this system in California should be aware that:

- For systems installed prior to July 1, 2003, tank vent lines are excluded from the statutory definition of "underground storage tank" if they are designed to prevent, and do not hold, standing fluid.<sup>1</sup> Based on the information provided, the VST Green Machine does not increase the likelihood of liquid-phase product accumulating in the tank vent lines. Because the information indicated that the VST Green Machine does not increase the likelihood of liquid phase product, tank vent lines that are currently excluded

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<sup>1</sup> California Health and Safety Code, Chapter 6.7, section 25281.5(a)(4).

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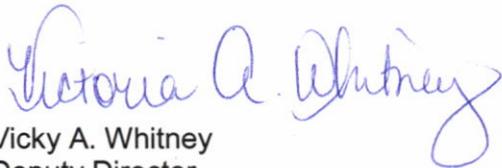
from the definition of "underground storage tank" may continue to be excluded once the VST Green Machine with the VST balance EVR dispensing hardware has been installed.

- California regulations<sup>2</sup> specify that any installation, repair, maintenance or programming of monitoring equipment must be done by a qualified service technician meeting the requirements of California Code of Regulations, title 23, section 2715(i). Where installation of the VST Green Machine involves connection to monitoring equipment used to satisfy the monitoring requirements for the UST system, all work must be performed by a qualified service technician meeting the requirements of section 2715(i).
- Permitting and inspection requirements vary among the local regulatory agencies who implement the State Water Board's UST Program. Depending on the jurisdiction, the local agency may require the UST owner/operator to obtain a permit prior to installation and/or conduct functional testing of the monitoring equipment after the VST Green Machine has been installed.

Pursuant to H&SC section 25290.1.2(a) the State Water Board certifies that, to the best of its knowledge, the VST Green Machine used in conjunction with VST balance EVR dispensing hardware meets the requirements of H&SC Chapter 6.7. This determination assumes the EVR system is installed in accordance with applicable ARB Executive Orders, manufacturer, instructions, and the limitations outlined in this letter.

If you have questions regarding this letter, please contact Laura Fisher at (916) 341-5870, or by email at [lfisher@waterboards.ca.gov](mailto:lfisher@waterboards.ca.gov).

Sincerely,



Vicky A. Whitney  
Deputy Director  
Division of Water Quality

Enclosures (2): Certification Statement for the VST Green Machine  
Supplemental Certification Statement

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<sup>2</sup> California Code of Regulations, Title 23, sections 2611 and 2638.

*Supplement I to Report on*

**CARB Amendment Application  
EVR Equipment Review**

**VST Green Machine  
EVR VR - 203 (using PMC)  
EVR VR - 204 (using ISD)  
August 27, 2010**

**Prepared by Pacific Petroleum Equipment**

Based on careful review of the subject report and its July 1, 2011 Addendum, review of Vapor Systems Technologies, Inc. (VST) Installation & Maintenance Manual for Green Machine Revision 1.1, review of California Air Resources Board (ARB) vapor recovery performance standards, review of previous ARB reports, and personal inspection and operational review of the VST Green Machine, I hereby certify the following supplemental information to Section 1, Engineering Statement of the subject report to be true and valid:

**1. The VST Green Machine, when properly installed and operated, reduces vapor released to vent or vapor recovery lines of an operating gasoline dispensing facility (GDF).**

As stated in Section 3, Product Description, Product Overview of the subject report: "The complete VST Green Machine system provides for active vapor pressure management". As in the subject report, it is assumed "...the VST Green Machine has met ARB's required emission standards". The specific applicable ARB standards may be found in Table 4-1, CP-201 and further explained in Section 4.6. 30 day rolling averages for Daily Average Pressures are to be less than or equal to 0.25 inches of water and Daily High Pressures are to be less than or equal to 1.50 inches of water.

It was previously shown in ARB's October 25, 2006 report, "Phase II Vapor Recovery Balance System Challenge Mode Study", that underground storage tank (UST) pressure management systems, such as VST's Green Machine, are necessary in order for Balance System GDFs to meet the pressure performance standards of CP-201, Section 4.6 and reduce vapors formed in the UST due to vapor growth. The VST Green Machine manages UST pressures by reducing the pressures caused by vapor growth. By reducing UST pressures, vapors formed in the UST and released to the vent and vapor recovery lines are also reduced. Furthermore, during the operation of the VST Green Machine, the remaining vapors that are released by the UST into the vent lines are processed and returned to the vent or vapor recovery lines in a vapor state only. Therefore, the VST Green Machine does not increase the formation of liquid condensate in the vent or vapor recovery lines. And,

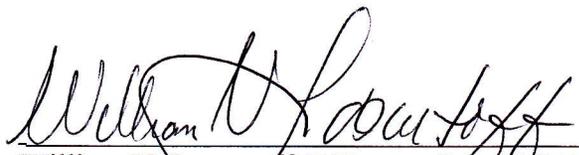
2. When referring to "VST Green Machine", the subject report and Addendum are referring to not only the Green Machine itself but to the Green Machine including VST hanging hardware and Veeder-Root pressure management and In-Station-Diagnostic (ISD) equipment.

Although the statement above is implied throughout the subject report, it is not unequivocally stated in the Engineering Statement. The Engineering Statement should appropriately refer to Section 3, Product Description, Product Overview. Product Overview includes Table 3-1, Parts List and VST Replacement Parts - Control Panel. These listings, as modified by the July 1, 2011 Addendum, should have been referenced in the subject report's Engineering Statement for purposes of clarity.

**Further clarification of this supplemental information:**

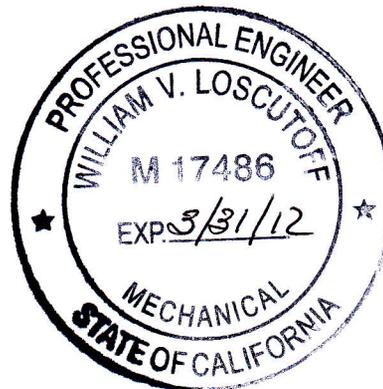
The statements above do not alter the conclusions of the subject report regarding the performance of the Green Machine with respect to the requirements of Chapter 6.7 of the California Health and Safety Code (the State Water Resources Control Board's underground storage tank requirement, including enhanced leak detection and continuous vacuum, pressure or hydrostatic monitoring) .

Limitations of this certification are the same as listed in the subject report of this addendum.

  
William V. Loscutoff, P.E. CA M 17486

September 27, 2011  
Date

William V. Loscutoff, P.E.  
144 Jalisco Place  
Davis, CA 95616



# Engineering Statement

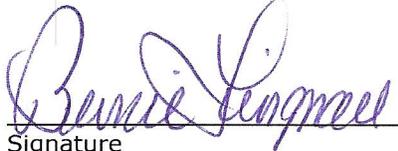
## Section 1

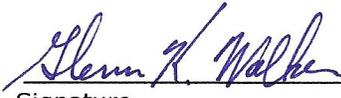
### Certification Statement for the VST Green Machine (PMC and ISD)

Based on a careful review and analysis, I hereby certify that the VST Green Machine system, which is under consideration for California Air Resources Board (ARB) certification, meets the requirements of Chapter 6.7 of the California Health and Safety Code (the State Water Resources Control Board's underground storage tank requirements, including enhanced leak detection and continuous vacuum, pressure, or hydrostatic monitoring.)<sup>2</sup>.

The VST Green Machine system is valid as long as it is installed, operated, and maintained in accordance with the manufacturer's instructions and in a manner that does not exceed the limitations described.

Limitations: See the attached Appendix B

  
Signature \_\_\_\_\_ Date 9/27/10  
California Professional Engineer  
C 50985

  
Signature \_\_\_\_\_ Date 9/28/10  
Company Representative

Bernie Lingnau, P.E.  
Pacific Petroleum Equipment  
5465 Gaines St., #102  
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Springboro, Ohio 45066

Phone: 619-688-5848  
E-Mail: [info@pacificpetro.com](mailto:info@pacificpetro.com)

Phone: 937-704-9333

<sup>1</sup> This certificate statement is part of the guidelines developed by the California Air Resources Board (ARB) and State Water Resources Control Board (State Water Board) to implement provisions of Assembly Bill 2955 (Statutes 2004, Chapter 649: McCarthy).

<sup>2</sup> This certification is based on the presumption that the system is constructed, installed, maintained, and operated in accordance with all applicable requirements of Chapter 6.7 of California Health and Safety Code, and Chapter 16 of California Code of Regulations.