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A-17

April 10, 2009

**VIA FEDERAL EXPRESS AND FACSIMILE (805) 568-3019**

County of Santa Barbara Board of Supervisors
105 E. Anapamu Street, Suite 407
Santa Barbara, CA 93101

**Re: Contesting the Agenda Item for Unlawful "Sole Sourcing"
Board of Supervisors Meeting, April 21, 2009
Client-Matter No. 39705.00006**

Dear Supervisors:

We are counsel for Valley Slurry Seal Company (hereinafter "VSS"), and we present this letter on its behalf in opposition to the proposed unlawful "sole sourcing" recommendation by the Public Works Department. Please consider the following facts and argument when voting on the Agenda Item (formerly Agenda Item "A-19" from the April 7, 2009 meeting), which would otherwise allow unlawful "sole sourcing" in the specifications for the Construction of 2008-2009 Countywide Preventive Maintenance Application of Scrub Seal and Micro-Surfacing County Project #820613 (hereinafter "County Specifications").

## I. INTRODUCTION

It is well settled that in the public bidding process, a public entity may ***not*** require, as the sole source, a particular brand or make of goods in its specifications, unless it also allows an "***or equal***" item. Pub. Contract Code § 3400, subd. (a) (emphasis added). The Public Works Department is asking you to do just that and approve a request that the County allow only one brand of construction materials in its bid specifications for road resurfacing. Approving such a request would be unlawful for the reasons described in more detail below. VSS respectfully requests that the County disapprove the request, and allow the competitive bidding procedures to operate as they were intended. Doing so would allow competitive bids that use equal quality materials with less cost to the County taxpayers.

## II. FACTS

On page 244 of the County Specifications, in the subsection entitled "Materials," and subsection entitled "Polymer Asphalt Surface Sealer," the specification states:

> The asphalt emulsion shall be a polymer modified rejuvenating Emulsion with a latex polymer, rejuvenating agent and asphalt and shall meet the following specifications. ***The polymer shall be PA-AS-1 a product of Polymer Science of America.*** (Emphasis Added).

This language purports to sole source PA-AS-1 as the polymer on this project, and contrary to Section 3400, there is no language in the County Specifications that allows an "or equal" product.

VSS Asphalt Technologies manufactures an equivalent, "or equal," material that would otherwise suit the County's specifications. "RoadChem 604-Latex," manufactured in the State of California, meets all of the performance specifications for the latex specified on page 245 of the current Special Provisions. The material certifications and test results from an ISO 17025 certified and IAS accredited testing laboratory accompany this letter (See Exhibit 1), and evidence the fact that RoadChem 604-Latex is, indeed, a suitable alternate material.

The Public Works Department's agenda letter to this Board references Section 3400(b)(3) as support for its request that the County approve the sole sourcing. But there are no facts to support that exemption. Rather, the facts support an opposite conclusion – that there are other suitable materials on the market, and that PA-AS-1 is not "a necessary item that is only available from one source." Pub. Contract Code § 3400, subd. (b)(3).

## III. ARGUMENT

It is well established that in California, Public Works contracts must be publicly bid in order to maximize resources and limit the cost to the taxpayers. Inherent in this scheme is that public entities may not require in their invitation for bids, as the sole source, a specific product or brand name without a proper exemption. The purpose is to encourage competition among equal products. Public Contract Code Section 3400 provides:

> (a) ***No*** ... ***political subdivision*** ... charged with the letting of contracts for the construction, alteration, or repair of public works, ***shall draft or cause to be drafted specifications for bids***, in connection with the construction, alteration, or repair of public works, (1) in a manner that limits the bidding, directly or indirectly, to any one specific concern, or (2) ***calling for a designated material, product, thing, or service by specific brand or trade name unless the specification is followed by the words "or equal" so that bidders may furnish any equal material, product, thing, or service.***

> (b) Subdivision (a) is not applicable if the awarding authority, or its designee, makes a finding that is described in the invitation for bids or requests for proposals that a particular material, product, thing, or service is designated by specific brand or trade name for any of the following purposes:
>
> (1) In order that a field test or experiment may be made to determine the product's suitability for future use.
>
> (2) In order to match other products in use or a particular public improvement either completed or in the course of completion.
>
> (3) In order to obtain a necessary item that is only available from one source.
>
> (4) (A) In order to respond to an emergency declared by a local agency, but only if the declaration is approved by a four-fifths vote of the governing board of the local agency issuing the invitation for bid or requests for proposals, (B) In order to respond to an emergency declared by the state, a state agency, or political subdivision of the state, but only of the facts setting forth the reasons for the finding of the emergency are contained in the public records of the authority issuing the invitation for bid or requests for proposals.

Pub. Contract Code § 3400 (Emphasis added).

The objective behind section 3400 is "to widen the area of competition, and to bar local procurement officials from choosing a particular source either out of favoritism or because of an honest preference." *Jack Stone Co. v. United States* (1965) 344 F.2d 370, 373-374. This aim is consistent with the reasons behind competitive public bidding generally, which is "to guard against favoritism, improvidence, extravagance, fraud and corruption; to prevent waste of public funds; and to obtain the best economic result for the public." *Graydon v. Pasadena Redevelopment Agency* (1980) 104 Cal.App.3d 631, 636.

The County Specifications and the Public Works Department's proposal to the County run afoul of these principles. The specification that "the polymer shall be PA-AS-1 a product of Polymer Science of America" lacks any flexibility for an "*or equal*" product. Absent a finding of a valid exemption, supported by substantial evidence, this type of "sole sourcing" would be an abuse of discretion and subject to challenge by a writ of mandate.

In the staff comments, the Public Works Department apparently relies on Section 3400(b)(3) as the basis for the exemption. Yet that exemption is only applicable where the "necessary item ... is only available from one source." Here, PA-AS-1 is not a "necessary item," because there are other polymer materials available that can meet the basic test of functionality and perform just as well as the PA-AS-1 product from Polymer Science of America. The Staff report offers no evidence in support of its position, and none exists.

Indeed, substantial evidence exists to the contrary. VSS Asphalt Technologies' product, "RoadChem 604-Latex," has been tested and meets all of the performance specifications for the latex specified on page 245 of the current Special Provisions. The material certifications and test results are provided with this letter, and evidence the fact that RoadChem 604-Latex is, indeed, a suitable alternate material.

Accordingly, the "necessary" polymer that meets the criteria for this project can be found at more than "one source." None of the narrow exemptions of Section 3400 apply here, and the County should decline the Public Works Department's request to sole source the polymer material. To do otherwise would be an abuse of discretion.

## IV. CONCLUSION

Section 3400 precludes the sole sourcing of polymer under these circumstances. Thus, we once again invite the County to eliminate the specification to require the sole sourcing of the PA-AS-1 polymer, and to decline the Public Works Department's request to sole source this material. There are other alternative products available that are of "equal" functionality and quality, including VSS Asphalt Technologies' "RoadChem 604-Latex."

Respectfully submitted,

DOWNEY BRAND LLP

Ryan C. Wood

RCW/

Enclosures

996752.1

cc (via fax & email):

Salud Carbajal, 1st District (805) 568-2534 supervisorCarbajal@sbcbos1.org
Janet Wolf, 2nd District (805) 568-2283 jwolf@sbcbos2.org
Doreen Farr, 3rd District (805) 568-2883 dfarr@countyofsb.org
Joni Gray, 4th District (805) 346-8498 jgray@co.santa-barbara.ca.us
Joseph Centeno, 5th District (805) 346-8404 jcenteno@co.santa-barbara.ca.us

996752.1

AEMA
ASPHALT EMULSION MANUFACTURERS ASSOCIATION

**VSS EMULTECH®**

**Road Oiling and Bulk Transport**

*"PROVEN SPECIALISTS IN QUALITY MATERIALS AND SERVICE"*

VSS EMULTECH

7200 PIT ROAD
P.O. BOX 991866
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(541) 826-3373

3785 CHANNEL DRIVE
WEST SACRAMENTO, CA 95691
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3800 GILMORE AVENUE
BAKERSFIELD, CA 93308
(661) 323-5904

April 6, 2009

Scott D. McGolpin
Director of Public Works
County of Santa Barbara
123 East Anapamu Street
Santa Barbara, CA 93101

Re: 2008-2009 Countywide Preventative Maintenance Application of Scrub Seal and Micro-Surfacing County Project No. 820613
Certificate of Compliance and Test Results
Polymer-Modified Rejuvenating Emulsion (PMRE)

Please find the attached Certificates of Compliance and test results required by the special provisions for the above referenced project.

The testing laboratories utilized have the appropriate accreditations as required by the special provisions.

VSS EMULTECH

Ronald D Bolles

Ronald D. Bolles
Sales Manager

AEMA
ASPHALT EMULSION MANUFACTURERS ASSOCIATION

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(916) 371-8480

3800 GILMORE AVENUE
BAKERSFIELD, CA 93308
(661) 323-5904

April 6, 2009

Scott D. McGolpin
Director of Public Works
County of Santa Barbara
123 East Anapamu Street
Santa Barbara, CA 93101

Re: Polymer-Modified Rejuvenating Emulsion
2008-2009 Countywide Preventative Maintenance Application
of Scrub Seal and Micro-Surfacing County Project No. 820613

This letter is to certify that the Polymer-Modified Rejuvenating Emulsion (PMRE) to be supplied to the above reference project meets the specifications per the project specification and as outlined in the attached specification. Compliance was verified by APART, Inc. (Asphalt Pavement and Recycling Technologies, Inc.) The test report is attached.

VSS EMULTECH

Alan S. Berger
Vice President/General Manager

ASPHALT EMULSION MANUFACTURERS ASSOCIATION

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(661) 323-5904

## PRODUCT SPECIFICATION

StyraFlex CS
Polymer-Modified Rejuvenating Emulsion (PMRE)

A polymer-modified rejuvenating emulsion with latex polymer, rejuvenating agent and asphalt meeting the following specifications:

| **Test on Emulsion** | Method | Specification |
|---|---|---|
| | | |
| Viscosity @ 77°F (SFS) | ASTM D244 | 50-350 |
| Residue, w%, minimum | ASTM D244 | 67 |
| pH | ASTM E70 | 2.0-5.0 |
| Sieve, w% maximum | ASTM D244 | 0.1 |
| Oil distillate, w%, maximum | ASTM D244 | 0.5 |
| | | |
| **Test on Residue** (1) | | |
| | | |
| Viscosity @ 140°F, P, maximum | ASTM D2170 | 3000 |
| Penetration @ 39.2°F, minimum | ASTM D5 | 40 |
| Elastic Recovery on residue by distillation, % minimum | AASHTO T59, T301 (1,2) | 60 |
| | | |
| **Test on Latex** | | |
| Specific Gravity | ASTM 1475 | 1.08 – 1.15 |
| Tensile strength, die C dumbbell, psi, minimum | ASTM D412 (3) | 500 |
| Swelling in rejuvenating agent, % maximum; 48 hours exposure @ 104°F | (4) ASTM D471 Modified | 40% intact film |
| | | |
| **Test on rejuvenating agent** | | |
| Flash point, COC, °F | ASTM D92 | >380 |
| Hot Mix Recycling Agent Classification | ASTM D4552 | See Section II |

(1) Exception to AASHTO T59: Bring the temperature on the lower thermometer slowly to 350°F plus or minus 10°F. Maintain at this temperature for 20 minutes. Complete total distillation in 60 plus or minus 5 minutes from first application of heat.

(2) Elastic Recovery @ 10° C (50°F): Hour glass sides, pull 20cm, hold 5 minutes then cut, let sit 1 hour.

(3) Tensile Strength Determination: Samples for testing for tensile strength in accordance with ASTM D412 shall be cut using a die dumbbell at a crosshead speed of 20 in/min.

(4) Latex Testing: Suitable substrate for film formation shall be polyethylene boards, silicone rubber sheeting, glass, or any substrate which produces a cured firm of uniform cross-section. Polymer film shall be prepared from latex as follows:

Resistance to Swelling: Polymer films shall be formed by using a 50 mil drawdown bar and drawing down 50 mils of the latex on polyethylene boards. Film shall be cured for 14 days at 75°F and 50% humidity. Samples for resistance to swelling in rejuvenating agent shall be 1: by 2" rectangles cut from the cured film. Cut at least 3 specimens for each sample to be tested for swelling. Fill 3- 8 oz ointment tins with at least a ¼" deep of rejuvenating agent. Swelling samples shall be weighed and then placed in the ointment tins on top of the rejuvenating agent. Then, add at least another ½: deep of rejuvenating agent over each of the latex samples. The ointment tins shall be covered and placed in an oven at 104°F for the specified 48 hours +/- 15 minutes. The ointment tins are allowed to cool to 75°F and then the latex films are removed from the tins. Unabsorbed rejuvenating agent is removed from the intact latex film by scraping with a rubber policeman and blotting with paper towels. If the latex film does not remain intact during removal from the tins or while removing the unabsorbed rejuvenating agent the sample shall be rejected. After the rejuvenating agent is removed from the samples they are then weighed. Percent swelling is reported as weight increase of the polymer film:; report mass increase as a percent by weight of the original latex film mass upon exposure of films to the recycling agent.

# Asphalt Pavement And Recycling Technologies, Inc.
# (APART, Inc.)

5207 Minter Field Avenue — Shafter, CA 93263
Telephone: (661) 393-2748 — Fax: (661) 393-2804
e-mail: apart@hughes.net


Report: 09-0927 — February 28, 2009

Customer: VSS Emultech – Sallie Houston

Sample submitted:

1/2 gallon sample of Stryaflex CS (02-26-09)

Requested Testing

Test the submitted sample for specification compliance. The specification was supplied by VSS Emultech.

Summary of Testing

The emulsion was tested as required by the supplied specification. Test procedures, including any exceptions to the test methods, and test data are reported by Table I.

Conclusion

Reported data indicate that the submitted sample is in compliance to the specification supplied.

Robert Stanyard


Test data reported herein has been secured by reliable testing procedures. As we have no knowledge of, or control over the conditions that may affect the use of material from which samples were taken, we assume no responsibility in furnishing this data other than to warrant that they represent reliable measurements of the properties of the sample (s) received and tested. No warranties, expressed or implied, including warranties of merchantability or fitness for a particular use, are made with respect to the products described herein. Nothing contained herein shall constitute a permission or recommendation to practice any invention covered by a patent without license from the owner of the patent.

## Table I
VSS Emultech

Stryaflex CS

| | Test Method | Test Result | Specification |
|---|---|---|---|
| | | | |
| Viscosity, 25°C, SFS | AASHTO T59 | 251.0 | 50-350 |
| pH | ASTM E70 | 2.24 | 2.0-5.0 |
| Sieve, w% | AASHTO T59 | 0.01 | 0.1 Max. |
| Residue, w% | AASHTO T59 | 67.8[1] | 67 Min. |
| Tests on the Residue | | | |
| Viscosity, 60°C, P | ASTM D2170 | 709 | 2000 Max. |
| Penetration, 4°C, dmm | ASTM D5 | 84 | 40 Min. |
| Elastic Recovery, % | AASHTO T301 | 90.0[2] | 60 Min. |
| Oil Distillate, w% | AASHTO T59 | Nil | 0.5 Max. |

[1] Exception to AASHTO T59: Bring temperature on the lower thermometer slowly to 350 ± 10°F. Maintain at this temperature for 20 minutes. Complete total distillation in 60 ± 5 minutes from first application of heat.

[2] Elastic Recovery @ 10°C (50°F): Hour glass sides, pull 20 cm, hold 5 minutes then cut, let sit 1 hour.

This emulsion is in compliance to the applicable specification.

# VSS Asphalt Techologies

April 6, 2009

VSS Emultech
3785 Channel Drive
West Sacramento, CA 95691

Re: County of Santa Barbara
2008-2009 Countywide Preventative Maintenance Application
of Scrub Seal and Micro-Surfacing County Project No. 820613
Specification for VSS Asphalt Technologies **Road Chem 604-Latex**

VSS ASPHALT Technologies as the manufacturer of the latex, certifies that the **Road Chem 604-Latex** supplied to VSS Emultech for use in the polymer modified rejuvenating emulsion to be supplied tor the emulsion in the above referenced project meets the required project specifications and the specifications as attached.

It is further certified that the latex is cationic.

Compliance was verified by Trinity ERD. The test reports are attached.

Best regards,

Kim Volk
Sales Agent
VSS Asphalt Technologies

P.O. BOX 981330 • WEST SACRAMENTO, CA 95798, USA
PHONE (916) 373-1500 • FAX NO. (916) 373-1438

# VSS Asphalt Techologies

**PRODUCT SPECIFICATION**

**RoadChem 604 Latex**

| | ASTM Test Method | Specification |
|---|---|---|
| Specific Gravity | ASTM 1475 | 1.08-1.15 |
| Tensile Strength | D412 | 500 Minimum |
| Swelling in rejuvenating agent, % maximum, 48 hours exposure @ 104 °F% | D412 | 40% intact film |

P.O. BOX 981330 • WEST SACRAMENTO, CA 95798, USA
PHONE (916) 373-1500 • FAX NO. (916) 373-1438

TRINITY | ERD

# Laboratory Report V9480.02.09R1

## Oil Absorption, Tensile Stress and Density Testing

*of*

## Latex Roadchem 604

*in accordance with*

## ASTM D471, ASTM D412 and ASTM D 1475

*for compliance with*

## The California Department of Transportation

Prepared for:
**VSS Asphalt Technologies**
**PO Box 981330**
**Sacramento, CA 95798**

Date of Issuance:
**February 26, 2009**

EXTERIOR RESEARCH & DESIGN, LLC.
MAIN: 80 Yesler Way • Suite 200 • Seattle, WA 98104 • P: (206) 467-0054 • F: (206) 467-5840
EAST: 353 Christian Street • Unit 13 • Oxford, CT 06478 • P: (203) 262-9245 • P: (203) 262-9243
LAB: 10 Mauney Court • Columbia, SC 29201 • P: (803) 988-8133 • F: (803) 988-8111

TL-199 Certified

TRINITY|ERD

**CLIENT INFORMATION:** VSS Asphalt Technologies
PO Box 981330
Sacramento, CA 95798
c/o: Sallie Houston

**PROJECT REFERENCE:** Project #2008.V9480SC

**SAMPLES:** **Roadchem 604 from VSS Asphalt Technologies** is a cationic, high solid syntetic latex emulsion

**Roadchem 704/RA-1 from VSS Asphalt Technologies** for use with emulsion products

**SAMPLE DELIVERY:** Trinity|ERD received from VSS Asphalt Technologies one quart each of Roadchem 604 and Roadchem 704/RA-1 which were used in both the testing contained within this report. Materials were received on 01/13/2009.

**TEST DATE(S):** 01/30/2009-02/02/2009, 02/26/2009

**TECHNICIANS:** Larry Good, Charles Phillips

**PROPERTIES:**

| | |
|---|---|
| Tensile | ASTM D412 |
| Oil Absorption | ASTM D471 |
| Density | ASTM D1475 |

**STANDARDS:**

ASTM D412-06a – *Standard Test Method for Vulcanized Rubber and Thermoplastic Elastomers – Tension*, © ASTM, 2006.

ASTM 471-06 – *Standard Test Methods for Rubber Property – Effect of Liquids*, © ASTM, 2006.

ASTM D1475-98(2008)- *Standard Test Method For Density of Liquid Coatings, Inks, and Related Products*, © ASTM, 2008.

California Department of Transportation (CALTRANS)

**EQUIPMENT:**

| | |
|---|---|
| Tensile Strength | Satec T-5000 |
| Oil absorption | Ointment tins, Ohaus Scale, ECL |
| Density | Weight/Gallon Cup, Ohaus Scale, ECL, Fluke Electronic Thermometer and Thermocouple. Thermostatically controlled water bath. |

TRINITY | ERD

## 1. TENSILE STRESS, ASTM D412, METHOD A, DIE C:

1.1 Specimen Preparation:

1.1.1 A film was formed using the latex sample by drawing down 50 mils on a polyethylene board and curing for 14 days at 75°F and 50% relative humidity.

1.1.2 Five "Dumbbell" specimens were produced from a type C die as directed by ASTM D412.

1.2 Procedure:

1.2.1 Each specimen was secured in the universal testing machine, and pulled at a constant rate of 20 inches per minute until failure occurs. Maximum Tensile Stress is recorded.

1.3 Results:

**Table 1: Test Results, Tensile Stress**

| Test | Peak Stress (psi) | Client Specified | Pass/Fail |
|---|---|---|---|
| 1 | 717.9 | Median≥ 500 psi | Pass |
| 2 | 905.3 | | |
| 3 | 681.1 | | |
| 4 | 948.6 | | |
| 5 | 714.3 | | |
| Median: | 717.9 | | |
| Average: | 793.4 | | |

## 2. OIL ABSORPTION:

2.1 Specimen Preparation:

2.1.1 Three samples, measuring 1 by 2 inches, were then cut from the cured film produced in section 1

2.2 Procedure:

2.2.1 Each specimen was initially weighed and then placed on top of the client supplied rejuvenating agent in ointment tins filled with the agent to a depth of ½". Rejuvenating agent was then poured on top of the specimens to an additional ½" depth above the initial level. The ointment tins were covered and placed in an oven at 104°F for 48 hours. Upon removal from the oven, the specimens were allowed to cool to 75°F before being removed from the tins. Unabsorbed rejuvenating agent was removed from the intact latex film and the specimens were reweighed. The mass increase as a percent by weight of the original mass was then calculated.

TRINITY|ERD

2.3 Results:

| Table 2: Test Results, Oil Absorption | | | | | | |
|---|---|---|---|---|---|---|
| Specimen | Initial Weight (g) | Final Weight (g) | Change (g) | Change (%) | Criteria | Pass/Fail |
| 1 | 1.8 | 2.1 | 0.2 | 11.6 | CALTRANS ≤40% | Pass |
| 2 | 2.0 | 2.2 | 0.2 | 10.6 | | |
| 3 | 2.0 | 2.2 | 0.2 | 9.1 | | |
| | | | Average: | 10.4 | | |
| | | | Std. Dev.: | 1.3 | | |

## 3. Density

3.1 Calibration of Cup. Measure the temperature of DI water and read corresponding density from the chart in the ASTM standard. Tare the cup with its lid. Fill the cup with the water to the rim. Be sure there are no bubbles in the water. Carefully place the lid on the cup and gently press down to seat the lid and expel excess water out the vent hole in the lid. Dry off the exterior of the cup and lid carefully and quickly and weigh the full cup. Record the net weight. Repeat twice more for a total of three measurements. Take the average net weight and divide by the density of water determined from the standard. This gives the cup volume in milliliters (ml).
3.2 Measurement and Calculation. Place the container of latex and the cup in the 25°C water bath and bring the latex to 25°C . Remove the cup and lid and dry and tare them quickly. Repeat 3.1 with the latex instead of water. Take the average of the three weights in grams and divide by the volume calculated in 3.1. This gives the density of the latex in grams/milliliter. Record the density to 3 decimal places along with the latex temperature

3.3 Results

| Table 3: Test Results Density | | | | | | |
|---|---|---|---|---|---|---|
| Temp. of Water °C | Density of Water From ASTM STD. | Sample # | Net Weight of water in Cup, Grams | Net Weight of Roadchem 604 Latex in Cup grams | Temp. Of Latex °C | Calculated Volume of Cup,ml |
| 21.8 | 0.997798 | 1 | 83.23 | 94.41 | 25.0 | 83.43372 |
| | | 2 | 83.24 | 94.52 | Density STD g/ml | |
| | | 3 | 83.28 | 94.50 | | |
| | | Averages | 83.25 | 94.477 | 1.08-1.15 | Pass |
| | | | | | Calculated Density, g/ml | 1.132 |

TRINITY | ERD

## 4. CONCLUSIONS:

4.1 TRINITY | ERD has tested Roadchem 604, as supplied by VSS Asphalt Technologies, for Tensile Stress in accordance with ASTM D412-06a. Test results are outlined in Table 1 herein.

4.2 TRINITY | ERD has tested Roadchem 604 with Roadchem 704/RA-1, both from VSS Asphalt Technologies, for oil absorption in accordance with ASTM D471 and specifications provided by the California Department of Transportation. Test results are outlined in Table 2 herein.

4.3 TRINITY | ERD has tested Roadchem 604, as supplied by VSS Asphalt Technologies, for density in accordance with ASTM D1475-98(08). Test results are outlined in Table 3 herein.

4.4 Review of the data indicates compliance with the client's specified test criteria.

Please contact our office with any questions.

Sincerely,
TRINITY | ERD

Larry E. Good
Laboratory Quality Manager

Charles Phillips
Laboratory Systems Manager

REPORT HISTORY:

| Date | Event | Notes | Authorized By: |
|---|---|---|---|
| 02/05/2009 | Report Issued | None | RN |
| 02/27/2009 | Add Density Test | None | LG |

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# VSS Asphalt Techologies

April 6, 2009

VSS Emultech
3785 Channel Drive
West Sacramento, CA 95691

Re: County of Santa Barbara
2008-2009 Countywide Preventative Maintenance Application
of Scrub Seal and Micro-Surfacing County Project No. 820613
Specification for VSS Asphalt Technologies **Road Chem 704 RA-1**

VSS Asphalt Technologies as the refiner of the recycling agent, certifies that the **Road Chem 704 RA-1** supplied to VSS Emultech for use in the polymer modified rejuvenating emulsion meets the specifications for the above referenced project and the specifications as attached. Compliance was verified by APART, Inc. (Asphalt Pavement and Recycling Techologies, Inc.) The test report is attached.

Best regards,

Kim Volk
Sales Agent
VSS Asphalt Technologies

P.O. BOX 981330 • WEST SACRAMENTO, CA 95798, USA
PHONE (916) 373-1500 • FAX NO. (916) 373-1438

# VSS Asphalt Techologies

**PRODUCT SPECIFICATION**

**RoadChem 704 RA-1**

| | ASTM Test Method | Specification |
|---|---|---|
| **Test** | | |
| Viscosity @ 104 °F, cSt | D2170 | 50-175 |
| Flash Point, °F, COC | D92 | 380 Minimum |
| Saturated Hydrocarbons, %w | D2007 | 30 Maximum |
| Asphaltenes, %w | D2007 | 1.0 Maximum |
| Hot Mix recycling Agent Classification | ASTM D4552 | RA 1 |
| **Test on Residue** | | |
| Weight Change, %w | D2872 | 6.5 Maximum |
| Viscosity Ratio (RTFO/Orig. Vis | D2170 | 3 Maximum |

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# Asphalt Pavement And Recycling Technologies, Inc.
## (APART, Inc.)

5207 Minter Field Avenue — Shafter, CA 93263
Telephone: (661) 393-2748 — Fax: (661) 393-2804
e-mail: apart@hughes.net


Report: 09-0210 — February 12, 2009

Customer: VSS Asphalt Technologies – Sallie Houston

Sample submitted:

1 quart sample of Road Chem 704 RA-1

Requested Testing

Test the submitted sample for specification compliance. The specification was supplied by VSS Asphalt Technologies.

Summary of Testing

The sample was tested as required by the supplied specification. Test procedures and test data are as follows:

| | ASTM Test Method | Test Results | Specification |
|---|---|---|---|
| Viscosity @ 140°F, cSt | D 2170 | 111 | 50-175 |
| Flash Point, °F, COC | D 92 | 432 | 380 Min. |
| Saturated Hydrocarbons, %w | D2007 | 18.2 | 30 Max. |
| Asphaltenes, %w | D 2007 | 0.1 | 1.0 Max. |
| Test on Residue | | | |
| Weight Change, %w | D2872 | -2.53 | 6.5 max. |
| Viscosity Ratio (RTFO/Orig.) | D2170 | 1.20 | 3 Max. |

Conclusion

Reported data indicate that the submitted sample is in compliance to the specification supplied.

Bob Stanard


Test data reported herein has been secured by reliable testing procedures. As we have no knowledge of, or control over the conditions that may affect the use of material from which samples were taken, we assume no responsibility in furnishing this data other than to warrant that they represent reliable measurements of the properties of the sample (s) received and tested. No warranties, expressed or implied, including warranties of merchantability or fitness for a particular use, are made with respect to the products described herein. Nothing contained herein shall constitute a permission or recommendation to practice any invention covered by a patent without license from the owner of the patent.