

September 10, 2020

Board of Public Works and Safety
City of Lafayette, Indiana
20 N. 6th Street
Lafayette, IN 47901

Re: Reclamite Asphalt Rejuvenation 2020

Dear Board Members,

You have before you the Contract with RejuvTec, Inc. for the application of Reclamite Asphalt Rejuvenating Agent. This project will improve and extend the life of the pavement in various areas of the City of Lafayette where the pavement is within 1 to 5 years of having been paved.

RejuvTec is the sole source provider of Reclamite in the State of Indiana as designated by the manufacturer, Tricor Refining LLC.

This project will provide coverage of 231,511.2 square yards of pavement for the estimated price of \$266,237.88. The project will begin after contract approval with completion by the end of 2020.

This contract has been reviewed by the City Attorney and I recommend it for your approval.

Sincerely,

Jeromy L. Grenard, PE
City Engineer

CONTRACT

Reclamite Asphalt Rejuvenation 2020

THIS CONTRACT, made the 15th day of September, 2020, by and between RejuvTec, Inc., hereinafter called the "Contractor", and the City of Lafayette, a municipal corporation, hereinafter call the "Owner", WITNESSETH, that the Contractor and the Owner, for the consideration stated herein, agree as follows:

ARTICLE I SCOPE OF WORK

The Contractor shall perform everything required to be performed and shall provide and furnish all of the labor, materials, necessary tools, equipment, and all utility and transportation services required to perform and complete in a workmanlike manner the service of:

Reclamite Asphalt Rejuvenation 2020

for the Owner, all in strict accordance with Contractor's proposal attached hereto and the Contractor shall do everything required by this Contract and the other documents constituting a part thereof.

ARTICLE II THE CONTRACT PRICE

The Owner shall pay to the Contractor for the performance of this Contract, subject to any additions or deductions provided therein, in current funds, the contract price of Two-hundred-sixty-six thousand, two-hundred-thirty-seven dollars and 88 cents, (\$266,237.88). Payments are to be made to the Contractor in accordance with and subject to the provisions embodied in the documents made a part of this Contract.

ARTICLE III COMPONENT PARTS OF THIS CONTRACT

This Contract consists of the following component parts, all of which are as fully a part of this Contract as if herein set out verbatim or, if not attached, as if hereto attached:

1. General Conditions
2. Contractor's Estimate # 1335
3. Specifications

In the event that any provision in any of the above component parts of this contract conflicts with any provision in any other of the component parts, the provision in the component part first enumerated above shall govern over any other component part which follows it numerically, except as may be otherwise specifically stated.

ARTICLE IV GUARANTEE

The Contractor hereby agrees to protect the Owner against imperfections in materials, equipment and workmanship, which may be or which may become apparent during the period of construction or erection, or which may develop within a period of one (1) year subsequent to the date of final acceptance by the Owner and the Contractor shall, at his own expense, remove and replace in whole or in part any such work, materials, or equipment which may prove defective or unsuitable for the service performed or to be performed and/or which may show unreasonable deterioration within said period, upon the written demand and to the full satisfaction of the Owner.

IN WITNESS WHEREOF, the parties have caused this instrument to be executed on the day and year first above written.

Contractor

By _____

Title _____

CITY OF LAFAYETTE
BY ITS BOARD OF PUBLIC WORKS AND SAFETY

Approved by the Board of Public Works and Safety on the 15th day of September, 2020.

By: _____
Gary Henriott, President

By: _____
Norm Childress, Member

By: _____
Cindy Murray, Member

By: _____
Amy Moulton, Member

By: _____
Ronald Shriner, Member

ATTEST:

Mindy Miller, Deputy Clerk

Date: _____

GENERAL CONDITIONS OF THE CONTRACT

ARTICLE 1 - OWNER'S RIGHTS AND RESPONSIBILITIES

- A. **Owner's Right to Correct Deficiencies:** Upon failure to perform the work in accordance with the Contract Document, including any requirements with respect to the Schedule of Completion and after five (5) days' written notice to the Contractor, the Owner may, without prejudice to any other remedy he may have, correct such deficiencies in work intended to become a permanent part of the project. The cost to correct such deficiencies may be deducted from the payment due the Contractor.
- B. **Suspension of Work by Owner:** The Owner shall have the authority to suspend the work wholly or in part, for such period or periods as he may deem necessary due to unsuitable weather or such other conditions as are considered unfavorable to carry out the provisions of the Contract. No extension of time will be allowed if work is suspended by the failure of the Contractor to comply with the Plans and Specifications.
- C. **Owner's Right to Terminate Agreement and Complete the Work:** The Owner shall have the right to terminate his agreement with the Contractor after giving ten (10) days written notice of termination to the Contractor in the event of any default by the Contractor.
 - 1. **Default by Contractor:** It shall be considered a default by the Contractor whenever he shall:
 - (a) Declare bankruptcy, become insolvent, or assign his assets for the benefit of his creditors.
 - (b) Disregard or violate provisions of the Contract Document or fail to prosecute the work according to the agreed Schedule of Completion, including extensions thereof.
 - (c) Fail to provide a qualified superintendent, competent workmen or subcontractors, or proper materials, or fail to make prompt payment therefor.
 - 2. **Completion by the Owner:** In the event of termination of the Agreement by the Owner because of default by the Contractor, the Owner may take possession of the work and of all materials and equipment thereon and may finish the work by whatever method and means he may select.

ARTICLE 2 - CONTRACTOR'S RIGHTS AND RESPONSIBILITIES

All work shall be done in strict accordance with the Contract Document. Observations, construction reviews, tests, recommendations, or approvals by persons other than the Contractor, shall in no way relieve the Contractor of his obligation to complete all work in accordance with the Contract Document. All work shall be done under the direct supervision of the Contractor. The Contractor shall be responsible for all obligations prescribed as employer obligations under Chapter XVII of Title 29, Code of Federal Regulations, Part 1926, otherwise known as "Safety and Health Regulations for Construction".

- A. Lands by Contractor: Any land and access thereto not specifically shown to be furnished by the Owner that may be required for temporary construction facilities or for storage of materials shall be provided by the Contractor with no liability to the Owner. The Contractor shall confine his apparatus and storage to such additional areas as he may provide at his expense.
1. Private and Public Property: The Contractor shall not enter upon private property for any purpose without obtaining permission from owner of said property. He shall be responsible for the preservation of all public property, trees, monuments, structures and improvements, along and adjacent to the street and/or right-of-way, and shall use every precaution necessary to prevent damage or injury thereto. He shall use suitable precautions to prevent damage to pipes, conduits, and other underground structures, and shall protect carefully from disturbance or damage all monuments and property marks until an authorized agent had witnessed or otherwise referenced their location and shall not remove them until directed.
- B. Subcontracts: At the time set forth in the Contract Document or when requested by the Owner, the Contractor shall submit in writing for review of the Owner the names of the Subcontractors proposed for the work. Subcontractors may not be changed except at the request or with the approval of the Owner. The Contractor is responsible to the Owner for the acts and deficiencies of his Subcontractors and of their direct and indirect employees to the same extent as he is responsible for the acts and deficiencies of his employees. The Contract Document shall not be construed as creating any contractual relation between any Subcontractor and the Owner. The Contractor shall bind every Subcontractor by the terms of the Contract Document.
- C. Contractor's Right to Suspend Work or Terminate Agreement: Contractor may suspend work or terminate his Agreement with the Owner upon ten (10) days' written notice to the Owner for any of the following reasons:
1. If an order of any court or other public authority caused the work to be stopped or suspended for a period of ninety (90) days through no act or fault of the Contractor or his employees.
2. If the Owner should fail to act upon any Request for Payment within thirty (30) days after it is presented in accordance with the General Conditions of the Contract.

ARTICLE 3 - ORAL AGREEMENTS

No oral order, objection, claim or notice by any party to the others shall affect or modify any of the terms or obligations contained in the Contract Document, and none of the provisions of the Contract Document shall be held to be waived or modified by reason of any act whatsoever, other than by a definitely agreed waiver or modification thereof in writing, and no evidence shall be introduced in any proceeding of any other waiver or modification.

ARTICLE 4 - MATERIALS AND EQUIPMENT

The materials and equipment installed in the work shall meet the requirements of the Contract Document. All materials and equipment not otherwise specifically indicated shall be furnished by the Contractor. Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, heat, light and power, etc. all necessary to the execution of the work. Unless otherwise specified, all material shall be new and both workmanship and material shall be of good quality.

ARTICLE 5 - INSURANCE

The Contractor shall not commence any work until he obtains, at his own expense, all required insurance. Such insurance must have the approval of the Owner as to limit, form, and amount. The Contractor shall not permit any Subcontractor to commence work on this project until the same insurance requirements have been complied with by each Subcontractor.

- A. Types: The types of insurance the Contractor is required to obtain and maintain, for the full period of the Contract, will be: Workmen's Compensation Insurance, Comprehensive General Liability Insurance as detailed in the following portions of this specification as applicable.
- B. Evidence: As evidence of specified insurance coverage, the Owner may, in lieu of actual policies, accept certificates issued by the insurance carrier showing such policies in force for the specified period. Each policy or certificate will bear an endorsement or statement waiving right of cancellation or reduction in coverage without thirty (30) days' notice in writing to be delivered by registered mail to the Owner. Should any policy be canceled before final payment by the Owner to the Contractor and the Contractor fails immediately to procure other insurance as specified, the Owner reserves the right to procure such insurance and to deduct the cost thereof from any sum due the Contractor under this Contract.
- C. Adequacy of Performance: Any insurance bearing on adequacy of performance shall be maintained after completion of the project for the full guaranty period. Should such insurance be cancelled before the end of the guaranty period and the Contractor fails immediately to procure other insurance as specified, the Owner reserves the right to procure such insurance and to charge the cost thereof to the Contractor.
- D. Payment of Damages: Nothing contained in these insurance requirements is to be construed as limiting the extent of the Contractor's responsibility for payment of damages resulting from his operations under this Contract.

ARTICLE 6 - WORKMEN'S COMPENSATION INSURANCE

Before the Agreement between the Owner and the Contractor is entered into, the Contractor shall submit written evidence that he and all Subcontractors have obtained, for the period of the Contract, full Workmen's Compensation Insurance coverage for all persons whom he employs or may employ in carrying out the work under this Contract. This insurance shall be in strict accordance with the requirements of the most current and applicable state Workmen's Compensation Insurance Laws. The Contractor shall provide a Waiver of Subrogation in favor of the Owner.

ARTICLE 7 - COMPREHENSIVE GENERAL LIABILITY INSURANCE

Before commencement of the work the Contractor shall submit written evidence that he and all his Subcontractors have obtained for the period of the Contract, full Comprehensive General Liability Insurance (including automobile) coverage with a combined single limit of \$2,000,000. Owner shall be named as Additional Insured. Contractor's insurance shall be written on a "primary" basis and the Owner's insurance program shall be in excess of all of Contractor's available coverage.

ARTICLE 8 - INDEMNITY

The Contractor shall hold harmless, indemnify and defend the Owner and its employees and agents, from any and all liability claims, losses or damage arising or alleged to arise from the performance of the work described herein, but not including the sole negligence of the Owner.

ARTICLE 9 - PERMITS

All permits and licenses (except as listed hereafter) necessary for the prosecution of the work shall be secured and paid for by the Contractor.

The permits for construction within or across public or private property, rights-of-way or easements of highways, railroads, gas lines, electric power transmission lines, water lines, telephone lines, telegraph lines, levees, or other utilities shall be secured and paid for by the Owner, excepting any bonds or insurance required by the affected agency or utility.

ARTICLE 10 - ASSIGNMENT OF CONTRACT

Neither the Contractor nor the Owner shall sublet, sell, transfer, assign, or otherwise dispose of the Contract or any portion thereof, or of his right, title or interest therein, or his obligations thereunder, without written consent of the other party.

ARTICLE 11 - WARNING SIGNS AND BARRICADES

The Contractor shall provide adequate signs, barricades, warning lights and watchmen and take all necessary precautions for the protection of the work and safety of the public. All barricades and obstructions shall be protected at night by suitable signal lights which shall be kept operative from sunset to sunrise. Barricades shall be of substantial construction and shall be painted such as to increase their visibility at night. Suitable warning signs shall be so placed and illuminated at night as to show in advance where construction, barricades or detours exist.

ARTICLE 12 - PUBLIC CONVENIENCE

The Contractor shall at all times conduct his work so as to insure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of the work, and to insure the protection of persons and property. No road or street shall be closed to the public except with the permission of the proper authorities. Fire hydrants on or adjacent to the work shall be kept accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the Contractor to insure the use of sidewalks and the proper functioning of all gutters, sewer inlets, drainage ditches, and irrigation ditches, which shall not be obstructed.

ARTICLE 13 - SAFETY

In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property affected directly or indirectly by his operations during the performance of the work. This requirement will apply continuously 24 hours per day until acceptance of the work by the Owner and shall not be limited to normal working hours.

ARTICLE 14 - NONDISCRIMINATION IN EMPLOYMENT

Pursuant to Indiana and Federal law, the Contractor shall agree that during the performance of this Contract:

- A. The Contractor, or any Subcontractor, or any person acting on behalf of the Contractor, or any Subcontractor shall not, in the hiring of employees for performance of work under this Contract or any Subcontract hereunder, discriminate by reason of race, color, religion, sex, disability, creed or national origin against any person who is qualified and available to perform the work to which the employment is related.
- B. The Contractor, or any Subcontractor, or any person acting on behalf of the Contractor or Subcontractor shall not, in any manner, discriminate against or intimidate any employee hired for performance of work under this Contract on account of race, color, creed or national origin.
- C. That the Contract may be canceled or terminated by the Owner and all money due or to become due hereunder may be forfeited, for violation of the terms or conditions of this section of this Contract.

ARTICLE 15 - CHANGES IN THE WORK (CHANGE ORDER)

The Owner may, as the need arises, order changes in the work through additions, deletions, or modifications in the appropriate proportion of the Contract Amount, without invalidating the Contract. Compensation and time of completion affected by the change shall be adjusted at the time of ordering such change.

ARTICLE 16 - REMOVAL OF CONSTRUCTION EQUIPMENT, TOOLS AND SUPPLIES

At the termination of this Contract, before acceptance of the work by the Owner, the Contractor shall remove all of his equipment, tools and supplies from the property of the Owner. Should the Contractor fail to remove such equipment, tools and supplies, the Owner shall have the right to remove them at the expense of the Contractor.

ARTICLE 17 - CLEANING UP

The Contractor shall remove from the Owner's property, and from all public and private property, all temporary structures, rubbish, and waste materials resulting from his operation or caused by his employees, and shall remove all surplus materials leaving the site smooth, clean and true to line and grade.

ARTICLE 18 - CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT

The making of the final payment by the Owner to the Contractor shall not relieve the Contractor of responsibility for faulty materials or workmanship. The Contractor shall promptly replace any such defects discovered within one year from the date of written acceptance of the work.

ARTICLE 19 - REQUESTS FOR PAYMENT

The Contractor may submit to the Owner periodically, but not more than once each month, a Request for Payment for work done and materials delivered to and stored on the site. The Contractor shall furnish the Owner all reasonable information required for obtaining the necessary data relative to the progress and execution of the work. Payment for materials stored on the site will be conditioned upon evidence submitted to establish the Owner's title to such materials. Each Request for Payment shall be computed on the basis of work completed on all items listed in the Detailed Breakdown of Contract (or on unit prices, as the case may be), less previous payments.

ARTICLE 20 - ACCEPTANCE AND FINAL PAYMENT

When the Contractor has completed the work in accordance with the terms of the Contract Document, he shall certify completion of the work to the Owner and submit a final Request for Payment, which shall be the Contract Amount plus all approved additions, less all approved deductions and less previous payments made. The Contractor shall furnish evidence that he has fully paid all debts for labor, materials, and equipment incurred in connection with the work, and upon acceptance by the Owner, the Owner will release the Contractor, any legal rights of the Owner, required guaranties, and will pay the Contractor's final Request for Payment.

ARTICLE 21 – INVESTING IN IRAN

Pursuant to Indiana Code 5-12-16.5, Contractor is required to certify under penalties of perjury that it does not engage in investment activities in Iran as more particularly described in Indiana Code 5-22-16.5.

ARTICLE 22 - E-VERIFY

Contractor must enroll in and verify the work eligibility status of all newly hired employees of the Contractor through the E-Verify program operated by the United States Department of Homeland Security. If the E-Verify program ceases to exist, the Contractor will not be required to verify the work eligibility status of newly hired employees through the E-Verify program. The Contractor affirms under penalties for perjury that the Contractor does not knowingly employ an unauthorized alien.

ARTICLE 23 – TOBACCO FREE POLICY

Contractor, subcontractors and suppliers shall comply with the City of Lafayette's Tobacco Free Workplace Policy while on the job-site.

RejuvTec, Inc.

1316 Deloss St.
Indianapolis, IN 46203

Estimate

Date	Estimate #
9/8/2020	1335

Name / Address
Lafayette, City of 20 North 6th Street Lafayette, IN.47901 Attn: Jeromy Grenard

			Project
Description	Qty	Rate	Total
Reclamite Preservative Sealing Furnish and apply Reclamite rejuvenating agent as a preservative seal per industry standards titled "Standard Specifications for Asphalt Maintenance with an Asphalt Rejuvenating Agent" to the list of candidate roads below	231,511.2	1.08	250,032.10
Sagamore Pkwy: Teal Road to 900' N. of Greenbush 78613.3 sqyds Beck Ln: Old US 231 to Sequoya Dr 40245.3 sqyds Brady Ln: 18th St to Concord Rd 25900 sqyds Greenbush St.: Erie St. to Elmwood Ave 7593.1 sqyds South St.: 2nd St. to 31st St 33066.7 sqyds Salem St.: Bridge over 4th St to Union St. 21194.4 sqyds Fannon Dr connector: Salem St. to 3rd St. 2222.2 sqyds Brown St.: 3rd St. to 13th St. 9715 sqyds 3rd St.: Columbia St. to North St. 4111.1 sqyds Old Romney Rd: US52/Teal Rd W to Twyckenham Blvd 8850 sqyds			
Sweeping	231,511.2	0.07	16,205.78
		Subtotal	\$266,237.88
		Sales Tax (0.00)	\$0.00
		Total	\$266,237.88



Purchasing Department
20 N. 6th Street
Lafayette, IN 47901

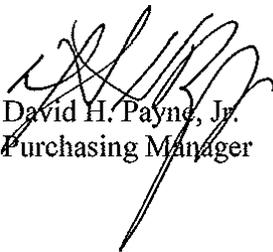
August 10, 2020

Rex Hedges
Rejuvtec, Inc.
1316 Deloss St.
Indianapolis, IN 46203
Re: Sole Source Supplier – Rejuvtec, Inc.

Dear Mr. Hedges,

I am in receipt of a copy of a letter dated June 1st, 2020 from John Church, Marketing Manager for Tricor Refining, LLC which states that Rejuvtec, Inc. is the exclusive source for Reclamite Preservative Seal Asphalt Rejuvenator in the State of Indiana. Based on the fact that Rejuvtec, Inc. has a defined relationship with Tricor Refining, LLC and has preferential rights to a defined sales territory in the State of Indiana and based on Indiana Code 5-22-10-13, I hereby find and have determined that Rejuvtec., Inc. is the only source available to the City of Lafayette, IN for Reclamite Preservative Seal Asphalt Rejuvenator which is needed and will be used by the City of Lafayette, Indiana.

Sincerely,



David H. Payne, Jr.
Purchasing Manager

Cc: Jeromy Grenard, City Engineer



Office of the City Engineer

20 North 6th Street • Lafayette, Indiana 47901-1412

Phone 765-807-1050 • FAX 765-807-1049

TO: Dave Payne
Purchasing Director

FROM: Jeromy L. Grenard, PE
City Engineer

RE: Sole Source Provider – Reclamite Asphalt Rejuvenator

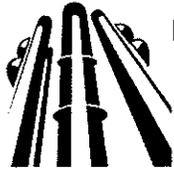
DATE: August 7, 2020

The Engineering Department has been seeking an alternate method of pavement preservation to add to our current toolbox of crack sealing, resurfacing, and reconstruction. Crack sealing is a very cost-effective treatment, but it only works once cracks have formed. Resurfacing is costly, and we do not have the budget available to resurface all 296 centerline miles of roadway on a 10-year rotating basis. Reconstruction is over 10 times more expensive than resurfacing.

After considerable research, we have identified a pavement treatment (asphalt rejuvenator) that is generally applied to pavements that are within 1 to 5 years of having been paved. These are pavements that are still in good condition, and this rejuvenator's purpose is to extend the amount of time between resurfacing.

It appears that there are several products on the market in a similar price range that claim to be rejuvenators; however, Reclamite is the only known product that is comprised only of asphalt maltenes. This is the component within the surface of the asphalt that causes it to remain pliable and resist cracking and potholes. Over time, the maltenes in the surface of the pavement are broken down by sunlight and other environmental factors. Reclamite, when sprayed on the surface and allowed to be absorbed by the pavement, restores these maltenes, makes the pavement less susceptible to cracking and water absorption, and adds years of life to the pavement.

Attached, you will find a letter from the manufacturer of Reclamite, Tricor Refining, LLC, that states that RejuvTec is the sole source applicator of Reclamite within the state of Indiana. You will also find the specification and other documentation for Reclamite.



TRICOR REFINING, LLC

Producers of GOLDEN BEAR PRESERVATION PRODUCTS

1134 Manor St. • Oildale, CA 93308 / P.O. Box 5877 • Bakersfield, CA 93388
Phone 661.393.7110 – Fax 661.393.1601

June 1, 2020

Lafayette, City of
Jeromy Grenard, City Engineer
20 N. 6th Street
Lafayette, IN 47901

RE: Sole Source Provider for Asphalt Rejuvenating Agent 2020

This letter is to advise that Tricor Refining, LLC has appointed Rejuvtec, Inc., Indianapolis, IN to market and apply Reclamite® Preservative Seal as the sole source applicator in the State of Indiana. Rejuvtec, Inc. has the necessary equipment and product familiarity to provide a successful application. Rejuvtec can assist in project section and correct application rates, dilution rates for the product. It is very important to Tricor Refining that we work with marketers and applicators that go beyond just the application. Tricor has worked with Rejuvtec, Inc. and Rex Hedges for over 30 years

The contact information for Rejuvtec, Inc. is as follows:

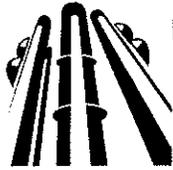
Rex Hedges
Rejuvtec, Inc.
1316 Deloss St.
Indianapolis, IN 46203
Phone: 317.241.9023

Tricor Refining, LLC – Reclamite® Preservative Seal is the only maltene based asphalt rejuvenator marketed nationally with a 50 year history of product use. Reclamite® has been proven in various testing by state, county and government agencies to decrease viscosity and increase penetration value of the asphalt.

Please feel free to contact me if you have any questions regarding the use of Reclamite®.

Respectfully,

John Church
Tricor Refining, LLC
Marketing Manager
johnc@tricorrefining.com



TRICOR REFINING, LLC

Producers of GOLDEN BEAR PRESERVATION PRODUCTS

1134 Manor St. • Bakersfield, CA 93308 / P.O. Box 5877 • Bakersfield, CA 93388-5877
Cell Phone 661.337.9979 tricorrefining.com

Date: June 1, 2020

To: Lafayette, City of

Jeromy Grenard, City Engineer

20 N. 6th Street

Lafayette, IN 47901

CERTIFICATE OF COMPLIANCE

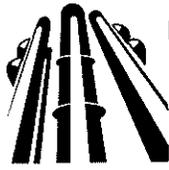
We certify that the Tricor asphalt rejuvenator Reclamite® meets the requirements per the attached specification.

Referencing: Reclamite® Asphalt Rejuvenator

Please let me know if you require further information.

Respectfully,

John Church
Marketing Manager
Tricor Refining, LLC
Cell: 760.600.6486
Email: johnc@tricorrefining.com



TRICOR REFINING, LLC

Producers of GOLDEN BEAR PRESERVATION PRODUCTS

1134 Manor St. • Oildale, CA 93308 / P.O. Box 5877 • Bakersfield, CA 93388
 Phone 661.393.7110 – Fax 661.393.1601

RECLAMITE® Asphalt Rejuvenating Agent

Specifications:

Tests	Test Method		Requirements	
	ASTM	AASHTO	Min.	Max.

Tests on Emulsion:

Viscosity @ 25°C, SFS	D-244	T-59	15	40
Residue, % w ⁽¹⁾	D-244 (mod)	T-59 (mod)	60	65
Miscibility Test ⁽²⁾	D-244 (mod)	T-59 (mod)	No Coagulation	
Sieve Test, % w ⁽³⁾	D-244 (Mod)	T-59 (mod)	---	0.1
Particle Charge Test	D-244	T-59	Positive	
Percent Light Transmittance ⁽⁴⁾	GB	GB	---	30
Cement Mixing	D-244			2.0

Tests on Residue from Distillation

Flash Point, COC, °C	D-92	T-48	196	---
Viscosity @ 60°C, cSt	D-445	---	100	200
Asphaltenes, %w	D-2006-70	---		0.75
Maltene Distribution Ratio	D-2006-70	---	0.3	0.6
$\frac{PC + A_1}{S + A_2}$ ⁽⁵⁾				
PC/S Ratio ⁽⁵⁾	D-2006-70	---	0.5	---
Saturate hydrocarbons, S ⁽⁵⁾	D-2006-70	---	21	28

¹ASTM D-244 Evaporation Test for percent of residue is made by heating 50 gram sample to 149°C (300°F) until foaming ceases, then cool immediately and calculate results.

²Test procedure identical with ASTM D-244 60 except that .02 Normal Calcium Chloride solution shall be used in place of distilled water..

³Test procedure identical with ASTM D-244 60 except that distilled water shall be used in place of two percent sodium oleate solution.

⁴Test procedure is attached.

⁵Chemical composition by ASTM Method D-2006-70:

PC = Polar Compounds, A₁ = First Acidaffins.
 A₂ = Second Acidaffins, S = Saturated Hydrocarbons.

Note: For gal/ton conversion use 242 gal/ton.

Note: Data presented are typical. Slight variation may occur from lot to lot.