



Industrial Tank Field Report

GROUP INFO: MUSC Health DATE: 7-2-19
CUSTOMER: MUSC INFO-OTHER: University Tanks
FACILITY: Building 500
ADDRESS: 118 Jonathan Lucas St. MSC 190, Charleston, SC 29425
CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0432
EMAIL: burtd@musc.edu, Longmat@musc.edu CELL: (843) 792-3531
Unit Id : 500-FT-33 Type : UST Capacity : 20,000 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- ☒ Annual/Pre-Clean
☐ Post Clean
☐ None

SERVICES PERFORMED:

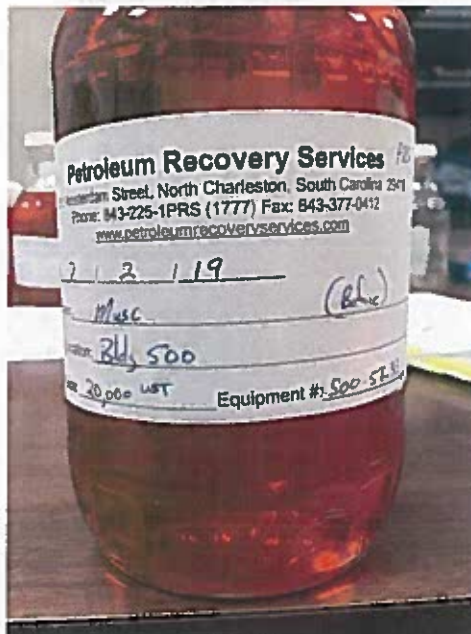
- ☐ Maintenance
☐ STI 001 Inspection
☐ Tank Cleaning
☐ Bottom Sweep
☒ Pre-clean Lab Analysis
☐ Post-clean Lab Analysis

Fuel Treatment:

- ☒ HydroClean
☐ ILFC 1032
☐ Biocide Predator 6000
☐ None

Exterior Tank Condition:

- ☒ Good ☐ Bad
☐ Recommend Inspection



PARTS CONDITION:

- | | | |
|--|------------------------------|---|
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A -Fill Cap |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Vent |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A -Fill Port |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A -Sump |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Spill Bucket |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gauge |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gaskets |

CONTAMINANTS FOUND:

- ☒ Pre-Clean ☐ Post Clean
☐ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☒ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

- ☒ Pre-Clean ☐ Post Clean
☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS:

Picture of the before cleaning sample

SERVICE TECHNICIAN: Ron and Steven

DATE: 7-2-19

877-252-6396 (Toll Free) • 843-225-1777 • 843-377-0412 (Fax)
4310 Amsterdam St., N. Charleston, SC 29418
www.petroleumrecoveryservices.com



Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 500-FT-33
Sample ID: 500-FT-33
PO: 632487
WO: MUSC-University - Pre

Sample Collection Date: 07/2/2019
Date Received: 07/15/2019
Date Released: 07/18/2019
Component Make:
Component Model: UST
Tank Capacity: 20,000 g
Quantity in Tank:
Test Package: Petroleum Recovery Pkg.
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	37
Cetane Number		ASTM D613	44.4
Cloud Point	report °C	ASTM D2500-99	-10
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.22
Distillation, 90%	282 - 338 °C	ASTM D86-08a	306.67
Flash Point	52 °C minimum	ASTM D93-10	74.44
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	1.3
Sulfur	15 ppm maximum	ASTM D5453-09	80
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	45

Comments

High Sulfur: Too much sulfur can cause wear in diesel engines as a result of the corrosive nature of its combustion by-products. It also increases the amount of deposits in the combustion chamber and on the pistons. ASTM sets limits at 15ppm ULSD, 500ppm LSD & 5,000 High Sulfur.

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.



Industrial Tank Field Report

GROUP INFO: MUSC Health DATE: 8/15/19
CUSTOMER: MUSC INFO-OTHER: University Tanks
FACILITY: Building 520 (CAT Gen Day-MRE #1)
ADDRESS: 119 Jonathan Lucas St. MSC 190, Charleston, SC 29425
CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0433
EMAIL: burtd@musc.edu, Longmat@musc.edu CELL: (843) 792-3532
Unit Id : 520-01-1DT Type : AST Capacity : 300 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

☐ Annual/Pre-Clean
☒ Post Clean
☐ None

SERVICES PERFORMED:

☐ Maintenance
☐ STI 001 Inspection
☒ Tank Cleaning
☐ Bottom Sweep
☐ Pre-clean Lab Analysis
☒ Post-clean Lab Analysis

Fuel Treatment:

☒ HydroClean
☐ ILFC 1032
☐ Biocide Predator 6000
☐ None



Exterior Tank Condition:

☒ Good ☐ Bad
☐ Recommend Inspection

PARTS CONDITION:

<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A -Fill Cap
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Vent
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A -Fill Port
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A -Sump
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Spill Bucket
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gauge
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gaskets

CONTAMINANTS FOUND:

☐ Pre-Clean ☒ Post Clean
☒ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☐ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

☐ Pre-Clean ☒ Post Clean
☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS: This is your after cleaning sample

SERVICE TECHNICIAN: Mike and Tommie

DATE: 8/15/19

877-252-6396 (Toll Free) • 843-225-1777 • 843-377-0412 (Fax)
4310 Amsterdam St., N. Charleston, SC 29418
www.petroleumrecoveryservices.com



Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 520-01-1DT
Sample ID: 520-01-1DT
PO: 632519
WO: MUSC - University - Post

Sample Collection Date: 08/15/2019
Date Received: 08/23/2019
Date Released: 08/30/2019
Component Make:
Component Model: AST
Tank Capacity: 300 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	37
Cetane Index	40 minimum	ASTM D976-01	44.5
Cloud Point	report °C	ASTM D2500-99	-9
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.22
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.22
Flash Point	52 °C minimum	ASTM D93-10	64.44
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	1.3
Sulfur	15 ppm maximum	ASTM D5453-09	83
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	71

Comments

High Sulfur: Too much sulfur can cause wear in diesel engines as a result of the corrosive nature of its combustion by-products. It also increases the amount of deposits in the combustion chamber and on the pistons. ASTM sets limits at 15ppm ULSD, 500ppm LSD & 5,000 High Sulfur.

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

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Industrial Tank Field Report

GROUP INFO: MUSC Health

DATE: 7-3-19

CUSTOMER: MUSC

INFO-OTHER: University Tanks

FACILITY: Building 520 (CAT Gen Day-MRE #2)

ADDRESS: 120 Jonathan Lucas St. MSC 190, Charleston, SC 29425

CONTACT: Rick Burt, Matthew Long

PHONE: 843-323-0434

EMAIL: burtld@musc.edu, Longmat@musc.edu

CELL: (843) 792-3533

Unit Id : 520-01-2DT

Type : AST

Capacity : 300

Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- ☒ Annual/Pre-Clean
☐ Post Clean
☐ None

SERVICES PERFORMED:

- ☐ Maintenance
☐ STI 001 Inspection
☐ Tank Cleaning
☐ Bottom Sweep
☒ Pre-clean Lab Analysis
☐ Post-clean Lab Analysis

Fuel Treatment:

- ☒ HydroClean
☐ ILFC 1032
☐ Biocide Predator 6000
☐ None

Exterior Tank Condition:

- ☒ Good ☐ Bad
☐ Recommend Inspection



PARTS CONDITION:

- | | | | |
|--|------------------------------|------------------------------|----------------|
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A | -Fill Cap |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A | - Vent |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A | -Fill Port |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A | -Sump |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A | - Spill Bucket |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A | - Gauge |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A | - Gaskets |

CONTAMINANTS FOUND:

- ☒ Pre-Clean ☐ Post Clean
☐ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☒ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

- ☒ Pre-Clean ☐ Post Clean
☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS:

Picture of the before cleaning sample

SERVICE TECHNICIAN: Ron and Steven

DATE: 7-3-19

877-252-6396 (Toll Free) • 843-225-1777 • 843-377-0412 (Fax)
4310 Amsterdam St., N. Charleston, SC 29418
www.petroileumrecoveryservices.com



Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 520-01-2DT
Sample ID: 520-01-2DT
PO: 632487
WO: MUSC-University - Pre

Sample Collection Date: 07/3/2019
Date Received: 07/15/2019
Date Released: 07/18/2019
Component Make:
Component Model: AST
Tank Capacity: 300 g
Quantity in Tank:
Test Package: Petroleum Recovery Pkg.
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	37
Cetane Index	40 minimum	ASTM D976-01	44.4
Cloud Point	report °C	ASTM D2500-99	-11
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.22
Distillation, 90%	282 - 338 °C	ASTM D86-08a	306.67
Flash Point	52 °C minimum	ASTM D93-10	72.22
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	6.7
Sulfur	15 ppm maximum	ASTM D5453-09	86
Visual Appearance	Visual	ASTM D4176-04	Clear, Few Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.005
Water by Karl Fischer	report in ppm	ASTM D6304-16	47

Comments

High Sulfur: Too much sulfur can cause wear in diesel engines as a result of the corrosive nature of its combustion by-products. It also increases the amount of deposits in the combustion chamber and on the pistons. ASTM sets limits at 15ppm ULSD, 500ppm LSD & 5,000 High Sulfur.

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

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915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health DATE: 7-3-19
CUSTOMER: MUSC INFO-OTHER: University Tanks
FACILITY: Building 520 MRE (520-FT-35)
ADDRESS: 121 Jonathan Lucas St. MSC 190, Charleston, SC 29425
CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0435
EMAIL: burtd@musc.edu, Longmat@musc.edu CELL: (843) 792-3534
Unit Id : 520-FT-41 Type : UST Capacity : 40,000 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

☒ Annual/Pre-Clean
☐ Post Clean
☐ None

SERVICES PERFORMED:

☐ Maintenance
☐ STI 001 Inspection
☐ Tank Cleaning
☐ Bottom Sweep
☒ Pre-clean Lab Analysis
☐ Post-clean Lab Analysis

Fuel Treatment:

☒ HydroClean
☐ ILFC 1032
☐ Biocide Predator 6000
☐ None

Exterior Tank Condition:

☒ Good ☐ Bad
☐ Recommend Inspection



PARTS CONDITION:

<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A -Fill Cap
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Vent
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A -Fill Port
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A -Sump
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Spill Bucket
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gauge
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gaskets

CONTAMINANTS FOUND:

☒ Pre-Clean ☐ Post Clean
☐ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☒ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

☒ Pre-Clean ☐ Post Clean
☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS: Picture of the before cleaning sample

SERVICE TECHNICIAN: Ron and Steven

DATE: 7-3-19

877-252-6396 (Toll Free) • 843-225-1777 • 843-377-0412 (Fax)
4310 Amsterdam St., N. Charleston, SC 29418
www.petroleumrecoveryservices.com



Certificate of Analysis

Laboratory Number: 71519519

Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 520-FT-41
Sample ID: 520-FT-41
PO: 632487
WO: MUSC-University - Pre

Sample Collection Date: 07/3/2019
Date Received: 07/15/2019
Date Released: 07/18/2019
Component Make:
Component Model: UST
Tank Capacity: 40,000 g
Quantity in Tank:
Test Package: Petroleum Recovery Pkg.
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	47.5
Cloud Point	report °C	ASTM D2500-99	-10
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	247.22
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.78
Flash Point	52 °C minimum	ASTM D93-10	64.44
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	3.3
Sulfur	15 ppm maximum	ASTM D5453-09	5
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	57

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

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915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health

DATE: 8/15/19

CUSTOMER: MUSC

INFO-OTHER: University Tanks

FACILITY: Building 525 (Dental Bldg CDM Gen)

ADDRESS: 122 Jonathan Lucas St. MSC 190, Charleston, SC 29425

CONTACT: Rick Burt, Matthew Long

PHONE: 843-323-0436

EMAIL: burtd@musc.edu, Longmat@musc.edu

CELL: (843) 792-3535

Unit Id : 525-01-139DT

Type : SBT

Capacity : 300

Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- ☐ Annual/Pre-Clean
☒ Post Clean
☐ None

SERVICES PERFORMED:

- ☐ Maintenance
☐ STI 001 Inspection
☒ Tank Cleaning
☐ Bottom Sweep
☐ Pre-clean Lab Analysis
☒ Post-clean Lab Analysis

Fuel Treatment:

- ☒ HydroClean
☐ ILFC 1032
☐ Biocide Predator 6000
☐ None



Exterior Tank Condition:

- ☒ Good ☐ Bad
☐ Recommend Inspection

PARTS CONDITION:

- | | | | |
|--|------------------------------|------------------------------|----------------|
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A | •Fill Cap |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A | - Vent |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A | -Fill Port |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A | -Sump |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A | - Spill Bucket |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A | - Gauge |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A | - Gaskets |

CONTAMINANTS FOUND:

- ☐ Pre-Clean ☒ Post Clean
☒ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☐ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

- ☐ Pre-Clean ☒ Post Clean
☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS: Photo shows after cleaning sample

SERVICE TECHNICIAN: Mike & Tommie

DATE: 8/15/19

877-252-6396 (Toll Free) • 843-225-1777 • 843-377-0412 (Fax)
4310 Amsterdam St., N. Charleston, SC 29418
www.petroleumrecoveryservices.com



Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 525-01-139DT
Sample ID: 525-01-139DT
PO: 632519
WO: MUSC - University - Post

Sample Collection Date: 08/15/2019
Date Received: 08/23/2019
Date Released: 08/30/2019
Component Make:
Component Model: AST
Tank Capacity: 300 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	37
Cetane Index	40 minimum	ASTM D976-01	44.5
Cloud Point	report °C	ASTM D2500-99	-10
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.22
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.22
Flash Point	52 °C minimum	ASTM D93-10	75.56
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	4
Sulfur	15 ppm maximum	ASTM D5453-09	33
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	73

Comments

High Sulfur: Too much sulfur can cause wear in diesel engines as a result of the corrosive nature of its combustion by-products. It also increases the amount of deposits in the combustion chamber and on the pistons. ASTM sets limits at 15ppm ULSD, 500ppm LSD & 5,000 High Sulfur.

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

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Industrial Tank Field Report

 GROUP INFO: MUSC Health

 DATE: 7-24-2019

 CUSTOMER: MUSC

 INFO-OTHER: University Tanks

 FACILITY: Building 700 (CHRP Bldg - Day Tank)

 ADDRESS: 123 Jonathan Lucas St. MSC 190, Charleston, SC 29425

 CONTACT: Rick Burt, Matthew Long

 PHONE: 843-323-0437

 EMAIL: burtd@musc.edu, Longmat@musc.edu

 CELL: (843) 792-3536

 Unit Id : 700-01-AADT

 Type : AST

 Capacity : 350

 Material: Dsl

 Last Tank Service: 2018
FUEL SAMPLE TAKEN:

- ☒ Annual/Pre-Clean
☐ Post Clean
☐ None

SERVICES PERFORMED:

- ☐ Maintenance
☐ STI 001 Inspection
☐ Tank Cleaning
☐ Bottom Sweep
☒ Pre-clean Lab Analysis
☐ Post-clean Lab Analysis

Fuel Treatment:

- ☒ HydroClean
☐ ILFC 1032
☐ Biocide Predator 6000
☐ None


Exterior Tank Condition:

- ☒ Good ☐ Bad
☐ Recommend Inspection

PARTS CONDITION:

- | | | |
|--|------------------------------|---|
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A -Fill Cap |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Vent |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A -Fill Port |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A -Sump |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Spill Bucket |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gauge |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gaskets |

CONTAMINANTS FOUND:

- ☒ Pre-Clean ☐ Post Clean
☒ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☐ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

- ☒ Pre-Clean ☐ Post Clean
☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

 COMMENTS: This is your before cleaning sample

 SERVICE TECHNICIAN: Steven

 DATE: 7-24-2019



Certificate of Analysis

Laboratory Number: 80219529

Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 700-01-AADT
Sample ID: 700-01-AADT
PO: 632502
WO: MUSC - University - Pre

Sample Collection Date: 07/24/2019
Date Received: 08/2/2019
Date Released: 08/7/2019
Component Make:
Component Model: AST
Tank Capacity: 350 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	37
Cetane Index	40 minimum	ASTM D976-01	44
Cloud Point	report °C	ASTM D2500-99	-11
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	241.11
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.78
Flash Point	52 °C minimum	ASTM D93-10	85.56
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	3.3
Sulfur	15 ppm maximum	ASTM D5453-09	7
Visual Appearance	Visual	ASTM D4176-04	Slightly Cloudy, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	85

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health

DATE: 7-2-19

CUSTOMER: MUSC

INFO-OTHER: University Tanks

FACILITY: Building 700 (CHRP Bldg - Main Tank)

ADDRESS: 124 Jonathan Lucas St. MSC 190, Charleston, SC 29425

CONTACT: Rick Burt, Matthew Long

PHONE: 843-323-0438

EMAIL: burt@musc.edu, Longmat@musc.edu

CELL: (843) 792-3537

Unit Id : 700-FT-14

Type : AST

Capacity : 5,000

Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- ☒ Annual/Pre-Clean
☐ Post Clean
☐ None

SERVICES PERFORMED:

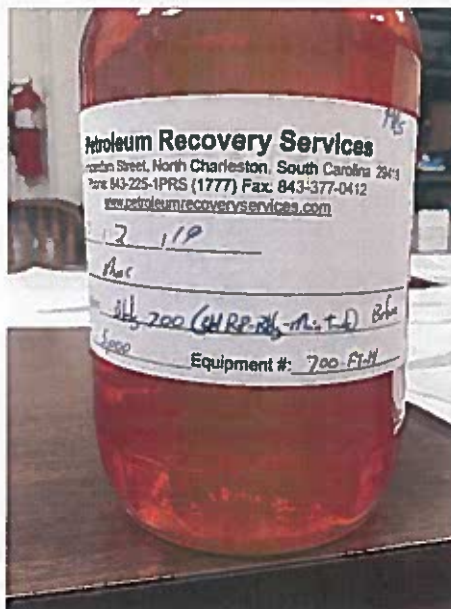
- ☐ Maintenance
☐ STI 001 Inspection
☐ Tank Cleaning
☐ Bottom Sweep
☒ Pre-clean Lab Analysis
☐ Post-clean Lab Analysis

Fuel Treatment:

- ☒ HydroClean
☐ ILFC 1032
☐ Biocide Predator 6000
☐ None

Exterior Tank Condition:

- ☒ Good ☐ Bad
☐ Recommend Inspection



PARTS CONDITION:

- | | | |
|--|------------------------------|---|
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Cap |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Vent |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Port |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Sump |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Spill Bucket |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gauge |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gaskets |

CONTAMINANTS FOUND:

- ☒ Pre-Clean ☐ Post Clean
☐ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☒ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

- ☒ Pre-Clean ☐ Post Clean
☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS: Picture of the before cleaning sample

SERVICE TECHNICIAN: Ron and Steven

DATE: 7-2-19

877-252-6396 (Toll Free) • 843-225-1777 • 843-377-0412 (Fax)
4310 Amsterdam St., N. Charleston, SC 29418
www.petroleumrecoveryservices.com



Certificate of Analysis

Laboratory Number: 71619521

Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 700-FT-14
Sample ID: 700-FT-14
PO: 632488
WO: MUSC-University - Pre

Sample Collection Date: 07/2/2019
Date Received: 07/16/2019
Date Released: 07/19/2019
Component Make:
Component Model: AST
Tank Capacity: 5,000 g
Quantity in Tank:
Test Package: Petroleum Recovery Pkg.
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	36
Cetane Index	40 minimum	ASTM D976-01	42.8
Cloud Point	report °C	ASTM D2500-99	-11
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.22
Distillation, 90%	282 - 338 °C	ASTM D86-08a	306.67
Flash Point	52 °C minimum	ASTM D93-10	74.44
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	2
Sulfur	15 ppm maximum	ASTM D5453-09	8
Visual Appearance	Visual	ASTM D4176-04	Clear, Few Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	106

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health

DATE: 7-24-2019

CUSTOMER: MUSC

INFO-OTHER: University Tanks

FACILITY: Building 750 (Psychiatry Institute-Day 1)

ADDRESS: 125 Jonathan Lucas St. MSC 190, Charleston, SC 29425

CONTACT: Rick Burt, Matthew Long

PHONE: 843-323-0439

EMAIL: burtd@musc.edu, Longmat@musc.edu

CELL: (843) 792-3538

Unit Id : 750-01-220DT

Type : AST

Capacity : 1,250

Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

☐ Annual/Pre-Clean

☒ Post Clean

☐ None

SERVICES PERFORMED:

☐ Maintenance

☐ STI 001 Inspection

☒ Tank Cleaning

☐ Bottom Sweep

☐ Pre-clean Lab Analysis

☒ Post-clean Lab Analysis

Fuel Treatment:

☒ HydroClean

☐ ILFC 1032

☐ Biocide Predator 6000

☐ None



Exterior Tank Condition:

☒ Good ☐ Bad

☐ Recommend Inspection

PARTS CONDITION:

<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A -Fill Cap
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Vent
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A -Fill Port
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A -Sump
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Spill Bucket
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gauge
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gaskets

CONTAMINANTS FOUND:

☒ Pre-Clean ☐ Post Clean

☐ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☒ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

☐ Pre-Clean ☒ Post Clean

☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS: The before cleaning sample is on the left and the after cleaning sample is on the right

SERVICE TECHNICIAN: Mike & Tommie

DATE: 7-24-2019

877-252-6396 (Toll Free) • 843-225-1777 • 843-377-0412 (Fax)
4310 Amsterdam St., N. Charleston, SC 29418
www.petroileumrecoveryservices.com



Certificate of Analysis

Laboratory Number: 80219535

Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 750-01-220DT
Sample ID: 750-01-220DT
PO: 632504
WO: MUSC - University - Post

Sample Collection Date: 07/24/2019
Date Received: 08/2/2019
Date Released: 08/7/2019
Component Make:
Component Model: AST
Tank Capacity: 1,250 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	46
Cloud Point	report °C	ASTM D2500-99	-9
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	241.67
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.78
Flash Point	52 °C minimum	ASTM D93-10	73.33
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D7321-08	2
Sulfur	15 ppm maximum	ASTM D5453-09	6
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	67

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health

DATE: 7-24-2019

CUSTOMER: MUSC

INFO-OTHER: University Tanks

FACILITY: Building 750 (Psychiatry Institute-Day 2)

ADDRESS: 126 Jonathan Lucas St. MSC 190, Charleston, SC 29425

CONTACT: Rick Burt, Matthew Long

PHONE: 843-323-0440

EMAIL: burtd@musc.edu, Longmat@musc.edu

CELL: (843) 792-3539

Unit Id : 750-01-221DT

Type : AST

Capacity : 1,250

Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

☐ Annual/Pre-Clean

☒ Post Clean

☐ None

SERVICES PERFORMED:

☐ Maintenance

☐ STI 001 Inspection

☒ Tank Cleaning

☐ Bottom Sweep

☐ Pre-clean Lab Analysis

☒ Post-clean Lab Analysis

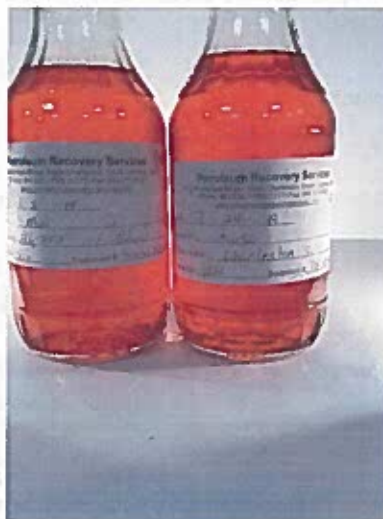
Fuel Treatment:

☒ HydroClean

☐ ILFC 1032

☐ Biocide Predator 6000

☐ None



Exterior Tank Condition:

☒ Good ☐ Bad

☐ Recommend Inspection

PARTS CONDITION:

<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A -Fill Cap
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Vent
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A -Fill Port
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A -Sump
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Spill Bucket
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gauge
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gaskets

CONTAMINANTS FOUND:

☒ Pre-Clean ☐ Post Clean

☐ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☒ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

☐ Pre-Clean ☒ Post Clean

☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS: The before cleaning sample is on the left and the after cleaning sample is on the right

SERVICE TECHNICIAN: Mike & Tommie

DATE: 7-24-2019

877-252-6396 (Toll Free) ● 843-225-1777 ● 843-377-0412 (Fax)

4310 Amsterdam St., N. Charleston, SC 29418

www.petroileumrecoveryservices.com



Certificate of Analysis

Laboratory Number: 80219536

Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 750-01-221DT
Sample ID: 750-01-221DT
PO: 632504
WO: MUSC - University - Post

Sample Collection Date: 07/24/2019
Date Received: 08/2/2019
Date Released: 08/7/2019
Component Make:
Component Model: AST
Tank Capacity: 1,250 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	46.3
Cloud Point	report °C	ASTM D2500-99	-9
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.78
Distillation, 90%	282 - 338 °C	ASTM D86-08a	308.33
Flash Point	52 °C minimum	ASTM D93-10	66.11
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	5.3
Sulfur	15 ppm maximum	ASTM D5453-09	5
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	106

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health

DATE: 7-15-19

CUSTOMER: MUSC

INFO-OTHER: University Tanks

FACILITY: Building 750 (Psychiatry Inst)

ADDRESS: 127 Jonathan Lucas St. MSC 190, Charleston, SC 29425

CONTACT: Rick Burt, Matthew Long

PHONE: 843-323-0441

EMAIL: burtd@musc.edu, Longmat@musc.edu

CELL: (843) 792-3540

Unit Id : 750-FT-42

Type : AST

Capacity : 10,000

Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

Annual/Pre-Clean

☒ Post Clean

None

SERVICES PERFORMED:

Maintenance

STI 001 Inspection

☒ Tank Cleaning

Bottom Sweep

Pre-clean Lab Analysis

☒ Post-clean Lab Analysis

Fuel Treatment:

☒ HydroClean

ILFC 1032

Biocide Predator 6000

None

Exterior Tank Condition:

☒ Good ☐ Bad

☐ Recommend Inspection



PARTS CONDITION:

<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Cap
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Vent
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Port
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Sump
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Spill Bucket
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gauge
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gaskets

CONTAMINANTS FOUND:

Pre-Clean Post Clean

☒ None

Bulk Water

Suspended Water

Micro-organisms

Sediments

Rust

Sludge

VISUAL FUEL RATING:

Pre-Clean ☒ Post Clean

Refinery Fresh

☒ Good

Watch Closely

Advanced Aging

Bad-Not Recommended

Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS: Picture of the before cleaning sample is on the left and the after cleaning sample is on the right.

SERVICE TECHNICIAN: Ron and Steven

DATE: 7-15-19

877-252-6396 (Toll Free) • 843-225-1777 • 843-377-0412 (Fax)
4310 Amsterdam St., N. Charleston, SC 29418
www.petroileumrecoveryservices.com



Certificate of Analysis

Laboratory Number: 73119529

Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 750-FT-42
Sample ID: 750-FT-42
PO: 632499
WO: MUSC - University - Post

Sample Collection Date: 07/15/2019
Date Received: 07/31/2019
Date Released: 08/5/2019
Component Make:
Component Model: AST
Tank Capacity: 10,000 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	46.1
Cloud Point	report °C	ASTM D2500-99	-8
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.22
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.22
Flash Point	52 °C minimum	ASTM D93-10	63.89
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	4.7
Sulfur	15 ppm maximum	ASTM D5453-09	5
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	75

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835

Industrial Tank Field Report

GROUP INFO: MUSC Health DATE: 8/15/19
 CUSTOMER: MUSC INFO-OTHER: University Tanks
 FACILITY: Building 770 (ONAN Day Tank)
 ADDRESS: 128 Jonathan Lucas St. MSC 190, Charleston, SC 29425
 CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0442
 EMAIL: burtd@musc.edu, Longmat@musc.edu CELL: (843) 792-3541
 Unit Id : 770-01-20DT Type : AST Capacity : 150 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

☐ Annual/Pre-Clean
☒ Post Clean
☐ None

SERVICES PERFORMED:

☐ Maintenance
☐ STI 001 Inspection
☒ Tank Cleaning
☐ Bottom Sweep
☐ Pre-clean Lab Analysis
☒ Post-clean Lab Analysis

Fuel Treatment:

☒ HydroClean
☐ ILFC 1032
☐ Biocide Predator 6000
☐ None



Exterior Tank Condition:

☒ Good ☐ Bad
☐ Recommend Inspection

PARTS CONDITION:

<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Cap
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Vent
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Port
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Sump
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Spill Bucket
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gauge
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gaskets

CONTAMINANTS FOUND:

☐ Pre-Clean ☒ Post Clean
☒ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☐ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

☐ Pre-Clean ☒ Post Clean
☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS: Photo shows after cleaning sample

SERVICE TECHNICIAN: Mike & Tommie DATE: 8/15/19



Certificate of Analysis

Laboratory Number: 82319522

Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 770-01-20DT
Sample ID: 770-01-20DT
PO: 632519
WO: MUSC - University - Post

Sample Collection Date: 08/15/2019
Date Received: 08/23/2019
Date Released: 08/30/2019
Component Make:
Component Model: AST
Tank Capacity: 150 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	37
Cetane Index	40 minimum	ASTM D976-01	44.7
Cloud Point	report °C	ASTM D2500-99	-15
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.78
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.22
Flash Point	52 °C minimum	ASTM D93-10	70.56
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	4.7
Sulfur	15 ppm maximum	ASTM D5453-09	30
Visual Appearance	Visual	ASTM D4176-04	Clear, Few Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	65

Comments

High Sulfur: Too much sulfur can cause wear in diesel engines as a result of the corrosive nature of its combustion by-products. It also increases the amount of deposits in the combustion chamber and on the pistons. ASTM sets limits at 15ppm ULSD, 500ppm LSD & 5,000 High Sulfur.

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health

DATE: 7-1-19

CUSTOMER: MUSC

INFO-OTHER: University Tanks

FACILITY: Building 770 (Caterpillar Day Tank)

ADDRESS: 129 Jonathan Lucas St. MSC 190, Charleston, SC 29425

CONTACT: Rick Burt, Matthew Long

PHONE: 843-323-0443

EMAIL: burt@musc.edu, Longmat@musc.edu

CELL: (843) 792-3542

Unit Id : 770-01-24DT

Type : AST

Capacity : 200

Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- ☒ Annual/Pre-Clean
☐ Post Clean
☐ None

SERVICES PERFORMED:

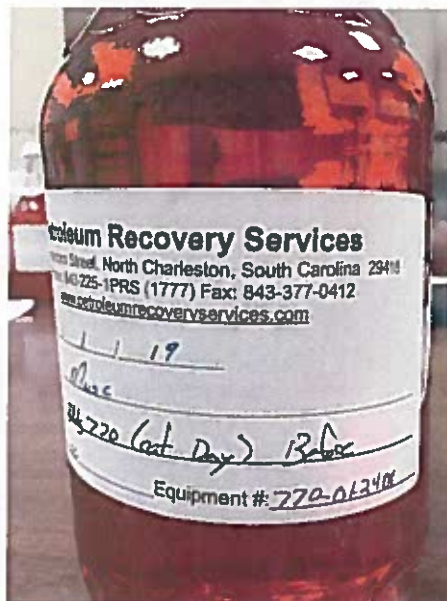
- ☐ Maintenance
☐ STI 001 Inspection
☐ Tank Cleaning
☐ Bottom Sweep
☒ Pre-clean Lab Analysis
☐ Post-clean Lab Analysis

Fuel Treatment:

- ☒ HydroClean
☐ ILFC 1032
☐ Biocide Predator 6000
☐ None

Exterior Tank Condition:

- ☒ Good ☐ Bad
☐ Recommend Inspection



PARTS CONDITION:

- | | | |
|--|------------------------------|---|
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Cap |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Vent |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Port |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Sump |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Spill Bucket |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gauge |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gaskets |

CONTAMINANTS FOUND:

- ☒ Pre-Clean ☐ Post Clean
☐ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☒ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

- ☒ Pre-Clean ☐ Post Clean
☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS:

Picture of the before cleaning sample

SERVICE TECHNICIAN: Ron and Steven

DATE: 7-1-19

877-252-6396 (Toll Free) • 843-225-1777 • 843-377-0412 (Fax)
4310 Amsterdam St., N. Charleston, SC 29418
www.petrorecovery.com



Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 770-01-24DT 200 GAL
Sample ID: 770-01-24DT 200 GAL
PO: 632488
WO: MUSC-University - Pre

Sample Collection Date: 07/1/2019
Date Received: 07/16/2019
Date Released: 07/19/2019
Component Make:
Component Model: AST
Tank Capacity: 200 g
Quantity in Tank:
Test Package: Petroleum Recovery Pkg.
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	36
Cetane Index	40 minimum	ASTM D976-01	42.9
Cloud Point	report °C	ASTM D2500-99	-8
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.78
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.78
Flash Point	52 °C minimum	ASTM D93-10	70.56
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	0
Sulfur	15 ppm maximum	ASTM D5453-09	39
Visual Appearance	Visual	ASTM D4176-04	Clear, Few Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	104

Comments

High Sulfur: Too much sulfur can cause wear in diesel engines as a result of the corrosive nature of its combustion by-products. It also increases the amount of deposits in the combustion chamber and on the pistons. ASTM sets limits at 15ppm ULSD, 500ppm LSD & 5,000 High Sulfur.

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health

DATE: 7-1-19

CUSTOMER: MUSC

INFO-OTHER: University Tanks

FACILITY: Building 770 Boiler

ADDRESS: 130 Jonathan Lucas St. MSC 190, Charleston, SC 29425

CONTACT: Rick Burt, Matthew Long

PHONE: 843-323-0444

EMAIL: burtd@musc.edu, Longmat@musc.edu

CELL: (843) 792-3543

Unit Id : 770-FT-23

Type : UST Capacity : 10,000 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- ☒ Annual/Pre-Clean
☐ Post Clean
☐ None

SERVICES PERFORMED:

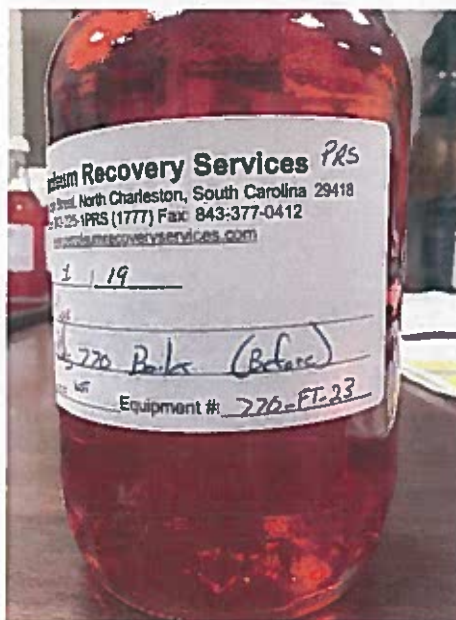
- ☐ Maintenance
☐ STI 001 Inspection
☐ Tank Cleaning
☐ Bottom Sweep
☒ Pre-clean Lab Analysis
☐ Post-clean Lab Analysis

Fuel Treatment:

- ☒ HydroClean
☐ ILFC 1032
☐ Biocide Predator 6000
☐ None

Exterior Tank Condition:

- ☒ Good ☐ Bad
☐ Recommend Inspection



PARTS CONDITION:

<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Fill Cap
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Vent
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Fill Port
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Sump
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Spill Bucket
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Gauge
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Gaskets

CONTAMINANTS FOUND:

- ☒ Pre-Clean ☐ Post Clean
☐ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☒ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

- ☒ Pre-Clean ☐ Post Clean
☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS: Picture of the before cleaning sample

SERVICE TECHNICIAN: Ron and Steven

DATE: 7-1-19



Certificate of Analysis

Laboratory Number: 71619524

Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 770-FT-23
Sample ID: 770-FT-23
PO: 632488
WO: MUSC-University - Pre

Sample Collection Date: 07/1/2019
Date Received: 07/16/2019
Date Released: 07/19/2019
Component Make:
Component Model: UST
Tank Capacity: 10,000 g
Quantity in Tank:
Test Package: Petroleum Recovery Pkg.
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	37
Cetane Index	40 minimum	ASTM D976-01	46.9
Cloud Point	report °C	ASTM D2500-99	-11
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	251.11
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.78
Flash Point	52 °C minimum	ASTM D93-10	72.22
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	0
Sulfur	15 ppm maximum	ASTM D5453-09	4
Visual Appearance	Visual	ASTM D4176-04	Clear, Few Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	63

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health

DATE: 8/8/19

CUSTOMER: MUSC

INFO-OTHER: University Tanks

FACILITY: Buildling 770 Generator

ADDRESS: 131 Jonathan Lucas St. MSC 190, Charleston, SC 29425

CONTACT: Rick Burt, Matthew Long

PHONE: 843-323-0445

EMAIL: burtd@musc.edu, Longmat@musc.edu

CELL: (843) 792-3544

Unit Id : 770-FT-24

Type : UST Capacity : 10,000 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

Annual/Pre-Clean

☒ Post Clean

None

SERVICES PERFORMED:

Maintenance

STI 001 Inspection

☒ Tank Cleaning

Bottom Sweep

Pre-clean Lab Analysis

☒ Post-clean Lab Analysis

Fuel Treatment:

☒ HydroClean

ILFC 1032

Biocide Predator 6000

None



Exterior Tank Condition:

☒ Good ☐ Bad

☐ Recommend Inspection

PARTS CONDITION:

<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Cap
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Vent
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Port
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Sump
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Spill Bucket
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gauge
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gaskets

CONTAMINANTS FOUND:

Pre-Clean ☒ Post Clean

☒ None
Bulk Water
Suspended Water
Micro-organisms
Sediments
Rust
Sludge

VISUAL FUEL RATING:

Pre-Clean ☒ Post Clean

Refinery Fresh
☒ Good
Watch Closely
Advanced Aging
Bad-Not Recommended
Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS: This is your after cleaning sample

SERVICE TECHNICIAN: Mike & Tommie

DATE: 8/8/19

877-252-6396 (Toll Free) • 843-225-1777 • 843-377-0412 (Fax)
4310 Amsterdam St., N. Charleston, SC 29418
www.petroleumrecoveryservices.com



Certificate of Analysis

Laboratory Number: 82319523

Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 770-FT-24
Sample ID: 770-FT-24
PO: 632519
WO: MUSC - University - Post

Sample Collection Date: 08/8/2019
Date Received: 08/23/2019
Date Released: 08/30/2019
Component Make:
Component Model: UST
Tank Capacity: 10,000 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	36
Cetane Index	40 minimum	ASTM D976-01	42.9
Cloud Point	report °C	ASTM D2500-99	-7
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.78
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.22
Flash Point	52 °C minimum	ASTM D93-10	73.33
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	1.3
Sulfur	15 ppm maximum	ASTM D5453-09	32
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	69

Comments

High Sulfur: Too much sulfur can cause wear in diesel engines as a result of the corrosive nature of its combustion by-products. It also increases the amount of deposits in the combustion chamber and on the pistons. ASTM sets limits at 15ppm ULSD, 500ppm LSD & 5,000 High Sulfur.

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health

DATE: 7-3-19

CUSTOMER: MUSC

INFO-OTHER: University Tanks

FACILITY: Building 810 (Harborview FT-15) (810-FT-15)

ADDRESS: 132 Jonathan Lucas St. MSC 190, Charleston, SC 29425

CONTACT: Rick Burt, Matthew Long

PHONE: 843-323-0446

EMAIL: burtd@musc.edu, Longmat@musc.edu

CELL: (843) 792-3545

Unit Id : 810-01-12DT

Type : AST

Capacity : 395

Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- ☒ Annual/Pre-Clean
☐ Post Clean
☐ None

SERVICES PERFORMED:

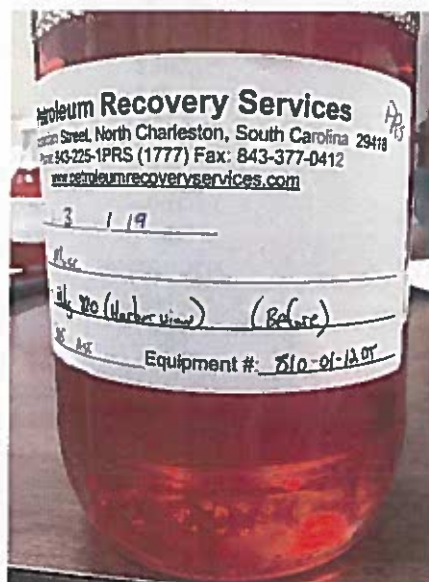
- ☐ Maintenance
☐ STI 001 Inspection
☐ Tank Cleaning
☐ Bottom Sweep
☒ Pre-clean Lab Analysis
☐ Post-clean Lab Analysis

Fuel Treatment:

- ☒ HydroClean
☐ ILFC 1032
☐ Biocide Predator 6000
☐ None

Exterior Tank Condition:

- ☒ Good ☐ Bad
☐ Recommend Inspection



PARTS CONDITION:

- | | | |
|--|------------------------------|---|
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Cap |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Vent |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Port |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Sump |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Spill Bucket |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gauge |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gaskets |

CONTAMINANTS FOUND:

- ☒ Pre-Clean ☐ Post Clean
☐ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☒ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

- ☒ Pre-Clean ☐ Post Clean
☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS: Picture of the before cleaning sample

SERVICE TECHNICIAN: Ron and Steven

DATE: 7-3-19

877-252-6396 (Toll Free) • 843-225-1777 • 843-377-0412 (Fax)
4310 Amsterdam St., N. Charleston, SC 29418
www.petrorecovery.com



Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 810-01-12DT
Sample ID: 810-01-12DT
PO: 632488
WO: MUSC-University - Pre

Sample Collection Date: 07/3/2019
Date Received: 07/16/2019
Date Released: 07/19/2019
Component Make:
Component Model: AST
Tank Capacity: 395 g
Quantity in Tank:
Test Package: Petroleum Recovery Pkg.
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	37
Cetane Index	40 minimum	ASTM D976-01	45.7
Cloud Point	report °C	ASTM D2500-99	-8
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	246.67
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.78
Flash Point	52 °C minimum	ASTM D93-10	73.33
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	1.3
Sulfur	15 ppm maximum	ASTM D5453-09	32
Visual Appearance	Visual	ASTM D4176-04	Clear, Few Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.005
Water by Karl Fischer	report in ppm	ASTM D6304-16	52

Comments

High Sulfur: Too much sulfur can cause wear in diesel engines as a result of the corrosive nature of its combustion by-products. It also increases the amount of deposits in the combustion chamber and on the pistons. ASTM sets limits at 15ppm ULSD, 500ppm LSD & 5,000 High Sulfur.

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health DATE: 7-2-19
CUSTOMER: MUSC INFO-OTHER: University Tanks
FACILITY: Building 830 Day Tank
ADDRESS: 133 Jonathan Lucas St. MSC 190, Charleston, SC 29425
CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0447
EMAIL: burtid@musc.edu, Longmat@musc.edu CELL: (843) 792-3546
Unit Id : 830-01-116-DT Type : AST Capacity : 25 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- ☒ Annual/Pre-Clean
☐ Post Clean
☐ None

SERVICES PERFORMED:

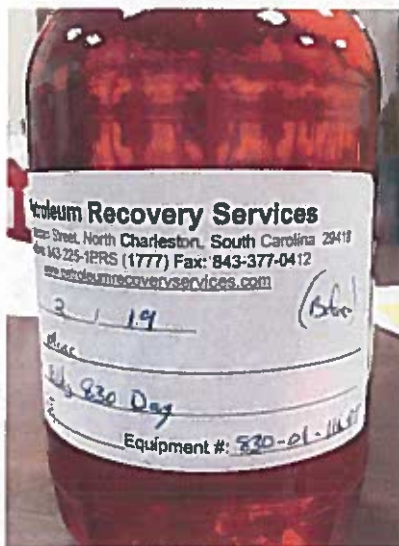
- ☐ Maintenance
☐ STI 001 Inspection
☐ Tank Cleaning
☐ Bottom Sweep
☒ Pre-clean Lab Analysis
☐ Post-clean Lab Analysis

Fuel Treatment:

- ☒ HydroClean
☐ ILFC 1032
☐ Biocide Predator 6000
☐ None

Exterior Tank Condition:

- ☒ Good ☐ Bad
☐ Recommend Inspection



PARTS CONDITION:

<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Fill Cap
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Vent
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Fill Port
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Sump
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Spill Bucket
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Gauge
<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Bad	<input type="checkbox"/>	N/A - Gaskets

CONTAMINANTS FOUND:

- ☒ Pre-Clean ☐ Post Clean
☐ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☒ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

- ☒ Pre-Clean ☐ Post Clean
☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS:

Picture of the before cleaning sample

SERVICE TECHNICIAN: Ron and Steven

DATE: 7-2-19

877-252-6396 (Toll Free) • 843-225-1777 • 843-377-0412 (Fax)
4310 Amsterdam St., N. Charleston, SC 29418
www.petroileumrecoveryservices.com



Certificate of Analysis

Laboratory Number: 71619527

Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 830-01-116DT
Sample ID: 830-01-116DT
PO: 632488
WO: MUSC-University - Pre

Sample Collection Date: 07/2/2019
Date Received: 07/16/2019
Date Released: 07/19/2019
Component Make:
Component Model: AST
Tank Capacity: 25 g
Quantity in Tank:
Test Package: Petroleum Recovery Pkg.
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	36
Cetane Index	40 minimum	ASTM D976-01	42.9
Cloud Point	report °C	ASTM D2500-99	-10
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.78
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.22
Flash Point	52 °C minimum	ASTM D93-10	67.22
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	1.3
Sulfur	15 ppm maximum	ASTM D5453-09	95
Visual Appearance	Visual	ASTM D4176-04	Clear, Few Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.005
Water by Karl Fischer	report in ppm	ASTM D6304-16	75

Comments

High Sulfur: Too much sulfur can cause wear in diesel engines as a result of the corrosive nature of its combustion by-products. It also increases the amount of deposits in the combustion chamber and on the pistons. ASTM sets limits at 15ppm ULSD, 500ppm LSD & 5,000 High Sulfur.

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health

DATE: 7-2-19

CUSTOMER: MUSC

INFO-OTHER: University Tanks

FACILITY: Building 830

ADDRESS: 134 Jonathan Lucas St. MSC 190, Charleston, SC 29425

CONTACT: Rick Burt, Matthew Long

PHONE: 843-323-0448

EMAIL: burtd@musc.edu, Longmat@musc.edu

CELL: (843) 792-3547

Unit Id : 830-FT-11

Type : AST Capacity : 500

Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

- ☒ Annual/Pre-Clean
☐ Post Clean
☐ None

SERVICES PERFORMED:

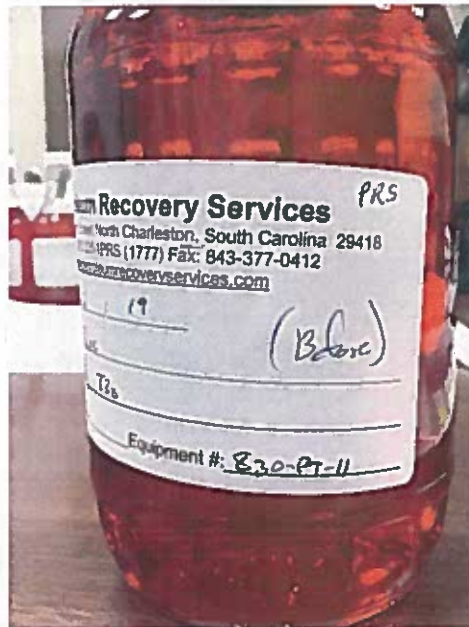
- ☐ Maintenance
☐ STI 001 Inspection
☐ Tank Cleaning
☐ Bottom Sweep
☒ Pre-clean Lab Analysis
☐ Post-clean Lab Analysis

Fuel Treatment:

- ☒ HydroClean
☐ ILFC 1032
☐ Biocide Predator 6000
☐ None

Exterior Tank Condition:

- ☒ Good ☐ Bad
☐ Recommend Inspection



PART CONDITION:

- | | | |
|--|------------------------------|---|
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Cap |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Vent |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Fill Port |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Sump |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Spill Bucket |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gauge |
| <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Bad | <input type="checkbox"/> N/A - Gaskets |

CONTAMINANTS FOUND:

- ☒ Pre-Clean ☐ Post Clean
☐ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☒ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

- ☒ Pre-Clean ☐ Post Clean
☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank clean recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMITTEE of the before cleaning sample

SERVICE TECHNICIAN: Ron and Steven

DATE: 7-2-19

877-252-6396 (Toll Free) • 843-225-1777 • 843-377-0412 (Fax)
4310 Amsterdam St., N. Charleston, SC 29418
www.petroleumrecoveryservices.com



Certificate of Analysis

Laboratory Number: 71619528

Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 830-FT-11
Sample ID: 830-FT-11
PO: 632488
WO: MUSC-University - Pre

Sample Collection Date: 07/2/2019
Date Received: 07/16/2019
Date Released: 07/19/2019
Component Make:
Component Model: AST
Tank Capacity: 500 g
Quantity in Tank:
Test Package: Petroleum Recovery Pkg.
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	37
Cetane Index	40 minimum	ASTM D976-01	44.5
Cloud Point	report °C	ASTM D2500-99	-12
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.78
Distillation, 90%	282 - 338 °C	ASTM D86-08a	306.67
Flash Point	52 °C minimum	ASTM D93-10	75.56
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	8
Sulfur	15 ppm maximum	ASTM D5453-09	97
Visual Appearance	Visual	ASTM D4176-04	Clear, Light Sediment, Some Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.01
Water by Karl Fischer	report in ppm	ASTM D6304-16	72

Comments

High Sulfur: Too much sulfur can cause wear in diesel engines as a result of the corrosive nature of its combustion by-products so increases the amount of deposits in the combustion chamber and on the pistons. ASTM sets limits at 15ppm ULSD, 500ppm L5,000 High Sulfur.

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health

DATE: 7-24-2019

CUSTOMER: MUSC

INFO-OTHER: University Tanks

FACILITY: Building 925 (Boiler Day-Penthouse)

ADDRESS: 135 Jonathan Lucas St. MSC 190, Charleston, SC 29425

CONTACT: Rick Burt, Matthew Long

PHONE: 843-323-0449

EMAIL: burtd@musc.edu, Longmat@musc.edu

CELL: (843) 792-3548

Unit Id : 925-01-DT1

Type : AST

Capacity : 200

Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

☐ Annual/Pre-Clean

☒ Post Clean

☐ None

SERVICES PERFORMED:

☐ Maintenance

☐ STI 001 Inspection

☒ Tank Cleaning

☐ Bottom Sweep

☐ Pre-clean Lab Analysis

☒ Post-clean Lab Analysis

Fuel Treatment:

☒ HydroClean

☐ ILFC 1032

☐ Biocide Predator 6000

☐ None



Exterior Tank Condition:

☒ Good ☐ Bad

☐ Recommend Inspection

PARTS CONDITION:

<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Cap
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Vent
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Port
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Sump
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Spill Bucket
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gauge
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gaskets

CONTAMINANTS FOUND:

☒ Pre-Clean ☐ Post Clean

☐ None
☐ Bulk Water
☐ Suspended Water
☐ Micro-organisms
☒ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

☐ Pre-Clean ☒ Post Clean

☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS:

The before cleaning sample is on the left and the after cleaning sample is on the right

SERVICE TECHNICIAN: Mike & Tommie

DATE: 7-24-2019



Certificate of Analysis

Laboratory Number: 80219537

Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 925-01-DT1
Sample ID: 925-01-DT1
PO: 632504
WO: MUSC - University - Post

Sample Collection Date: 07/24/2019
Date Received: 08/2/2019
Date Released: 08/7/2019
Component Make:
Component Model: AST
Tank Capacity: 200 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	46.6
Cloud Point	report °C	ASTM D2500-99	-8
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	243.89
Distillation, 90%	282 - 338 °C	ASTM D86-08a	308.33
Flash Point	52 °C minimum	ASTM D93-10	74.44
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	0
Sulfur	15 ppm maximum	ASTM D5453-09	5
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	55

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health DATE: 7-24-2019
CUSTOMER: MUSC INFO-OTHER: University Tanks
FACILITY: Building 925 Day #3
ADDRESS: 136 Jonathan Lucas St. MSC 190, Charleston, SC 29425
CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0450
EMAIL: burtd@musc.edu, Longmat@musc.edu CELL: (843) 792-3549
Unit Id : 925-01-DT2 Type : AST Capacity : 300 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

☐ Annual/Pre-Clean
☒ Post Clean
☐ None

SERVICES PERFORMED:

☐ Maintenance
☐ STI 001 Inspection
☒ Tank Cleaning
☐ Bottom Sweep
☐ Pre-clean Lab Analysis
☒ Post-clean Lab Analysis

Fuel Treatment:

☒ HydroClean
☐ ILFC 1032
☐ Biocide Predator 6000
☐ None



Exterior Tank Condition:

☒ Good ☐ Bad
☐ Recommend Inspection

PARTS CONDITION:

<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Cap
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Vent
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Port
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Sump
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Spill Bucket
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gauge
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gaskets

CONTAMINANTS FOUND:

☒ Pre-Clean ☐ Post Clean
☐ None
☐ Bulk Water
☒ Suspended Water
☐ Micro-organisms
☒ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

☐ Pre-Clean ☒ Post Clean
☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS: The before cleaning sample is on the left and the after cleaning sample is on the right

SERVICE TECHNICIAN: Mike & Tommie

DATE: 7-24-2019



Certificate of Analysis

Laboratory Number: 80219538

Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 925-01-DT2
Sample ID: 925-01-DT2
PO: 632504
WO: MUSC - University - Post

Sample Collection Date: 07/24/2019
Date Received: 08/2/2019
Date Released: 08/7/2019
Component Make:
Component Model: AST
Tank Capacity: 300 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	46.5
Cloud Point	report °C	ASTM D2500-99	-11
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	243.33
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.78
Flash Point	52 °C minimum	ASTM D93-10	64.44
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	4.7
Sulfur	15 ppm maximum	ASTM D5453-09	5
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	68

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health DATE: 7-24-19
CUSTOMER: MUSC INFO-OTHER: University Tanks
FACILITY: Building 925 (Roof Tank)
ADDRESS: 137 Jonathan Lucas St. MSC 190, Charleston, SC 29425
CONTACT: Rick Burt, Matthew Long PHONE: 843-323-0451
EMAIL: burt@musc.edu, Longmat@musc.edu CELL: (843) 792-3550
Unit Id : 925-01-DT3 Type : AST Capacity : 100 Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

☐ Annual/Pre-Clean
☒ Post Clean
☐ None

SERVICES PERFORMED:

☐ Maintenance
☐ STI 001 Inspection
☒ Tank Cleaning
☐ Bottom Sweep
☐ Pre-clean Lab Analysis
☒ Post-clean Lab Analysis

Fuel Treatment:

☒ HydroClean
☐ ILFC 1032
☐ Biocide Predator 6000
☐ None

Exterior Tank Condition:

☒ Good ☐ Bad
☐ Recommend Inspection



PARTS CONDITION:

<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Cap
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Vent
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Port
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Sump
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Spill Bucket
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gauge
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gaskets

CONTAMINANTS FOUND:

☒ Pre-Clean ☐ Post Clean
☐ None
☐ Bulk Water
☒ Suspended Water
☒ Micro-organisms
☒ Sediments
☐ Rust
☐ Sludge

VISUAL FUEL RATING:

☐ Pre-Clean ☒ Post Clean
☐ Refinery Fresh
☒ Good
☐ Watch Closely
☐ Advanced Aging
☐ Bad-Not Recommended
☐ Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS:

The before cleaning sample is on the left and the after cleaning sample is on the right

SERVICE TECHNICIAN: Mike & Tommie

DATE: 7-24-19

877-252-6396 (Toll Free) • 843-225-1777 • 843-377-0412 (Fax)
4310 Amsterdam St., N. Charleston, SC 29418
www.petroleumrecoveryservices.com



Certificate of Analysis

Laboratory Number: 80219539

Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 925-01-DT3
Sample ID: 925-01-DT3
PO: 632504
WO: MUSC - University - Post

Sample Collection Date: 07/24/2019
Date Received: 08/2/2019
Date Released: 08/7/2019
Component Make:
Component Model: AST
Tank Capacity: 100 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	46
Cloud Point	report °C	ASTM D2500-99	-10
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	241.67
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.78
Flash Point	52 °C minimum	ASTM D93-10	76.67
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	6
Sulfur	15 ppm maximum	ASTM D5453-09	6
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	62

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835



Industrial Tank Field Report

GROUP INFO: MUSC Health

DATE: 7-11-19

CUSTOMER: MUSC

INFO-OTHER: University Tanks

FACILITY: Building 925 (Hollings Cancer Ctr)

ADDRESS: 138 Jonathan Lucas St. MSC 190, Charleston, SC 29425

CONTACT: Rick Burt, Matthew Long

PHONE: 843-323-0452

EMAIL: burt@musc.edu, Longmat@musc.edu

CELL: (843) 792-3551

Unit Id : 925-FT-34

Type : UST

Capacity : 20,000

Material: Dsl

Last Tank Service: 2018

FUEL SAMPLE TAKEN:

Annual/Pre-Clean

☒ Post Clean

None

SERVICES PERFORMED:

Maintenance

STI 001 Inspection

☒ Tank Cleaning

Bottom Sweep

Pre-clean Lab Analysis

☒ Post-clean Lab Analysis

Fuel Treatment:

☒ HydroClean

ILFC 1032

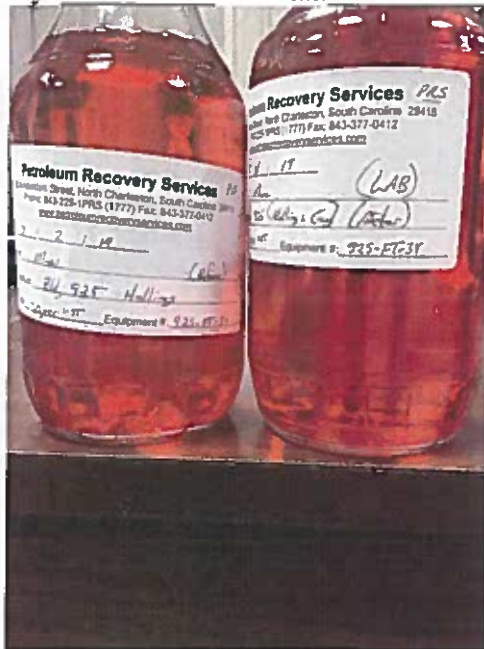
Biocide Predator 6000

None

Exterior Tank Condition:

☒ Good ☐ Bad

☐ Recommend Inspection



PARTS CONDITION:

<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Cap
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Vent
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Fill Port
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Sump
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Spill Bucket
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gauge
<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Bad	<input type="checkbox"/> N/A - Gaskets

CONTAMINANTS FOUND:

Pre-Clean ☒ Post Clean

☒ None

Bulk Water

Suspended Water

Micro-organisms

Sediments

Rust

Sludge

VISUAL FUEL RATING:

Pre-Clean ☒ Post Clean

Refinery Fresh

☒ Good

Watch Closely

Advanced Aging

Bad-Not Recommended

Severe-Do Not Use

THIS TANK DOES NOT PASS ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION

*Tank cleaning is recommended based on Visual Fuel Inspection ONLY. Lab Report will determine fuel parameters based on ASTM D975 Specifications

THIS TANK PASSES THE ASTM D975 "CLEAR & BRIGHT" VISUAL INSPECTION.

*Lab Report will determine fuel parameters based on ASTM D975 Specifications

COMMENTS:

Picture of the before cleaning sample is on the left and the after cleaning sample is on the right.

SERVICE TECHNICIAN: Ron and Steven

DATE: 7-11-19

877-252-6396 (Toll Free) • 843-225-1777 • 843-377-0412 (Fax)

4310 Amsterdam St., N. Charleston, SC 29418

www.petroileumrecoveryservices.com



Certificate of Analysis

Laboratory Number: 73119530

Loretta Shaw
Petroleum Recovery Services
4310 Amsterdam St.
North Charleston, SC 29418
843-225-1777

Sample Taken From: 925-FT-34
Sample ID: 925-FT-34
PO: 632499
WO: MUSC - University - Post

Sample Collection Date: 07/11/2019
Date Received: 07/31/2019
Date Released: 08/5/2019
Component Make:
Component Model: UST
Tank Capacity: 20,000 g
Quantity in Tank:
Test Package: PRS Package
Type of Fuel: ULSD
Serial Number:

Test	Limits	Methods	Result
API Gravity by Hydrometer	report	ASTM D1298-99	38
Cetane Index	40 minimum	ASTM D976-01	46.2
Cloud Point	report °C	ASTM D2500-99	-11
Copper Strip Corrosion	3 maximum	ASTM D130-04	1a
Distillation, 50%	report °C	ASTM D86-08a	242.22
Distillation, 90%	282 - 338 °C	ASTM D86-08a	307.78
Flash Point	52 °C minimum	ASTM D93-10	71.11
Microbial Growth	report	Micro/Culture Medium	Negative
Particulate Contamination	report in milligrams/liter	ASTM D6217-08	0.7
Sulfur	15 ppm maximum	ASTM D5453-09	5
Visual Appearance	Visual	ASTM D4176-04	Clear, Trace Particles
Water and Sediment	0.05 maximum (% volume)	ASTM D2709	0.001
Water by Karl Fischer	report in ppm	ASTM D6304-16	63

Comments

Limits for Particulate Contamination are 10 mg/L in Marine diesel fuel; Petroleum Recovery Services recommends fuel maintenance/filtration on any fuel with 200 ppm or higher of water present.

These results are submitted pursuant to our terms, conditions and limitations and laboratory pricing policy. No responsibility is assumed for the manner in which these results are used or interpreted.

915 Jefferson St., Vancouver, WA 98660 : 360-546-3835