



**CALIFORNIA  
ENERGY COMMISSION**



Clean Transportation Program

## **FINAL PROJECT REPORT**

# **Escondido Biorefinery Second Generation**

**Prepared for: California Energy Commission**

**Prepared by: Buster Biofuels, LLC**



**August 2023 | CEC-600-2023-041**

# California Energy Commission

Matthew Zuber  
Weldon Halterman  
**Primary Author(s)**

Buster Biofuels, LLC  
1170 Industrial Avenue  
Escondido, CA 92029  
(760) 294-9400  
[Buster Biofuels, LLC](http://www.busterbiofuels.com) (www.busterbiofuels.com)

**Agreement Number: ARV-12-035**

Andrew Hom  
**Commission Agreement Manager**

Elizabeth John  
**Branch Manager**  
**Medium- and Heavy-Duty Zero Emission Technologies Branch**

Hannon Rasool  
**Director**  
**FUELS AND TRANSPORTATION**

Drew Bohan  
**Executive Director**

## **DISCLAIMER**

**This report was prepared as the result of work sponsored by the California Energy Commission (CEC). It does not necessarily represent the views of the CEC, its employees, or the State of California. The CEC, the State of California, its employees, contractors, and subcontractors make no warrant, express or implied, and assume no legal liability for the information in this report; nor does any party represent that the use of this information will not infringe upon privately owned rights. This report has not been approved or disapproved by the CEC nor has the CEC passed upon the accuracy or adequacy of the information in this report.**

# **ACKNOWLEDGEMENTS**

This project would not have been possible without the monetary support of the California Energy Commission and their team of renewable fuel advocates. Likewise, this project was only made possible by the core team at Buster Biofuels, LLC and the strategic consultants who deserve special recognition below:

## **Buster Biofuels, LLC (Core Team)**

Brian Sachau, VP Operations

Max Minahan, Plant and Construction Manager

Robert Goldin, Member/Consultant

Matthew Zuber, Production Manager

## **Consultants**

David McKinley (McKinley Engineering)

Mark Petersen (Itsco Engineering)

Frankie Mathis (Tactical Fabrication)

Debra Ryan (Healthy Books)

Wesley Lindquist (Precision Financial)

# PREFACE

Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007) created the Clean Transportation Program. The statute authorizes the California Energy Commission (CEC) to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change policies. Assembly Bill 8 (Perea, Chapter 401, Statutes of 2013) reauthorizes the Clean Transportation Program through January 1, 2024, and specifies that the CEC allocate up to \$20 million per year (or up to 20 percent of each fiscal year's funds) in funding for hydrogen station development until at least 100 stations are operational.

The Clean Transportation Program has an annual budget of about \$100 million and provides financial support for projects that:

- Reduce California's use and dependence on petroleum transportation fuels and increase the use of alternative and renewable fuels and advanced vehicle technologies.
- Produce sustainable alternative and renewable low-carbon fuels in California.
- Expand alternative fueling infrastructure and fueling stations.
- Improve the efficiency, performance, and market viability of alternative light-, medium-, and heavy-duty vehicle technologies.
- Retrofit medium- and heavy-duty on-road and nonroad vehicle fleets to alternative technologies or fuel use.
- Expand the alternative fueling infrastructure available to existing fleets, public transit, and transportation corridors.
- Establish workforce-training programs and conduct public outreach on the benefits of alternative transportation fuels and vehicle technologies.

To be eligible for funding under the Clean Transportation Program, a project must be consistent with the CEC's annual Clean Transportation Program Investment Plan Update. The CEC issued PON-11-601 for the development of new, California-based biofuel production facilities that can sustainably produce low carbon transportation fuels. In response to PON-11-601, the recipient submitted an application which was proposed for funding in the CEC's notice of proposed awards October 5, 2012 and the agreement was executed as ARV-12-035 on May 2, 2013.

# ABSTRACT

This report for the California Energy Commission is for the Escondido Biorefinery, Second Generation Project proposed by Buster Biofuels, LLC to provide a sustainable source of low carbon and renewable fuel as a substitute to conventional petroleum diesel. Outlined within this report are the specifics of how the project came to grow from small time feedstock collection to design, growth, construction, test, and calibration, through to production.

The Project broke ground in October of 2013, utilizing various local general contractors and subcontractors for the construction which was completed in August of 2016. Complementing the monetary support of the Clean Transportation Program grant Buster Biofuels, LLC's funding was sourced through various private equity to reimburse the construction up to its completion.

In November of 2016 the Internal Revenue Service approved Buster Biofuels, LLC of producing American Society for Testing and Materials spec biodiesel allowing us to sell to fuel renderers, starting our goal of displacing 4.83 million gallons of petroleum diesel annually. Buster Biofuels, LLC is participating in the state of California's Low Carbon Fuel Standard credits program as well as the federal Environmental Protection Agency's credit program called the Renewable Fuel Standard. Through these programs, Buster Biofuels is able to help meet certain environmental goals.

A 3rd party review places Buster Biofuels, LLC name plate capacity at 4.5 million gallons a year, not quite reaching our originally proposed goal. Buster Biofuels, LLC current challenge is obtaining enough low-cost feedstock to run the biodiesel production at full capacity. In the current fuel market, buying clean feedstock brings production cost very high making profitability very difficult to obtain, especially for a plant in start-up mode – like Buster Biofuels, LLC. More cash reserves were necessary for the plant to find an economies of scale and/or production volumes near its nameplate capacity. The market took a significant turn in Q1, 2017 after the expiration of the federal biodiesel tax credit. It was then decided to pause the production of biodiesel until the market rebounds again, or new investment capital could be attained for more equipment and infrastructure. An expansion would improve efficiencies, reduce feedstock cost of goods sold and enable the plant to find that economies of scale needed.

**Keywords:** Escondido Biorefinery, Buster Biofuels, LLC, low carbon, renewable fuel, feedstock, biodiesel, petroleum diesel

Zuber, Matthew and Weldon Halterman. 2023. *Escondido Biorefinery, Second Generation*. California Energy Commission. Publication Number: CEC-600-2023-041.



# TABLE OF CONTENTS

	Page
Acknowledgements .....	i
Preface .....	ii
Abstract .....	iii
Table of Contents .....	v
List of Figures .....	vi
List of Tables.....	vi
Executive Summary .....	1
CHAPTER 1: Project Narrative.....	3
1.1 The Feedstock .....	3
1.2 How UCO Becomes Biodiesel.....	3
1.3 Escondido Biorefinery Second Generation Funding .....	3
1.4 The People Who Make It Happen.....	4
CHAPTER 2: Pre-Construction .....	5
2.1 Buster Biofuels, LLC Before the Biodiesel.....	5
2.2 Buster Biofuels, LLC Feedstock Collection and Expansion with Feedstock Procurement Agreement .....	5
2.3 Final Project Engineering and Design, Process Sequence and Equipment Layout.....	7
2.4 Regulatory Application, Registration, and Permitting.....	9
CHAPTER 3: Construction .....	10
3.1 Equipment Procurement and Installation .....	10
CHAPTER 4: Equipment Testing and Calibration .....	13
CHAPTER 5: Operations .....	15
5.1 Quality Control .....	15
5.2 Statement of Procedures and Safety .....	16
5.3 Regulatory Registration and the Biodiesel Community .....	16
5.4 Glycerin Market Development.....	17
CHAPTER 6: Data Collection and Analysis .....	18
6.1 Data Collection and Analysis.....	18
6.2 Thinking Green .....	18
6.3 Finances.....	19
6.4 Complete Proposed Goals .....	19
Glossary.....	21
APPENDIX A: Lists .....	A-1
APPENDIX B: Table.....	B-1
APPENDIX C: Agreements .....	C-1

APPENDIX D: Third Party Lab Results.....	D-1
APPENDIX E: Applications, Registration, and Permitting .....	E-1
APPENDIX F: Inspections .....	F-1
APPENDIX G: Equipment Documentation .....	G-1

## **LIST OF FIGURES**

	Page
Figure 1: Buster Biofuels, LLC First Crude UCO storage, Weldon Halterman (Left) and Max Minahan (Right).....	5
Figure 2: Gallons of UCO Procured vs. Quarter .....	6
Figure 3: Fabricated UCO Containers for Restaurants.....	7
Figure 4: Buster Biofuels, LLC Facility Site Plan .....	8
Figure 5: Local Sub Contractors .....	10
Figure 6: Phase One of Construction .....	11
Figure 7: Phase Two of Construction .....	11
Figure 8: Phase Three of Construction.....	12
Figure 9: Phase Four of Construction.....	12
Figure 10: Timeline of Buster Biofuels, LLC From Completing Construction to Producing Fuel	13
Figure 11: The Programmable Logic Controller Screen .....	14
Figure 12: Quality Control Lab .....	15
Figure 13: Research and Development Lab .....	16

## **LIST OF TABLES**

	Page
Table 1: Escondido Biorefinery Second Generation Personnel Recruitment.....	4



# EXECUTIVE SUMMARY

The City of Escondido is located just a 40-minute drive north of downtown San Diego and it was this city for which Buster Biofuels, LLC chose to build its biodiesel plant, Escondido Biorefinery 2nd Generation Project. In 2012, when California Energy Commission's Notice of Proposed Awards became public, this project was a shovel-ready, California Environmental Quality Act approved project and offered substantial energy, economic and environmental benefits for the San Diego region and California as a whole.

Buster Biofuels, LLC has been collecting used cooking oil since the company's inception in 2009 - always with the foresight that biodiesel production was soon to come. This goal became realized October 5, 2012 when the Escondido Biorefinery Second Generation project was approved by the California Energy Commission Program Opportunity Notice 11-601. The total budget cost was to be \$10,938,090 with the California Energy Commission awarding \$2,641,723.

The company has installed a commercial scale biodiesel production facility turning used cooking oil into biodiesel through an enzymatic reaction process. A 3rd-party engineering review estimated a name plate capacity of 4.5 million gallons of biodiesel per year for the plant.

Unlike most traditional biodiesel production facilities processing by means of acid esterification, Escondido Biorefinery Second Generation had a late design change to allow for use of an enzyme catalyst allowing for a wider range of feedstocks while only needing a small change to the already estimated equipment needed for the plant.

Escondido Biorefinery Second Generation construction finished in August 2016 and the plant sold its first batch of American Society for Testing and Materials spec biodiesel in November of 2016. Due to unforeseen costs of startup, the decrease in monetary government assistance in green energy and the inability to reach the optimal economy of scale to limit costs, Buster Biofuels, LLC had to temporarily cease the production of biodiesel in April of 2017. Buster Biofuels, LLC is still operating as an innovative and profitable waste collection service, whose core strategy targets localization and sustainability by reclaiming feedstock locally and in southern California recycling it into biodiesel or as a yellow grease commodity. The expansion of our used cooking oil procurement has and always will be a focus of ours to continuously grow the business in both as a service and to feed biodiesel production.

However, for the plant to operate again, there needs to be a serious market correction and/or additional plant infrastructure incorporated into the existing facility. The Buster Biofuels, LLC plant aims for such expansion opportunity to help the plant become truly viable and/or surpass its original production goals. More investment capital is required to bring this vision to fruition.



# CHAPTER 1:

## Project Narrative

---

Currently, most biodiesel production facilities are designed to process high-grade feedstocks into American Society for Testing and Materials-quality fuel for distribution and use. When processing lower-grade feedstocks such as used cooking oil (UCO) into biodiesel, these existing production facilities must utilize large quantities of sulfuric acid, methanol, water and energy. While UCO is one of the lowest carbon intensive feedstocks available today, the production processes in these facilities have indirect effects on emissions values.

### 1.1 The Feedstock

Biodiesel can be produced from many types of oils, most common of these are various types of vegetable oils that are great feedstock to start from if the only parameter is to produce American Society for Testing and Materials spec biodiesel but these same oils have a high value and are more carbon intensive when compared to the lower valued, lower carbon intensive wasted feedstock that is UCO. The downside to UCO is that it is harder to produce spec biodiesel through acid esterification methods of production. There is an upper limit to how polluted the UCO can be with oil soluble acids called Free Fatty Acid. Buster Biofuels, LLC does not use acid esterification but instead an enzyme catalyst allowing us to use higher Free Fatty Acid UCO with the potential to blend in various less desirable feedstock such as brown grease to further cut down on the plants Carbon Intensity value and feedstock costs.

### 1.2 How UCO Becomes Biodiesel

After the collection of the crude UCO it undergoes filtering of large particulate, typically food waft, while being offloaded from the collection trucks in the aptly named filter box. This oil is then heated in cleaning tanks allowing the oil to separate from the emulsion and water by float to the top. This clean oil is now considered biofeed and gets transfer to the reactor. The reaction eclipsed time is 24 to 48 hours while the fluidized liquid enzyme catalyzes the reaction between glycerides, which are fatty acid esters of glycerol, or free fatty acid, both present in the biofeed, with methanol to produce biodiesel, a fatty acid methyl ester. The byproduct is the former glycerol, now glycerin, after being stripped of its fatty acid esters. At the end of the reaction the biodiesel is still crude but can be separated from the glycerin through means of both a decanter and a centrifuge. The crude biodiesel undergoes polishing steps before reaching American Society for Testing and Materials quality for distribution.

### 1.3 Escondido Biorefinery Second Generation Funding

Buster Biofuels, LLC's Escondido Biorefinery Second Generation project was approved on October 5, 2012 in response to Program Opportunity Notice PON-11-601. The total project budget cost was to be \$10,938,090 which included a 12-month Fabrication and Installation Phase and a Subsequent 24-month Operations and Demonstration Phase. Of this the CEC awarded \$2,641,723 which more than 70 percent represents cost of equipment, installation, and site preparation. Buster Biofuels, LLC matched the grant within cash and in-kind services for the agreed upon value of \$8,296,367 which includes 24-month feedstock acquisition and management, quality control equipment and data collection, other equipment and personnel, marketing and communications expenses.

## 1.4 The People Who Make It Happen

The Project includes an unequaled team of project designers, engineers, fabricators, and operators who are acknowledged experts in developing successful biorefinery operations throughout the United States, as well as a breadth of professionals with demonstrated success in developing feedstock acquisition, transportation, and marketing infrastructure throughout California, found in Table 1.

Collectively, members of the Escondido Biorefinery Second Generation Team have designed, engineered, and developed and optimized 18 biodiesel refinery operations in the United States, developing critical new intellectual property that supports feedstock collection, rendering, and water wash systems in the process. Additionally, the Escondido Biorefinery Second Generation Team has collectively developed and managed feedstock collection contracts with more than 1,200 facilities and collections companies in Southern California

**Table 1: Escondido Biorefinery Second Generation Personnel Recruitment**

<b>Key Personnel</b>	<b>Company</b>	<b>Title</b>	<b>Project Role</b>
Frankie Mathis	Tactical Fabrication LLC	Project Manager	Manufacture and Installation of Biodiesel processing equipment, Automation/Controls of Processing Equipment
Matt Pascoe	Elementary Design	Principal	Processing equipment fabricator, on-site fabricator
David McKinley	Efficient Energy Company	P.E. (Mechanical, Chemical)	Biodiesel Process Consulting, Plant Calibration/Analysis, Data Collection
Soroj	S&P Consulting	P.E. (Electrical)	Electrical Engineer: Electrical Install
Tony Castaneda	AMC Consulting	P.E. (Civil, Structural)	Structural Consulting
William Graff	William Graff, CPA	CPA/CFO	Financial Consultant/Tax
Wesley Lindquist	Wesley Lindquist	CPA	Financial and Grant Reporting Consultant
Rich Van Every	Lightworks Creative	Producer	Marketing/Video and Public Outreach
Kevin Breedlove	Breedlove Creative	Designer/Web Developer	Web Development/ Maintenance
Kimberly Reed	Reed Law	Attorney	General Counsel for Buster Biofuels, LLC, Contracts
Fred Stanley	Fred Stanley	IT	Internet and Communications

Source: Buster Biofuels, LLC

# CHAPTER 2:

## Pre-Construction

---

### 2.1 Buster Biofuels, LLC Before the Biodiesel

Prior to the expansion and construction of the biodiesel facility, Buster Biofuels, LLC was only a used cooking collection service, procuring restaurants to pledge their waste product to our cause. The infrastructure was not here to clean the oil, so it was sold to larger yellow grease rendering plants as crude UCO. The first step towards a biodiesel plant was the ability to clean the oil at large scale and to acquire enough accounts to grow our collection service to supplement our feedstock needs when production reached full scale. Figure 1 shows Weldon Halterman and Max Minahan of Buster Biofuels, LLC.

**Figure 1: Buster Biofuels, LLC First Crude UCO storage, Weldon Halterman (Left) and Max Minahan (Right)**



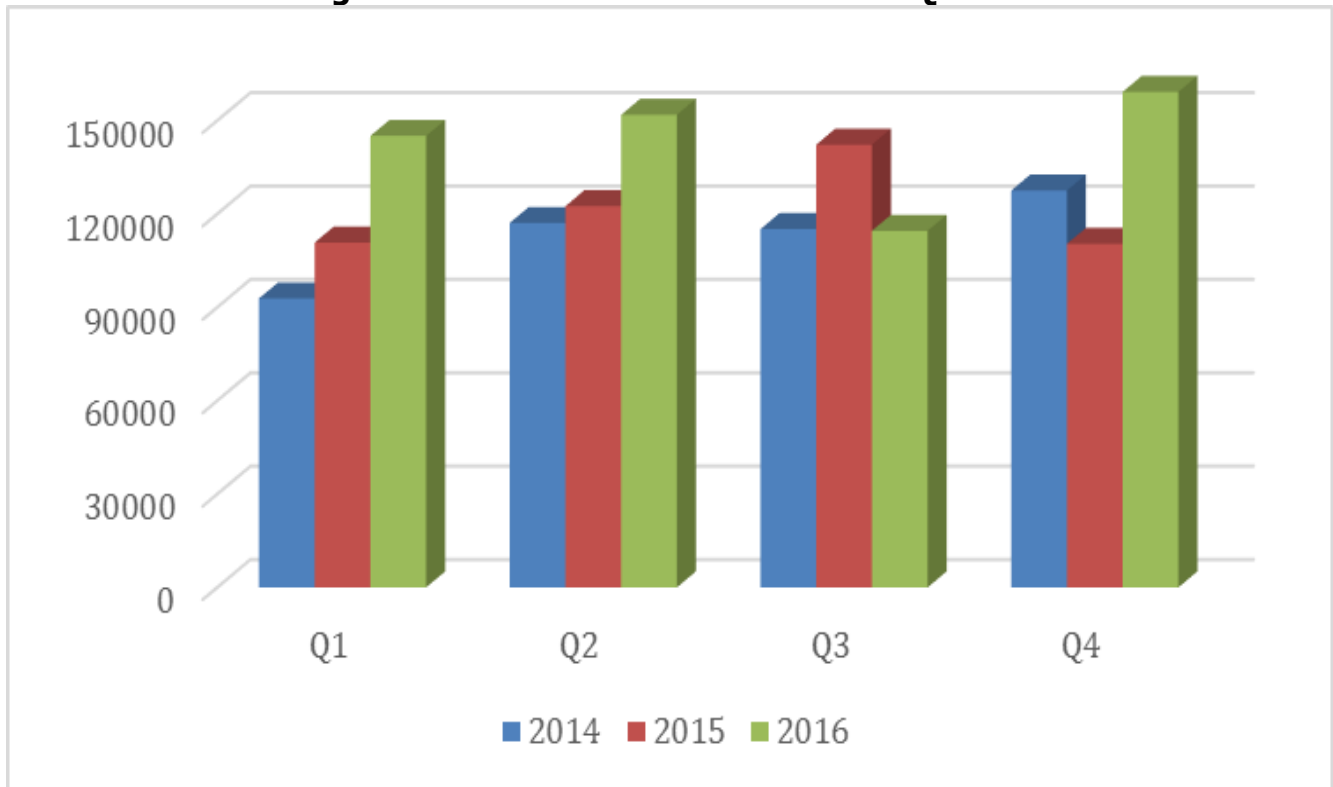
Source: Buster Biofuels, LLC

### 2.2 Buster Biofuels, LLC Feedstock Collection and Expansion with Feedstock Procurement Agreement

Expanding Buster Biofuels, LLC feedstock collection is an integral step in reaching our biodiesel production goals. Year after year our collection has increased. Figure 2 shows a graph of our quarterly feedstock procurement and collection log based off yellow grease sales, while in Appendix B a Feedstock Expansion Plan is laid out in a spreadsheet. Meeting and making partnerships with local and regional commercial restaurant owners to acquire restaurants in bulk along with door-to-door operations on the small scale allows us to receive commitments

from restaurants. A sample of a feedstock procurement agreement is located in Appendix C. Hundreds of restaurants were acquired during the grant term to secure local UCO supply. Figure 3 illustrates our 135-gallon outdoor UCO container that we supply to restaurants free of charge which are also lockable to deter oil theft.

**Figure 2: Gallons of UCO Procured vs. Quarter**



**A graph of gallons of UCO procured by Buster Biofuels grouped by quarter from 2014 to 2016. Each Year's total was 452,600 gal in 2014, 486,000 gal in 2015 and 570,800 gal for 2016.**

Source: Buster Biofuels, LLC

**Figure 3: Fabricated UCO Containers for Restaurants**



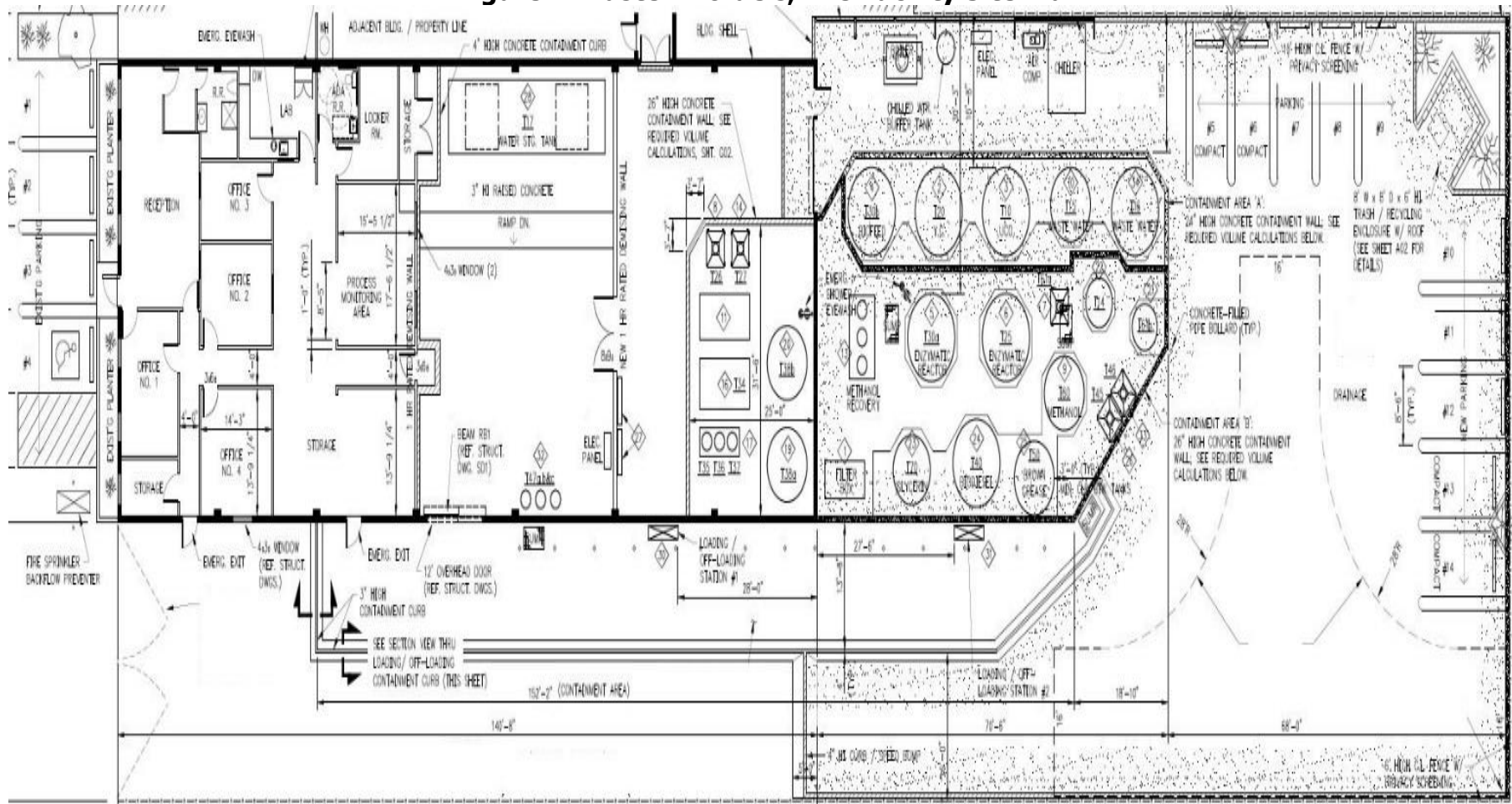
**135-gallon outdoor lockable Containers.**

Source: Buster Biofuels, LLC

## **2.3 Final Project Engineering and Design, Process Sequence and Equipment Layout**

For reference a Plant overall site plan is shown in Figure 4. To manage the increasing UCO collection the plant had to be designed with growth in mind. This forethought was already accounted for when setting our biodiesel production goals high. While a Process flow diagram would allow for us to communicate the production of UCO to biodiesel, due to confidentiality agreements with our technology provider there are no renderings to be included in this report. The equipment needed to achieve said production have been procured, designed, and fabricated in the timely manner dictated by the equipment Procurement found in Appendix A, accompanied by their respective delivered costs.

**Figure 4: Buster Biofuels, LLC Facility Site Plan**



Source: ItSCO Engineering/Mark Pettersen



## **2.4 Regulatory Application, Registration, and Permitting**

All necessary permits were filed and approved prior to construction or completion of the plant dependent upon respective deadlines. A partial list includes: Renderer Inedible Kitchen Grease License, Environmental Protection Agency Facility Registration, County of San Diego Air Pollution Control District, Department of Environmental Health Unified Program Facility Permit, Low Carbon Fuel Standard Alternative Fuel Portal Company Registration both Tier one and Tier two provisional path way for UCO, Central Data Exchange Responsible Corporate Officer Update CR-1371, and Environmental Protection Agency 40 Code of Federal Regulations 79.13, California Department of Tax and Fee Administration accounts including Diesel fuel motor vehicle fuel sales and use taxes, and Internal Revenue Service Biodiesel Registration. All can be found in Appendix E.

# CHAPTER 3:

## Construction

---

Various local general contractors and subcontractors were solicited to complete the construction of the Buster Biofuels, LLC production room and tank farm, shown in Figure 5. The selection process consisted of at least two to three quotes from various trades. Contractors were chosen based primarily on price but with consideration of their references and availability.

Throughout construction every and all necessary inspections from appropriate vendors were completed. Lead times for equipment averaged to be 4-8 weeks. In most cases, no terms were supplied to Buster Biofuels, LLC which put a strain on the company’s cash flow (which was supported primarily from revenues from the UCO business).

The UCO revenue and grant reimbursement lag time simply could not support the project needs from a cash flow perspective. Often Buster Biofuels, LLC had to utilize equipment finance companies to preserve funds needed to get other projects and/or contractors under way. Sometimes cash shortages required the company to raise more than \$1,100,000 in cash funds from friends, relatives or other small private investors to help bring the project to completion. Nearly half of these funds came from the owners of Buster Biofuels, LLC.

**Figure 5: Local Sub Contractors**

<b>BUSTER BIOFUELS - Local Sub Contractors</b>		
<b>Contractor</b>	<b>Trade</b>	<b>Project Focus</b>
Morello Concrete Construction	Concrete / Masonry	Foundation, spill containments
Berg Electric	Electrical	Panels, wiring, conduit, etc.
Electric Cal Partners	Electrical	Various equipment hookup to panels
JTS Plumbing Inc.	Plumbing	Fluid and gas piping, valves, accessories
Underground Utilities	Sprinklers, Etc.	Underground/Installation sprinkler riser
West Coast Fire Protection	Sprinklers, Etc.	Interior sprinkler installation and testing
J&J Enterprises	Alarm systems	Sprinkler alarm/monitoring system
Bob's Crane Services	Crane Operators	Tanks/Equipment placement in tank farm

Source: Buster Biofuels, LLC

### 3.1 Equipment Procurement and Installation

The equipment needed to achieve biodiesel production have be procured, designed and fabricated in the timely manner dictated by the List of Equipment Procurement found in Appendix A accompanied by their respective delivered costs. A sample purchase order of some of our main oil holding tanks can be found in Appendix G. Within those tanks there are heating coils, a sample of fabrication design of this coil can also be found in Appendix G along with an equipment design of our hot water boiler. While a shipment and verification schedule were on our list of deliverable material, we did not collect this information formally. The closest thing would be informal dates of delivered/installed on the previously mentioned equipment procurement.

Install of the purchased equipment was all done in house or by appropriate subcontractors. All piping lines were also pressure tested in house with no formal documentation being obtained nor required by local agencies. Installation of safety equipment such as interior wet sprinkler systems required by the Escondido Fire Department and the anchoring of every tank were signed off and documentation can be found in Appendix F, in the City of Escondido Inspection Report or the anchor report respectively. Pictures from each of the four phases of construction can be found below. Figures 6 through 9 shows four phases of plant construction.

**Figure 6: Phase One of Construction**



Source: Buster Biofuels, LLC and Itsco Engineering/Mark Pettersen

**Figure 7: Phase Two of Construction**



Source: Buster Biofuels, LLC

**Figure 8: Phase Three of Construction**



Source: Buster Biofuels, LLC and Biodiesel Magazine

**Figure 9: Phase Four of Construction**



Source: Buster Biofuels, LLC

# CHAPTER 4:

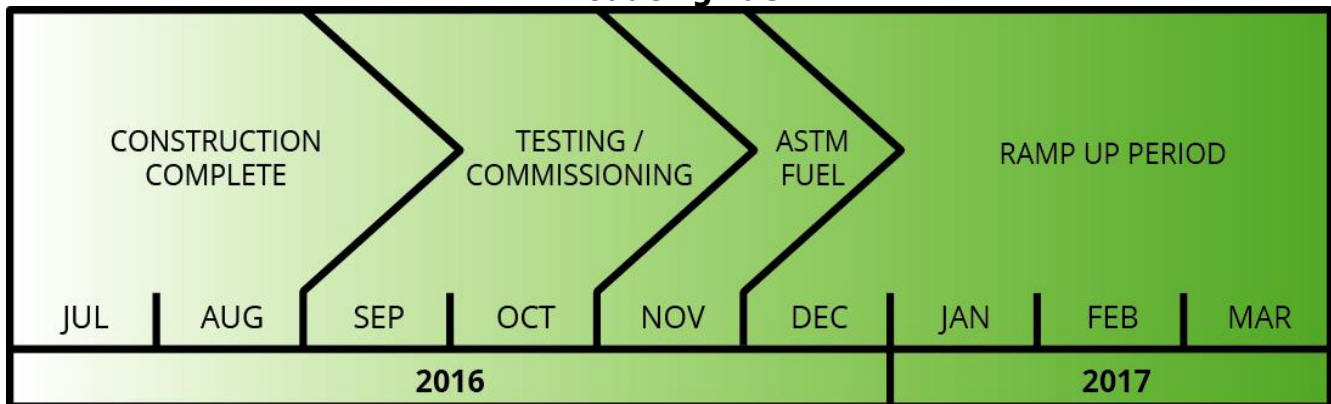
## Equipment Testing and Calibration

---

The goal of this task is to calibrate and test key individual equipment and commission the production system to begin commercial production of American Society for Testing and Materials D6751 biodiesel fuel.

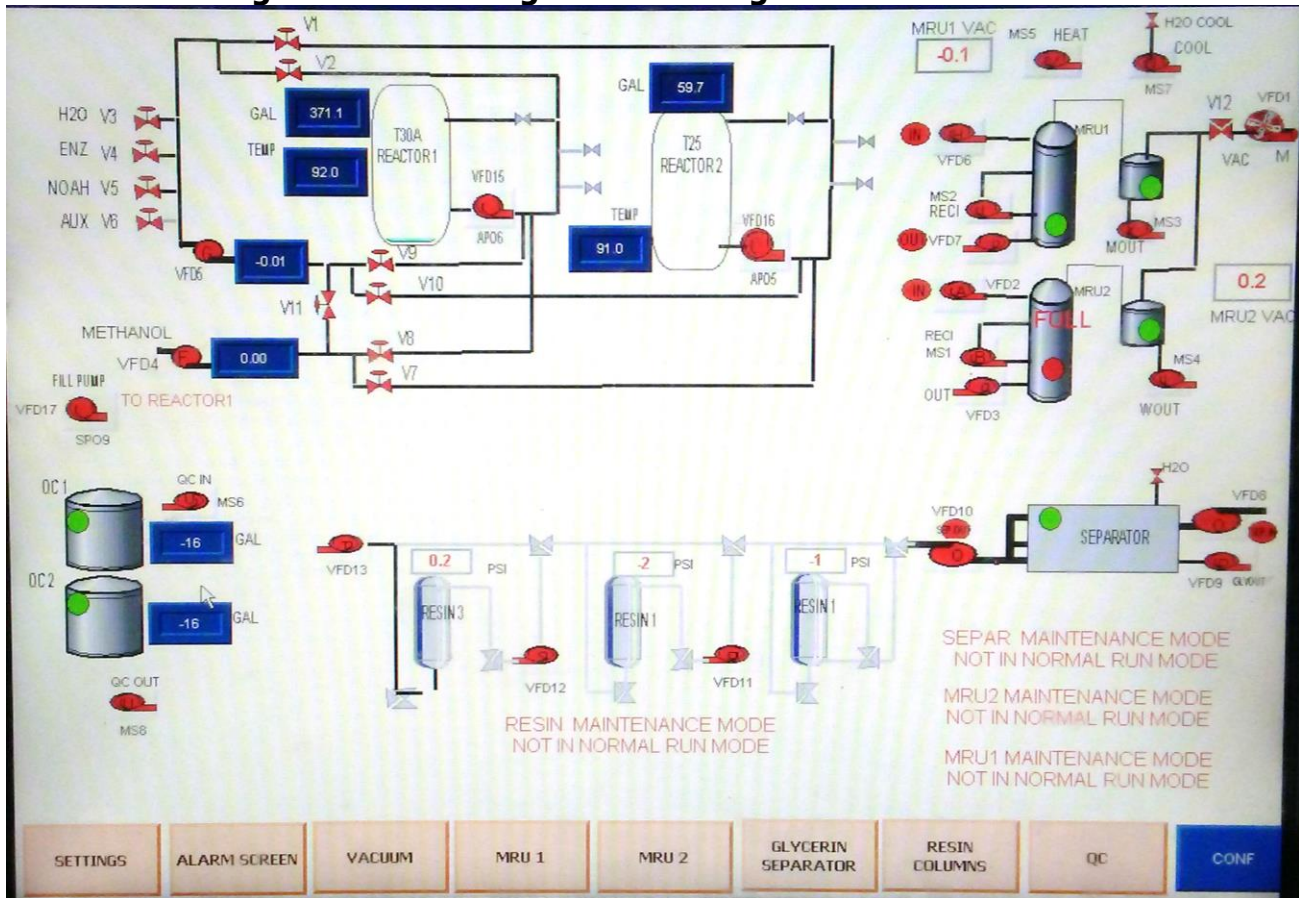
All electrical, pumps, controls, valves, switches, and other miscellaneous equipment was tested by the corresponding subcontractor upon installation. While there is no documentation to present, all equipment came with the standard one-year manufacture warranty. Before the first reaction of biodiesel each system was tested with water while undergoing simulations of what normal operations could be. This doubled as initial training for the production team. This included operating of the Programmable Logic Controller, verifying the appropriate valves are actuating, that pumps are running as they should and that the venture meters are giving the same reading at the Programmable Logic Controller. No formal documentation of this was recorded. Figure 10 shows a timeline of Buster Biofuels, LLC from construction through to fuel production and a picture of the Programmable Logic Controller where the majority of the fuel production process is controlled. Figure 11 shows the programmable logic controller screen.

**Figure 10: Timeline of Buster Biofuels, LLC From Completing Construction to Producing Fuel**



Source: Buster Biofuels, LLC

**Figure 11: The Programmable Logic Controller Screen**



**The Programmable Logic Controller displaying the overview of the portion of the plant that is automated/controlled by from Programmable Logic Controller.**

Source: Buster Biofuels, LLC

# CHAPTER 5:

## Operations

---

The goal of this task is to operate the facility as designed for 6 months and to collect data to document the project's fulfillment of its objectives.

### 5.1 Quality Control

To assure Buster Biofuels, LLC produces American Society for Testing and Materials spec biodiesel steps are taken to monitor key indicator at every step in the production process. For this to be achieved a quality control lab and research and development lab had to be implemented into the existing structure. A list of lab equipment can be found in Appendix A and pictures of each lab are shown in Figure 12 and 13. Some such indicators are Free Fatty Acid, Soap (the conjugate base to Free Fatty Acid), and glyceride levels to name a few and their testing methods each have their own Standard Operating Procedure, a full list of lab Statement of Procedures can be found in Appendix A. Our production staff have been trained on how to use the lab equipment along with controlled runs of the Statement of Procedures to assure competency before gaining access to performing such tests for production. We had sent out numerous B100 samples to Gorge Analytical to confirm our results of passing American Society for Testing and Materials standards, two certificates of analysis are found in Appendix D.

**Figure 12: Quality Control Lab**



Source: Buster Biofuels, LLC

**Figure 13: Research and Development Lab**



Source: Buster Biofuels, LLC

## **5.2 Statement of Procedures and Safety**

Establishing and maintaining a safe working environment is at the forefront here at Buster Biofuels, LLC. We abide by the Injury and Illness Prevention Program as laid out in Title 8 of the California Code of Regulations, Section 3203. This includes the training of our personnel to appropriately and safely complete assigned tasks. A list of training subjects can be found in Appendix A. To accompany the training each employee is familiar with the Material Safety Data Sheet log, covering all the chemicals found on the premises, and where it is stored. Found in the same position are the Emergency Contacts and Evacuations plans if such every become necessary. To assure a safe work place each employee must be up to date with the Statement of Procedures of their respective field such that said employee is fully familiar with the operations of the equipment to reduce the chance of error which could result in potential harm to themselves and the people around them. A full list of production Statement of Procedures can be found in Appendix A.

## **5.3 Regulatory Registration and the Biodiesel Community**

Through our Environmental Protection Agency registration, and as per the Small Business Provisions set forth in 40 Code of Federal Regulations 79.58(d), we realized that we did not need the Health Effects Study which is a huge benefit provided by the National Biodiesel Board when you join as a producer member. The Environmental Protection Agency Small Business Provision states, "A manufacturer of a baseline or non-baseline fuel whose average of the previous three years annual sales revenue is less than \$50 million is exempt from Tier I and Tier 2 health effects testing requirements. A manufacturer of an atypical fuel whose average of the previous three years annual sales revenue is less than \$10 million is exempt from the Tier 2 requirements."

While we had hoped to join and support the National Biodiesel Board as a member (and benefit from the Health Effects Study), it was deemed to be another unfeasible cost for the company at that stage.



On the same lines of the National Biodiesel Board membership the BQ-9000 Producer and Marketer Certification could not be realized due to infrastructure and equipment limitations. The BQ-9000 certification requires that a volume of biodiesel be locked down and not touched while samples are sent out to third party labs for testing which takes roughly 3 days to perform. It is only after the certificate of analysis is awarded can the volume in question be unlocked and sold. The existing plant layout has a huge tank capacity restraint that made this extremely unviable and unreasonable to accomplish until additional storage, lab equipment and other resources could be put in place at the site.

#### **5.4 Glycerin Market Development**

Glycerin is a byproduct derived from vegetable oil through the biodiesel production process, chemically this process is called transesterification. Buster Biofuels, LLC currently has an avenue to disburden this byproduct. Originally, we had expected this byproduct to be of high enough quality to be desirable to industries using glycerin such as skin care products with little to no refining needed of the glycerin. But due to the nature of the caustic wash step our glycerin becomes quite crude and saturated with impurities such as dissolved salts, soaps, water and methanol. More infrastructure would be needed (outside of the grant funds provided) in order to solve these impurity issues. Our outlet for the crude, methanol laden glycerin is a chemical recycling plant that can purify the crude methanol and glycerin product. This vendor also delivered much of the recovered methanol back to the Escondido Biorefinery Second Generation plant.

# CHAPTER 6:

## Data Collection and Analysis

---

The goal of this task is to collect and analyze operational data to determine the economic viability and environmental impact of the project.

### 6.1 Data Collection and Analysis

With 7 months of fuel production data Buster Biofuels, LLC has found to have an average conversion of feedstock to be 87 percent, while this is a very acceptable number for us, we are exploring ways of increasing our efficiency to get this conversion percentage even higher. One example of how we would manage this is to convert the soaps being discharged from the centrifuge back into Free Fatty Acid and recycle that back into the start of the reaction to supplement feedstock. When relying solely on our own oil collection for feedstock American Society for Testing and Materials spec biodiesel production is at 32,000 gallons a month, with a rate of 115 gallons an hour monitored and maintained by only three employees. At our highest production, we produced 83,600 gallons a month while only needing a production staff of 8. As we gain more experience this number will naturally go up due to reduced downtime and increased efficiencies.

### 6.2 Thinking Green

Currently the biodiesel produced at Buster Biofuels, LLC is destined to end up as blended fuel. Engines running on B20 obtain similar power and fuel economy as compared to engines consuming petroleum-based diesel [Alternative Fuels Data Center]. Other Reports Have a B20 blend decreasing fuel economy by 2 percent and up to a 10 percent for B100. [Office of Energy Efficiency & Renewable Energy]. Therefore every gallon of biodiesel produced can directly replace 90 percent of a gallon all the way up to the full gallon of petroleum-based diesel fuel depending on the blend. This means that to date we have displaced no less than 180 thousand gallons of petroleum diesel by producing just over 200 thousand gallons of biodiesel. When we reach full production again, we are projected to be displacing over four and a half million gallons of conventional diesel annually estimated from the Environmental Protection Agency's independent third-party engineering review per 80.1450. All of this is achieved with two California Air Resources Board-approved provisional pathways with a Carbon Intensity value of 16.94 grams carbon dioxide per megajoule for feed stock collected by Buster Biofuels, LLC, and a Carbon Intensity of 21.53 grams carbon dioxide per megajoule for rendered feedstock purchased from other vendors.

Previously we had performed a light water wash to assist the dropping out of soaps and glycerin in the crude biodiesel while in the decanter. This step brought our total water usage to an estimated 11 percent to that of biodiesel produced. Since then we have installed a centrifuge to spin out any heavy impurities, like soaps and glycerin, allowing to cut back on the water wash even more bringing our total water usage down to an estimated 7 percent to that of biodiesel produced. This is a 30 percent reduction in water used in production. Comparing this to tradition biodiesel production which can water wash with up to 20 percent to that of biodiesel produced, our enzymatic catalyst is less reliant on water.

## 6.3 Finances

November was the first month that we were consistently producing American Society for Testing and Materials spec biodiesel at around a batch a week. In December we were able to crank up production to two or three reactions a week and January we had a goal of Four reactions a week, reached only a couple of times from that point on. This is important because at the slow rate we were producing biodiesel the operating, labor and utility costs were too high to make the production profitable at that throughput. We were just starting to improve production volumes and striving closer to an economy of scales when the biodiesel blender credit expired on December 31, 2016. The profit margin got eaten up overnight and the company saw drops in per gallon revenue by nearly 25 percent. Funds were exhausted quickly in Q1, 2017, but the current volume and margins could not support the overhead.

While producing at one batch a week we can only produce at 115 gallons per hour but if we were able to run continuously by starting a reaction as soon as the reactor is emptied of the previous product then we would be able to run more biodiesel at a time increasing our production to an estimated 160 gallons per hour. This higher rate of production will help offset the running costs of the biodiesel production. Though the higher production rate comes with another cost. We do not collect enough UCO to run at the higher production rate and we need to purchase clean UCO which brings the material cost too high to be profitable, again at current volumes/margins. In our case, the aid from the existing State and Federal programs meant to assist the biodiesel industry through financial support was not enough.

On a micro-level, the project utilized local contractors, sub-contractors and laborers through the construction phases. By allocating the vast majority of Escondido Biorefinery Second Generation spending directly into the economy, the state will recoup a significant portion of its expenditure in the form of increased income tax revenue.

## 6.4 Complete Proposed Goals

- Provide a reliable, locally produced supply of American Society for Testing and Materials-quality biodiesel displacing petroleum diesel fuel, while increasing in-state biofuels production to already committed state and national vendors.
  - Completed.
- Divert nearly 5.65 million gallons per year of UCO from being utilized in low value rendering operations, reduce the use of petroleum diesel by up to 4.83 million gallons per year (based on 8 percent energy loss in biodiesel) in major local, regional, and state fleets, and reduce carbon-dioxide equivalents per by approximately 64.5 million pounds in the southern California region.
  - It is estimated by the Environmental Protection Agency's third-party engineer that our plant can produce 4.5 million gallons a year, while this is slightly lower than our initial proposal, we will still strive to reach this goal once financial/economic means allows production to start again.
- Research and demonstrate alternative uses for low value glycerin byproduct for algae-based jet fuel production, anaerobic digester acceleration and green chemistry.
  - Since Buster biofuels has changed to an enzymatic catalyst it was been deemed that the glycerin was too crude for these applications. Instead, we ship the glycerin to a chemical recycler that purifies the glycerin and reclaims the trapped methanol which we then purchase for the production of biodiesel.

- Provide a highly scalable model for the replication of additional facilities in California using waste-based, low carbon intensity feedstocks.
  - In the right market, it is determined that the Escondido Biorefinery Second Generation project/plant is scalable. However, we do not currently have any plans to replicate the plant anytime soon.
- Produce 28 full-time, contractual professional, Technical, and material handler jobs to construct Escondido Biorefinery Second Generation and support creation of 16-18 full-time Buster Biofuels, LLC positions to operate the Escondido Biorefinery Second Generation.
  - At peak Escondido Biorefinery Second Generation production we had 19 full time employees working here at Buster Biofuels, LLC. It was a scheduling decision that reduced the number of jobs that we created. Essentially, we ran the plant 24/7 with 12-hour shifts (more overtime/higher income jobs). This required us to only have eight production staff members. If we ran 3 shifts a day, then we would have hired at least four more employees.
- Distribute biodiesel in three distinctive ways (Page 13), deliver bulk loads and providing wet-hose service for fleets and companies.
  - It was determined during start up that only bulk distribution was the viable option for Buster Biofuels, LLC due to logistics and profitability. Volume throughput of the plant was essential before considering extremely low volume distribution of performing wet-hose services for fleets and companies locally. Additionally, the industry has evolved since the Escondido Biorefinery Second Generation project began. Now biodiesel is commonly blended in at least 2-5 percent of all diesel fuel sold in CA. We feel this is a more sustainable method to reduce emissions while creating a viable business, there are customers wanting to run higher blends of biodiesel then are typically available at the pump. BB aims to cater to those clients in the future via fuel marketers once the production model stabilizes in the future.

## **GLOSSARY**

**CALIFORNIA ENERGY COMMISSION (CEC)**—The state agency established by the Warren-Alquist State Energy Resources Conservation and Development Act in 1974 (Public Resources Code, Sections 25000 et seq.) responsible for energy policy. The CEC's five major areas of responsibilities are:

1. Forecasting future statewide energy needs.
2. Licensing power plants sufficient to meet those needs.
3. Promoting energy conservation and efficiency measures.
4. Developing renewable and alternative energy resources, including providing assistance to develop clean transportation fuels.
5. Planning for and directing state response to energy emergencies.

Funding for the CEC's activities comes from the Energy Resources Program Account, Federal Petroleum Violation Escrow Account, and other sources.

**USED COOKING OIL (UCO)**—Fats or oils that have been processed through the cooking or frying of food by the restaurant and food services industries.

# APPENDIX A:

## Lists

---

### Lab Statement of Procedures

- Standard 9/1 conversion
- Caustic Pretreatment
- Standard Pretreatment
- Standard Guidelines Caustic Wash
- Enzyme Activity Testing
- Determining Free & Bound Glycerin in Biodiesel
- Titration Test Method for Free Fatty Acid
- Titration Test Method for Soap Content
- Cold Soak Filtration
- Moisture in Biodiesel Using Karl Fischer
- Standard Mini Batch Reaction
- Methanol Impurity
- Moisture and Volatiles, Insoluble Impurities and Unsaponifiables Test
- Sodium Hydroxide Solution Density
- Operator Guidelines for Reactor Monitoring
- Optimal Water Content Determination
- Quality Trait Analysis Reaction Monitoring

### Production Statement of Procedures

- Reactor Startup and Dosing
- Caustic Wash for Production
- Backend Startup
- Backend Shutdown
- Westfalia(Green) Centrifuge
- Alfa Laval(Blue) Centrifuge
- MRU Wash
- MRU Operations
- Boiler Unit
- Programmable Logic Controller Operations
- Resin Column Operations
- Resin Column MeOH flush
- Shipping and Receiving (Specifically of Biodiesel)

## **Training Subjects**

- Task and Job Specific Safe Practices
- Confined Spaces
- Safe Practices for Operating Specific Pieces of Equipment
- Good Housekeeping, Fire Prevention, Safe Practices for Operating Any Construction Equipment
- Safe Access Procedures for Cleaning, Repairing, Servicing and Adjusting Equipment and Machinery
- Safe Access to Working Areas
- Protection from Falls
- Electrical Hazards, Including Working Around High Voltage Lines
- Proper Use of Powered Tools
- Guarding of Belts and Pulleys, Gears and Sprockets, and Conveyor Nip Points
- Machine, Machine Parts, And Prime Movers Guarding
- Lock-Out/Tag-Out Procedures
- Materials Handling
- Fall Protection from Elevated Locations
- Slips, Falls, and Back Injuries
- Driver Safety
- Ergonomic Hazards
- Personal Protective Equipment
- Respiratory Equipment
- Hazardous Chemical Exposures
- Hazard Communication
- Physical Hazards, Such as Heat/Cold Stress, Noise, And Ionizing and Non-Ionizing Radiation
- Laboratory Safety
- Chemical Hazards

## Lab Equipment

- Denver instrument Karl-Fischer
- Microvoid fume hood
- Eurofins Quality Trait Analysis Infrared spectroscopy
- Koehler Automatic Heated Oil Test Centrifuge
- Volumetric Pipettes of Various Sizes.
- Transfer Pipettes
- Titration Pipettes
- Titrants and Indicator solutions
- Balance
- Stirring Hot plates
- Magnetic stir Bars
- Miscellaneous Glass and Plasticware.
- Menchmark Incu-Shaker Mini
- Parafilm
- Syringes of Various Sizes
- Hewlett Packard 5890 series II Gas Chromatograph
- Cabinet for Flammables
- Cabinet for Corrosives



## Equipment Procurement

Figure 14 shows a list of essential equipment procured by Buster Biofuels, LLC for the rendering of biodiesel.

**Figure 14: Essential Equipment for Biodiesel Rendering**

Equipment Procurement with Delivered Costs				
VENDOR	DESCRIPTION	ORDERED / PAID	DELIVERED / INSTALLED	COST
American Heating Company, Inc.	Tank Heating Coils	10/11/2013	12/12/2013	16,150
American Heating Company, Inc.	Tank Heating Coils - second half and shipping	12/9/2013	12/12/2013	20,550
Brian F. Sachau	450 gallon steel tank, pressure vessel for chilled water tank	2/29/2016	2/30/2016	1,750
Complete Trucking	Shipping 4 tanks	5/16/2014	5/16/2014	3,800
Crestline Transportation	Shipping 4 tanks	9/28/2015	10/1/2015	3,900
Packard Logistics Inc	Shipping of Tanks	2/18/2016	2/21/2016	2,400
Brewer Crane and Rigging	Transport of Large Tanks from Fresno to Escondido	1/22/2014	1/29/2014	12,453
Central Valley Tank of California, Inc.	6 - 15,000 Gallon UL 142 tank	10/11/2013	5/16/2014	108,000
Central Valley Tank of California, Inc.	1- 8,500 Gallon UL 142 Methanol Tank	10/11/2013	5/16/2014	12,000
Central Valley Tank of California, Inc.	vent port and nozzle adds	1/1/2014	N/A	800
Central Valley Tank of California, Inc.	anchor chairs/labor	1/1/2014	N/A	1,660
Central Valley Tank of California, Inc.	4000 tank	5/16/2014	5/16/2014	6,200
Central Valley Tank of California, Inc.	2000 tank	5/16/2014	5/16/2014	6,890
Central Valley Tank of California, Inc.	2 - 3,380 gal tank	5/16/2014	5/16/2014	7,200
Central Valley Tank of California, Inc.	12,000 gal Used Tank	3/4/2016	5/12/2016	7,500
Central Valley Tank of California, Inc.	12,500 gal used tank	3/4/2016	5/12/2016	7,500
Bob's Crane Service	Setting of Tanks	5/16/2014	5/17/2014	1,894
Bob's Crane Service	Setting of Tanks	2/29/2016	1/29/2016	936
Bob's Crane Service	Setting of Tanks	5/12/2016	5/12/2016	749
Koehler Instrument Company, Inc.	Oiltest Centrifuge, 115V, Longtube	1/17/2014	1/25/2014	11,228
Parker Boiler Co.	T2970 Gas Fired Hot Water Boiler with Accessories	10/22/2013	11/14/2013	45,056
Parker Boiler Co.	Hot Water Boiler	11/14/2013	11/14/2013	2,123
Parker Boiler Co.	Burk pump for boiler system	7/13/2015	7/14/2013	2,121
Tactical Fabrication / Leasing Innovations	Chemical Inector Feed Skid	12/13/2013	9/1/2016	250,000
Tactical Fabrication / Leasing Innovations	Heat Recovery	1/27/2016	9/1/2016	100,000
Tactical Fabrication / Leasing Innovations	Ion Exchange Resin Columns	11/13/2015	9/1/2016	7,500
Tactical Fabrication / Leasing Innovations	Twin Tower Methanol Recovery System	12/31/2013	9/1/2016	305,819
Tactical Fabrication / Leasing Innovations	Glycerin Separator	12/31/2014	9/1/2016	5,836
Tactical Fabrication / Leasing Innovations	Filter Box	12/31/2014	9/1/2016	7,000
Tactical Fabrication	Installation and Added cost due to delays	2/12/2016	9/1/2016	45,325
Access America Transport	Shipping of Filter Box	3/20/2014	3/25/2014	1,985
Freightquote	shipping of chiller	4/27/2016	9/1/2016	4,600
Balboa - Misc. Tanks	deposit payment on Change Addendum for QTA, Tanks, JTS, Chiller	3/4/2016	3/4/2016	1,214
Balboa - JTS Plumbing	Balboa Capital Final Amount - Increase to Manufacturing Equip	12/31/2015	1/29/2016	8,708
Balboa - Eurofins QTA lab equipment	EuroFins MRT FT Instrument Purchase	1/1/2016	3/4/2016	30,300
JPR Systems Inc.	DCF1600 - Continuous Cleaning Valve/Freight	12/1/2014	12/10/2014	25,760
JPR Systems Inc.	MCF 824 Eaton Filter	4/8/2014	4/20/2014	12,500
Trane	Air Cooled Chiller (2007 Trane CGAF 50 ton)	3/4/2016	9/1/2016	17,300
Trane	chiller install - JPR	3/4/2016	9/1/2016	27,200
Kyte Centrifuge	OSB-35 Centrifuge	11/10/2016	11/15/2016	49,386
			Total	1,183,293

Source: Buster Biofuels, LLC

# APPENDIX B: Table

## Buster Biofuels, LLC's Feedstock Expansion Plan

Figure 15 shows a table explaining the desired expansion of restaurants accounts held by Buster Biofuels, LLC

**Figure 15: Desired Expansion of Restaurant Accounts**

<b>NET COLLECTED</b>		<b>25% LOSS (=PROCESSING ASSUMPTIONS D3)</b>												
YR./MO.	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	TOTAL	
2014	33,375	34,125	34,875	35,625	36,375	37,125	37,875	38,625	39,375	40,125	40,875	41,625	450,000	
2015	42,375	43,125	43,875	44,625	45,375	46,125	46,875	47,625	48,375	49,125	49,875	50,625	558,000	
2016	51,375	52,125	52,875	53,625	54,375	55,125	55,875	56,625	57,375	58,125	58,875	59,625	666,000	
													1,674,000	
<b># OF CLIENTS</b>		<b>50 GALLONS PER RESTAURANT</b>												
YR./MO.	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	NEW ACCTS	Actual
<b>2011</b>	70	80	90	100	110	120	130	140	255	270	285	300	300	ACCUMULATED
added		10	10	10	10	10	10	10	115	15	15	15	230	added
<b>2012</b>	320	340	360	380	400	420	440	460	480	500	520	540	540	ACCUMULATED
added	20	20	20	20	20	20	20	20	20	20	20	20	240	added
<b>2013</b>	650	670	690	710	730	750	770	790	810	830	850	870	870	ACCUMULATED
added	20	20	20	20	20	20	20	20	20	20	20	20	240	added
<b>2014</b>	890	910	930	950	970	990	1,010	1,030	1,050	1,070	1,090	1,110	1,110	ACCUMULATED
added	20	20	20	20	20	20	20	20	20	20	20	20	240	added
<b>2015</b>	1,130	1,150	1,170	1,190	1,210	1,230	1,250	1,270	1,290	1,310	1,330	1,350	1,350	ACCUMULATED
added	20	20	20	20	20	20	20	20	20	20	20	20	240	added
<b>2016</b>	1,370	1,390	1,410	1,430	1,450	1,470	1,490	1,510	1,530	1,550	1,570	1,590	1,590	ACCUMULATED
added	20	20	20	20	20	20	20	20	20	20	20	20	240	added
<b>2017</b>	1,610	1,630	1,650	1,670	1,690	1,710	1,730	1,750	1,770	1,790	1,810	1,830	1,830	ACCUMULATED
added	20	20	20	20	20	20	20	20	20	20	20	20	240	added
<b>2018</b>	1,850	1,870	1,890	1,910	1,930	1,950	1,970	1,990	2,010	2,030	2,050	2,070	2,070	ACCUMULATED
added	20	20	20	20	20	20	20	20	20	20	20	20	240	added
<b>2019</b>	2,090	2,110	2,130	2,150	2,170	2,190	2,210	2,230	2,250	2,270	2,290	2,310	2,310	ACCUMULATED
added	20	20	20	20	20	20	20	20	20	20	20	20	240	added
<b>2020</b>	2,330	2,350	2,370	2,390	2,410	2,430	2,450	2,470	2,490	2,510	2,530	2,550	2,550	ACCUMULATED
added	20	20	20	20	20	20	20	20	20	20	20	20	240	added
<b>2021</b>	2,570	2,590	2,610	2,630	2,650	2,670	2,690	2,710	2,730	2,750	2,770	2,790	2,790	ACCUMULATED
added	20	20	20	20	20	20	20	20	20	20	20	20	240	added

Source: Buster Biofuels, LLC

# APPENDIX C: Agreements

---

## Used Cooking Oil Collection Agreement

1170 Industrial Ave. Escondido, CA. 92029

P 760-294-9400 F 760.294-9420

### Used Cooking Oil (UCO)

This Agreement is made effective as of \_\_\_\_\_ between

**Customer:**

**Company:** \_\_\_\_\_ **DBA:** \_\_\_\_\_

**Main Address:** \_\_\_\_\_

**Service Address:** \_\_\_\_\_

**Owner/Manager:** \_\_\_\_\_ **P:** \_\_\_\_\_ **C:** \_\_\_\_\_

\_\_\_\_\_

**Email:** \_\_\_\_\_ **Website:** \_\_\_\_\_

And **AGENT:** BUSTER BIOFUELS LLC, located at 1170 Industrial Ave. Escondido, CA 92029

### **THE CUSTOMER AND AGENT AGREE TO THE FOLLOWING:**

1. **TERM AND TERMINATION:** This agreement shall remain in effect for 3 (three) years (the "Term"). 30 (thirty) days prior to the end of the Term, the parties agree to make their best efforts to renegotiate and replace this document with a new agreement. If no new agreement is signed and agreed to, this service agreement shall remain in effect on a month to month basis and may, by written notice to the other, terminate this agreement providing at least thirty (30) days grace period until Agent's services shall cease and termination shall become effective.
2. **NO CONTRACT INTERFERENCE:** Customer certifies that it is not contractually obligated to another company for the same services, nor is Customer entering into a breach of contract as a result of signing this agreement.
3. **SCOPE OF SERVICES:**
  - a. **USED COOKING OIL (UCO) SERVICES:**
    - i. Customer appoints and hereby grants Agent exclusive rights to remove all UCO accumulated at the Customer's premises at the Customer's location. Agent accepts such appointment and agrees to act in accordance with the terms and conditions of this Agreement.
    - ii. Customer agrees to dispose all UCO in the container/s provided by Agent and assigns ownership of UCO to Agent.

- iii. Customer warrants that all UCO provided to Agent has not been mixed, combined or otherwise blended with any material that would render the UCO hazardous or non-organic as defined and regulated by any regulatory agency of the United States. Any fees or fines resulting from non-organic and/or hazardous material contamination in the UCO shall be at the Customer's expense.
  - iv. Agent shall: (1) Provide and deliver, free of charge to the customer, suitable container/s and lock/s (if needed) for UCO storage. The size, shape and quantity of container/s will be mutually agreed to by Customer and Agent upon signing this agreement. (2) Remove and/or replace previous container and spill containment basin from loading dock area in a timely manner if requested by Customer. (3) Remove, free of charge, all UCO produced from cooking grade oil in a safe, clean, and timely manner or upon emergency request by the customer.
  - v. Schedule: Service is dependent UCO volume produced and storage container sizes. Customer and Agent shall mutually agree to a schedule that accommodates both parties.
  - vi. Fees: No fees will be charged for the services and equipment outlined above.
  - vii. Terms: There are no payment terms necessary for the services and equipment outlined above.
4. **LICENSES AND PERMITS:** If any license or permit is required for the proper and lawful conduct of Agent's business or other activity carried on in or at Customer's premises, or if a failure to procure such licenses or permit might or would in any way affect the operations of Customer's business, then Agent at its expense, shall duly procure and thereafter maintain such license or permit and upon request by Customer, submit for inspection.
5. **INSURANCES:**
- a. The Agent and its subcontractors (if any) shall include the following as an additionally insured on the Agent's insurance policies as described herein:
    - i. NOT APPLICABLE
  - b. Agent shall hold and maintain, at its own expense throughout the life of this agreement and any extension thereof, insurances as set forth below:
    - i. Workers' Compensation Insurance in the amount of at least statutory maximum with an employer's liability coverage
    - ii. Commercial General Liability Insurance
    - iii. Automobile Liability Insurance
  - c. Agent, and its subcontractors, shall submit valid certificates of insurance in the form and substance satisfactory to Customer upon their request.
  - d. Customer agrees to indemnify, hold harmless and defend Agent from any and all liabilities of whatever nature which Customer may incur, become responsible for, or suffer by reason of: **(a)** Customer's lack of cleanliness to the container/s and/or storage areas as a result from accidental spills, careless UCO transferring and transporting, or non-compliance accusations or fines that are the responsibility of the Customer.
6. **TRADEMARK AND LOGO:** Agent grants Customer a non-exclusive license to use Agent's Marks for promoting green initiatives associated with vendor services and environmental practices SO LONG AS THE SERVICES UNDER THIS AGREEMENT ARE VALID AND IN PLACE.
7. **CONFIDENTIALITY:** Agent and Customer shall, at all times during and after termination of this agreement, consider all information obtained in connection with this agreement or information concerning any matters affecting or relating to the business of the Customer or Agent, including but not limited to, its marketing methods and related data, emails, vendor

lists or client lists, costs of materials, compensation to employees and other terms of employment, and any other information unless expressed in written form to be considered public, or is clearly considered public knowledge and attainable without any assistance or communication from either Customer or Agent.

**IN WITNESS WHEREOF this Agreement has been executed by Customer and Agent and shall be effective as of the date first written above.**

Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Customer (PRINT): \_\_\_\_\_ Title: \_\_\_\_\_

Agent Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Agent (PRINT): \_\_\_\_\_ Title: \_\_\_\_\_

# APPENDIX D: Third Party Lab Results

Figures 16 through 19 third party lab analysis results of Buster Biofuels, LLC's B100 sample by Gorge Analytical.

**Figure 16: Gorge Analytical Analysis Results, November 2, 2016**



GORGE ANALYTICAL

1685 Tucker Road  
Hood River, OR 97031  
541.386.0249 (office)  
866.293.1337 (fax)

Client: **Genscape, Inc.**  
Contact Name: **Creed Gann**  
Client Sample ID: **AGE-300**  
Date/Time Received: **11/3/2016 09:54**  
GA Sample ID: **1522016308401**

Sample Matrix: **B100**  
Feedstock: **UCO**  
Lot Number: **Buster Biofuels QC 2**  
Sample Collection Date/Time: **11/2/2016 12:00**  
Lot Volume (gal):

## Certificate of Analysis

Analysis Performed	Analytical Method	Date Analyzed	Result	fn	Reporting Units	Reporting Criterion	Pass/Fail
Distillation Temperature, vacuum	ASTM D1160	11/8/2016	356		° C	360 max	Pass
Copper Strip Corrosion Rating	ASTM D130	11/3/2016	1a		n/a	No. 3 max	Pass
Cloud Point	ASTM D2500	11/4/2016	3		° C	n/a	n/a
Water and Sediment of Middle Distillate Fuels by Centrifuge	ASTM D2709	11/4/2016	0		% Volume	0.050 max	Pass
Visual Inspection - Part 1	ASTM D4176 - Part 1	11/6/2016	1	<sup>1</sup>	Haze Rating	n/a	n/a
Visual Inspection - Part 2	ASTM D4176 - Part 2	11/6/2016	Free of Particulate	<sup>1</sup>	n/a	Free of Particulate	Pass
Kinematic Viscosity @ 40° C	ASTM D445-40	11/3/2016	4.888		mm <sup>2</sup> /s	1.9 - 6.0	Pass
Micro-Carbon Residue	ASTM D4530	11/3/2016	0.005	<sup>2</sup>	% Mass	0.050 max	Pass
Phosphorus by ICP-OES	ASTM D4951	11/6/2016	< 0.0001		% Mass	0.0010 max	Pass
Sulfur by UVF	ASTM D5453 - Distillates/BD	11/4/2016	7.0		ppm (wt/wt)	15 max	Pass
Total Glycerin (Free and Bound)	ASTM D6584 - 0 Total Glycerin	11/4/2016	0.143		% Mass	0.240 max	Pass
Free Glycerin	ASTM D6584 - 00 Free Glycerin	11/4/2016	0.009		% Mass	0.020 max	Pass
Total Monoglycerides	ASTM D6584 - 1 Monoglycerides, Total	11/4/2016	0.153		% Mass	n/a	n/a
Total Diglycerides	ASTM D6584 - 2 Diglycerides, Total	11/4/2016	0.506		% Mass	n/a	n/a
Total Triglycerides	ASTM D6584 - 3 Triglycerides, Total	11/4/2016	0.180		% Mass	n/a	n/a
Total Acid Number	ASTM D664	11/4/2016	0.48		mg KOH/g	0.50 max	Pass
Derived Cetane Number of Diesel Fuel Oils	ASTM D6890	11/6/2016	54.6	<sup>3</sup>	n/a	47 min	Pass
Cold Soak Filtration Test	ASTM D7501	11/7/2016	203		Seconds	360 max	Pass
Sulfated Ash	ASTM D874	11/3/2016	< 0.005		% Mass	0.020 max	Pass
Flash Point, Pensky Martens	ASTM D93	11/4/2016	140.5		° C	93 min	Pass
Ca, Mg by ICP-OES	EN 14538:2006 - Ca, Mg	11/6/2016	< 2.0	<sup>4</sup>	ppm (wt/wt)	5 max	Pass
Na, K by ICP-OES	EN 14538:2006 - Na, K	11/6/2016	2.0	<sup>5</sup>	ppm (wt/wt)	5 max	Pass
Oxidation Stability (Accelerated Method) at 110° C	EN 15751:2009	11/3/2016	11.4		Hours	3 min	Pass

This report shall not be reproduced except in full without the express written consent of Gorge Analytical, LLC. These results pertain only to the representative sample submitted for analysis.

Client-Based Solutions and High-Quality, Rapid Results

Page 1 of 2

Source: Buster Biofuels, LLC

**Figure 17: Gorge Analytical Certificate of Analysis, November 2, 2016**



1685 Tucker Road  
Hood River, OR 97031  
541.386.0249 (office)  
866.293.1337 (fax)

Client: **Genscape, Inc.**  
Contact Name: **Creed Gann**  
Client Sample ID: **AGE-300**  
Date/Time Received: **11/3/2016 09:54**  
GA Sample ID: **1522016308401**

Sample Matrix: **B100**  
Feedstock: **UCO**  
Lot Number: **Buster Biofuels QC 2**  
Sample Collection Date/Time: **11/2/2016 12:00**  
Lot Volume (gal):

**Certificate of Analysis**

Analysis Performed	Analytical Method	Date Analyzed	Result	fn	Reporting Units	Reporting Criterion	Pass/Fail
--------------------	-------------------	---------------	--------	----	-----------------	---------------------	-----------

**Footnotes:**

Acceptance criteria for B100 biodiesel are found in ASTM D6751. ASTM analyses are performed in accordance with the most current methods.

1. Visual Inspection was performed at 22° C.
2. Sample was analyzed for Micro-Carbon Residue in accordance with (IAW) ASTM D4530 and reported IAW ASTM D6751 Appendix X1.9.
3. The test's average charge air temperature was 560.2° C.
4. Calcium and Magnesium are reported as a combined value.
5. Sodium and Potassium are reported as a combined value.

Reviewed By: M. Fetkenhour, Laboratory Director

Date: 11/8/2016

*MDFetkenhour*  
Digitally signed by Michelle D. Fetkenhour  
DN: cn=Michelle D. Fetkenhour, o=Gorge Analytical, LLC, ou, email=Michelle@gorgeanalytical.com, c=US  
Reason: I attest to the accuracy and integrity of this document  
Date: 2016.11.08 18:11:44 -0800

*This report shall not be reproduced except in full without the express written consent of Gorge Analytical, LLC. These results pertain only to the representative sample submitted for analysis.*

*Client-Based Solutions and High-Quality, Rapid Results*

Page 2 of 2

Source: Buster Biofuels, LLC

**Figure 18: Gorge Analytical Lab Results, February 13, 2017**



GORGE ANALYTICAL

1685 Tucker Road  
Hood River, OR 97031  
541.386.0249 (office)  
866.293.1337 (fax)

Client: **Buster Biofuels LLC**  
Contact Name: **Buster Halterman**  
Client Sample ID: **B100 W/Bioextend**  
Date/Time Received: **2/15/2017 9:46**  
GA Sample ID: **3002017046201**

Sample Matrix: **B100**  
Feedstock: **Not Provided**  
Lot Number: **170213\_QC1**  
Sample Collection Date/Time: **2/13/2017**  
Lot Volume (gal):

## Certificate of Analysis

Analysis Performed	Analytical Method	Date Analyzed	Result	fn	Reporting Units	Reporting Criterion	Pass/Fail
Distillation Temperature, vacuum	ASTM D1160	2/20/2017	355		° C	360 max	Pass
Copper Strip Corrosion Rating	ASTM D130	2/20/2017	1a		n/a	No. 3 max	Pass
Cloud Point	ASTM D2500	2/20/2017	2		° C	n/a	n/a
Water and Sediment of Middle Distillate Fuels by Centrifuge	ASTM D2709	2/21/2017	0		% Volume	0.050 max	Pass
Visual Inspection - Part 1	ASTM D4176 - Part 1	2/21/2017	1	1	Haze Rating	n/a	n/a
Visual Inspection - Part 2	ASTM D4176 - Part 2	2/21/2017	Free of Particulate	1	n/a	Free of Particulate	Pass
Kinematic Viscosity @ 40° C	ASTM D445-40	2/20/2017	4.921		mm <sup>2</sup> /s	1.9 - 6.0	Pass
Micro-Carbon Residue	ASTM D4530	2/20/2017	0.006	2	% Mass	0.050 max	Pass
Phosphorus by ICP-OES	ASTM D4951	2/20/2017	< 0.0001		% Mass	0.0010 max	Pass
Sulfur by UVF	ASTM D5453 - Distillates/BD	2/20/2017	7.0		ppm (wt/wt)	15 max	Pass
Total Glycerin (Free and Bound)	ASTM D6584 - 0 Total Glycerin	2/16/2017	0.159		% Mass	0.240 max	Pass
Free Glycerin	ASTM D6584 - 00 Free Glycerin	2/16/2017	0.016		% Mass	0.020 max	Pass
Total Monoglycerides	ASTM D6584 - 1 Monoglycerides, Total	2/16/2017	0.176	3	% Mass	n/a	n/a
Total Diglycerides	ASTM D6584 - 2 Diglycerides, Total	2/16/2017	0.465		% Mass	n/a	n/a
Total Triglycerides	ASTM D6584 - 3 Triglycerides, Total	2/16/2017	0.273		% Mass	n/a	n/a
Total Acid Number	ASTM D664	2/16/2017	0.26		mg KOH/g	0.50 max	Pass
Derived Cetane Number of Diesel Fuel Oils	ASTM D6890	2/22/2017	54.8	4	n/a	47 min	Pass
Cold Soak Filtration Test	ASTM D7501	2/21/2017	112	3	Seconds	360 max	Pass
Sulfated Ash	ASTM D874	2/21/2017	< 0.005		% Mass	0.020 max	Pass
Flash Point, Pensky Martens	ASTM D93	2/21/2017	114.5		° C	93 min	Pass
Methanol Content	EN 14110:2003	2/21/2017	0.13		% Mass	0.2 max	Pass
Ca, Mg by ICP-OES	EN 14538:2006 - Ca, Mg	2/20/2017	< 2.0	5	ppm (wt/wt)	5 max	Pass
Na, K by ICP-OES	EN 14538:2006 - Na, K	2/20/2017	< 2.0	6	ppm (wt/wt)	5 max	Pass
Oxidation Stability (Accelerated Method) at 110° C	EN 15751:2009	2/15/2017	6.0		Hours	3 min	Pass

*This report shall not be reproduced except in full without the express written consent of Gorge Analytical, LLC. These results pertain only to the representative sample submitted for analysis.*

*Client-Based Solutions and High-Quality, Rapid Results*



**Figure 19: Gorge Analytical Certificate of Analysis, February 13, 2017**



1685 Tucker Road  
 Hood River, OR 97031  
 541.386.0249 (office)  
 866.293.1337 (fax)

Client: <b>Buster Biofuels LLC</b>	Sample Matrix: <b>B100</b>
Contact Name: <b>Buster Halterman</b>	Feedstock: <b>Not Provided</b>
Client Sample ID: <b>B100 W/Bioextend</b>	Lot Number: <b>170213_QC1</b>
Date/Time Received: <b>2/15/2017 9:46</b>	Sample Collection Date/Time: <b>2/13/2017</b>
GA Sample ID: <b>3002017046201</b>	Lot Volume (gal):

## Certificate of Analysis

Analysis Performed	Analytical Method	Date Analyzed	Result	fn	Reporting Units	Reporting Criterion	Pass/Fail
--------------------	-------------------	---------------	--------	----	-----------------	---------------------	-----------

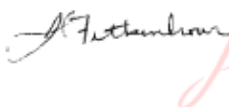
**Footnotes:**

Acceptance criteria for B100 biodiesel are found in ASTM D6751. ASTM analyses are performed in accordance with the most current methods.

1. Visual Inspection was performed at 24° C.
2. Sample was analyzed for Micro-Carbon Residue in accordance with (IAW) ASTM D4530 and reported IAW ASTM D6751 Appendix X1.9.
3. The test result for this sample meets the Grade No. 1-B specification. To qualify as a Grade No. 1-B biodiesel, passing test results for all ASTM D6751 specifications are required.
4. The test's average charge air temperature was 550.6°C.
5. Calcium and Magnesium are reported as a combined value.
6. Sodium and Potassium are reported as a combined value.

Reviewed By: J. Fetkenhour, Technical Director

Date: 2/22/2017

 Digitally signed by Jeffrey G. Fetkenhour  
 DN: cn=Jeffrey G. Fetkenhour, o=Gorge Analytical, LLC, ou,  
 email=jeff@gorgeanalytical.com, c=US  
 Reason: I attest to the accuracy and integrity of this document  
 Date: 2017.02.22 15:31:33 -0800

*This report shall not be reproduced except in full without the express written consent of Gorge Analytical, LLC. These results pertain only to the representative sample submitted for analysis.*

*Client-Based Solutions and High-Quality, Rapid Results*

# APPENDIX E: Applications, Registration, and Permitting

---

Figure 20 shows a license for inedible kitchen grease rendering.

**Figure 20: Inedible Kitchen Grease License**

California Department of Food and Agriculture 3/9/2017  
Meat, Poultry and Egg Safety Branch

1220 N Street, Sacramento, CA 95814  
(916) 900-6004

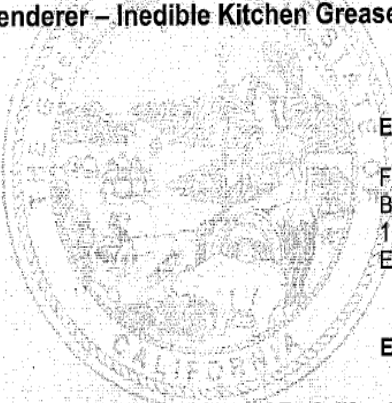
**Renderer – Inedible Kitchen Grease License**

Mailing Address: Est # A-514  
BUSTER BIOFUELS  
1170 INDUSTRIAL AVENUE  
ESCONDIDO, CA 92029

Facility Address:  
BUSTER BIOFUELS  
1170 INDUSTRIAL AVENUE  
ESCONDIDO, CA 92029

Expires: **12/31/2017**

**Authorized Use Of This License Is Restricted To California Licensed Establishments**



Source: Buster Biofuels, LLC

Figure 21 shows Environmental Protection Agency Facility Registration.

**Figure 21: Environmental Protection Agency Facility Registration**

**OTAQ Registration Home**

Logged in as BUSTERRBIOFUELS (Logout) | Contact Us

**Pending Requests**

Filter requests:

ID	Request For	Created On	Requested By	Status
CR-13338	Buster Biofuels LLC[4166]	03/08/2016 01:21:45 PM	Weldon R. Halterman	Awaiting EPA Review

Show 5 requests per page | Showing 1 to 1 of 1 entries

Legend: New Company Company Update Company Association RCO Update AAD Letter

**Company Information**

Filter companies:

ID	Company Name	Roles	Actions
4166	Buster Biofuels LLC	<ul style="list-style-type: none"> <li>Company Editor</li> <li>DC Fuels Submitter, Title 40 CFR Part 79 Subparts A, B, C, D, and F</li> <li>DC Fuels Submitter, Title 40 CFR Part 80 Subpart I</li> <li>DC Fuels Submitter, Title 40 CFR Part 80 Subparts D, E, F, H, J, and L</li> <li>EMTS RFS Submitter</li> <li>EMTS RFS Viewer</li> <li>DC Fuels Submitter, Title 40 CFR Part 80 Subparts K and M</li> </ul>	

Show 5 companies per page | Showing 1 to 1 of 1 entries

**Registration Lists**

Please click one of the lists below for an up-to-date version. All lists are exported as an xls file. These lists are also available at <http://www.epa.gov/otaq/fuels/reporting/programsregistration.htm>.

- EPA Fuels Programs Company and Facility List
- EPA Fuels Programs Company List
- Independent Lab List

OTAQ Help Desk: [EPAFuelsPrograms@epa.gov](mailto:EPAFuelsPrograms@epa.gov) or (202) 343-9755  
 CDX Help Desk: (888) 890-1995  
[EPA Home](#) | [Privacy and Security Notice](#) | [Terms and Conditions](#) | [Contact Us](#)

Source: Buster Biofuels, LLC

Figure 22 shows authority to construct license from the County of San Diego Air Pollution Control District.

**Figure 22: Authority to Construct License**



COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT  
10124 OLD GROVE ROAD, SAN DIEGO, CA 92131  
(858) 586-2600 FAX (858) 586-2601  
www.sdapcd.org

Sectors: 02  
SITE Record ID: APCD2010-SITE-00366

Application Record ID  
APCD2016-APP-004464



Buster Biofuels LLC  
Weldon Halterman  
1170 Industrial Ave  
Escondido, CA 92029

**EQUIPMENT ADDRESS**  
Buster Biofuels LLC  
Weldon Halterman  
1170 Industrial Ave  
Escondido, CA 92029


**AUTHORITY TO CONSTRUCT EXTENSION**  
EXPIRES: July 5, 2018

The San Diego County Air Pollution Control District (**hereinafter referred to as "the District"**) is extending your Authority to Construct, for the application referenced above, until July 5, 2018

Source: Buster Biofuels, LLC.

Figure 23 shows the Department of Environmental Health Unified Program Facility Permit.

**Figure 23: Department of Environmental Health Unified Program Facility Permit**

<b>JAN</b>	<b>County of San Diego</b> <b>DEPARTMENT OF ENVIRONMENTAL HEALTH</b> <b>UNIFIED PROGRAM FACILITY PERMIT</b>	<b>2018</b>
<small>P.O. BOX 129261, SAN DIEGO, CA 92112-9261 / (858) 505-6661 / (800) 253-9933 / FAX (858) 505-6848 www.sdcdeh.org</small>		
Owner/Operator Name:	<b>1180 INDUSTRIAL LLC</b>	 Elise Rothschild Director
Facility Name:	<b>BUSTER BIOFUELS, LLC</b>	
Facility Located at:	<b>1170 INDUSTRIAL AVE, ESCONDIDO, CA 92029</b>	
Mailing Address:	<b>WELDON R HALTERMAN</b> <b>1170 INDUSTRIAL AVE</b> <b>ESCONDIDO, CA 92029</b>	
		Record Number: <b>DEH2010-HUPFP-211915</b>
<b>UNIFIED PROGRAM FACILITY PERMIT</b> Permit valid: <b>2/1/2017 to 1/31/2018</b> RENEWAL IS REQUIRED BEFORE EXPIRATION DATE		
<b>The Unified Program Facility Permit is required due to the following Program elements:</b>		
<ul style="list-style-type: none"><li>• Facility stores/handles Hazardous Materials in reportable quantities and is subject to Hazardous Materials Business Plan requirements.</li></ul>		
<p>This information is taken from the California Environmental Reporting System (CERS), unless discrepancies were observed during an inspection.</p>		
<b>ATTENTION</b>		
<ul style="list-style-type: none"><li>• A copy of this permit must be maintained at the facility location.</li><li>• Permit is not valid for any facility location or owner not listed above.</li><li>• This permit is not transferable. Any change in the above owner or location requires a new permit. A change in business activity may require a revised permit to add or delete program elements. All changes to the information shown on this permit must be reported in CERS.</li><li>• This is not a City or County use permit, nor a permit to operate under any other regulatory program. Other permits may be required for these operations at this location.</li></ul>		
<p>A Unified Program Facility Permit is conditional until the information submitted in CERS is verified by inspection. This permit does not modify any requirement of federal, state or local law. This permit can be suspended or revoked for violations of Unified Program requirements.</p>		
<small>022973 - DEH20170991PMT</small>		

Source: Buster Biofuels, LLC

Figure 24 shows the Low Carbon Fuel Standard Alternative Fuel Portal Company Registration, with both tier one and tier two provisional path way for UCO.

**Figure 24: Low Carbon Fuel Standard Alternative Fuel Portal Company Registration**

Version: V2.9941

**For Reporting Use Only** [Contact Us](#) [Sign out](#)

[Home](#)
[Producer Profile](#)
[FPC](#)
[My Facilities](#)
[Registered Facilities](#)
[Reports](#)
[Correspondence](#)

Welcome: WELDON R HALTERMAN for BUSTER BIOFUELS LLC

### Fuel Producer Company Facilities

Fuel Producer Company: BUSTER BIOFUELS LLC  
Company ID: 4166

Facility Name	Facility ID	Address	Geographic Coordinates	UTM Coordinates	Facility Contact Details	Fuel Pathway Applications		FTM Demonstration or Temporary FPC
> BUSTER BIOFUELS LLC	83449	1170 INDUSTRIAL AVENUE, ESCONDIDO, CA, US 92029	Latitude: 33.119434 Longitude: -117.104419		Name: WELDON R HALTERMAN; Title: CEO; Phone#: (760) 294-9400; Email: BUSTER@BUSTERBIOFUELS.COM; URL: BUSTERBIOFUELS.COM	<a href="#">Tier 1</a>	<a href="#">Tier 2</a>	<a href="#">Submittal</a>

[Add Facility](#)

[LCFS AFP Home](#)
[Terms of Use](#)
[ARB LCFS Page](#)
[Back to Top](#)

Source: Buster Biofuels, LLC

Figure 25 shows Central Data Exchange Responsible Corporate Officer Update CR-13701

## Figure 25: Central Data Exchange Responsible Corporate Officer Update CR-13701

RCO Update Request CR-13701  
Buster Biofuels LLC [4166]

05/18/2016 12:13 PM

---

### Request Information

Request ID : CR-13701	Created On : 05/18/2016
Request Type : RCO Update	Modified On : 05/18/2016
Request Status : Awaiting RCO Wet Ink Signature	Requested By : Weldon R. Halterman
Company Name : Buster Biofuels LLC [4166]	Username : BUSTERBIOFUELS

### List of Changes

- RCO CDX User ID changed from "(empty)" to "BUSTERBIOFUELS"

---

### Company Name and Location

Company ID : 4166	Address 1 : 1170 Industrial Avenue
Company Name : Buster Biofuels LLC	Address 2 :
	City : Escondido
	State : California
	Postal Code : 92029
	Country : United States

Reason for RCO Update :  
Updating RCO CDX user ID.

---

### Responsible Corporate Officer (RCO) Info

RCO CDX User ID : BUSTERBIOFUELS  
RCO Name : Weldon R Halterman  
RCO Title : CEO  
RCO E-mail : buster@busterbiofuels.com  
RCO Phone : 7602940901  
RCO Fax : 7602949420

# Figure 25: Central Data Exchange Responsible Corporate Officer Update CR-13701 (cont'd)

RCO Update Request CR-13701  
Buster Biofuels LLC [4166]

05/18/2016 12:13 PM

## RCO Change Notification Letter

To whom it may concern:

Please be advised that I, Weldon R Halterman, of Buster Biofuels LLC Company ID 4166, became the responsible corporate officer on 05/18/2016 and replaced Weldon R Halterman, the previous responsible corporate officer is no longer the RCO because:  
Updating RCO CDX user ID.

Please include both the previous RCO and new RCO signatures. If the previous RCO is unavailable to sign this change letter, please indicate why.

Company Name: Buster Biofuels LLC  
Previous RCO: Weldon R Halterman, CEO  
buster@busterbiofuels.com  
7602940901 (phone)  
7602949420 (fax)  
New RCO: Weldon R Halterman, CEO  
buster@busterbiofuels.com  
7602940901 (phone)  
7602949420 (fax)

Signature:



Signature:





# Figure 25: Central Data Exchange Responsible Corporate Officer Update CR-13701 (cont'd)

RCO Update Request CR-13701  
Buster Biofuels LLC [4166]

05/18/2016 12:13 PM

## RCO Delegation Letter

To whom it may concern:

Please be advised that I Weldon R Halterman, CEO, of Buster Biofuels LLC Company ID 4166 delegate Weldon R. Halterman, CEO/President, to submit any and all information to the United States Environmental Protection Agency in relation to EPA's Fuels Programs.

I authorize delegate Weldon R. Halterman to set up a Central Data Exchange (CDX) account and enable them to electronically sign and certify reports submitted to the EPA, on my behalf. Weldon R. Halterman understands the reports and information they are submitting. Weldon R. Halterman is my employee and is not a third party agent.

In addition, I acknowledge that I and the delegated person are responsible for the information submitted in accordance with the regulations under title 40 CFR Part 80.

I also establish Weldon R. Halterman to register for and use the following CDX applications on my company's behalf. Please confirm the delegate's program role selections by marking the appropriate program roles below with an X. Delegate Weldon R. Halterman has requested access to the following program roles:

Company Editor, DC Fuels Submitter, Title 40 CFR Part 79 Subparts A, B, C, D, and F, DC Fuels Submitter, Title 40 CFR Part 80 Subpart I, DC Fuels Submitter, Title 40 CFR Part 80 Subparts D, E, F, H, J, and L, EMTS RFS Submitter, EMTS RFS Viewer, DC Fuels Submitter, Title 40 CFR Part 80 Subparts K and M

QAP Auditor - My delegate may edit any currently registered QAP information for Buster Biofuels LLC. Additionally, they may create new QAP relationships to any registered fuel producing companies on my behalf.

OTAQReg: Fuels Programs Registration -- This application is used for registration under 40 CFR Part 80

OTAQReg: Fuels Programs Registration -- Company Editor Role -- Fuels programs registration portal: My delegate may edit and electronically send registrations for my company.

OTAQReg: Fuels Programs Registration -- Company Viewer Role -- Fuels programs registration portal: My delegate may view my company registration information.

OTAQReg: Fuels Programs Registration -- Limited Company Viewer Role -- Fuels programs registration portal: My delegate may view my company registration information.

OTAQDCFuel: OTAQ DCFuels Application -- This application is used for the certification and submission of required reports under 40 CFR Part 80

OTAQDCFUEL: OTAQ DC FUEL Application -- Submitter Role -- The portal provides users the ability to electronically sign and submit encrypted reports over a secure connection. I understand I am granting my delegate the ability to send my reports via the portal, obtain an electronic signature and that they will have the submitter role in the OTAQReg application for my company. The delegate will also have the ability to retrieve copies of the record that they submit. In addition, I acknowledge that I and the delegated person are responsible for the information submitted in accordance with the applicable subparts:

Reports under 40 CFR Part 79 Subparts A, B, C, D, and F -- Registration of Fuels and Fuel Additives

Reports under 40 CFR Part 80 Subparts D, E, F, H, J, and L -- Reformulated Gasoline / Anti-Dumping / Gasoline Toxics / Gasoline Sulfur / Gasoline Benzene

Reports under 40 CFR Part 80 Subpart I -- Motor Vehicle, Nonroad, Locomotive, and Marine Diesel Fuel

Reports under 40 CFR Part 80 Subparts K and M -- Renewable Fuel Standard

Reports under 40 CFR Part 80 Subpart O -- Gasoline Sulfur / Gasoline Benzene

RFS Pathway Petitions - New Renewable Fuel Standard Pathway Petitions under 40 CFR 80.1416

## Figure 25: Central Data Exchange Responsible Corporate Officer Update CR-13701 (cont'd)

**RCO Update Request CR-13701**  
**Buster Biofuels LLC [4166]**

05/18/2016 12:13 PM

OTAQEMTS: EPA Moderated Transaction System -- This application is used for Renewable Identification Number (RIN) transactions under the Renewable Fuel Standard (RFS2) as well as Gasoline Sulfur and Benzene Averaging, Banking, and Trading.

[ X ] OTAQEMTS: OTAQ EMTS Application -- RFS Submitter Role -- EPA Moderated Transaction System (EMTS): EMTS is required for companies to generate and transact Renewable Identification Numbers (RINs) for the Renewable Fuel Standard (RFS2). I understand I am granting my delegate the ability to perform all actions under this program (including trades) for my company in EMTS and be assigned the submitter role in the OTAQReg application.

[ X ] OTAQEMTS: OTAQ EMTS Application -- RFS Company Viewer Role -- EPA Moderated Transaction System (EMTS): EMTS is required for companies to generate and transact Renewable Identification Numbers (RINs) for the Renewable Fuel Standard (RFS2). I understand I am granting my delegate the ability to view all actions under this program for my company in EMTS and be assigned the company viewer role in the OTAQReg application.

[ ] OTAQEMTS: OTAQ EMTS Application -- Fuels ABT Submitter Role -- EPA Moderated Transaction System (EMTS): EMTS is required for companies to conduct Averaging, Banking, and Trading of credits under the Gasoline Sulfur and Benzene programs. I understand I am granting my delegate the ability to perform all actions under this program (including trades) for my company in EMTS and be assigned the submitter role in the OTAQReg application.

[ ] OTAQEMTS: OTAQ EMTS Application -- Fuels ABT Company Viewer Role -- EPA Moderated Transaction System (EMTS): EMTS is required for companies to conduct Averaging, Banking, and Trading of credits under the Gasoline Sulfur and Benzene programs. I understand I am granting my delegate the ability to view all actions under this program for my company in EMTS and be assigned the company viewer role in the OTAQReg application.

OTAQWaiverCredits: Cellulosic Biofuel Waiver Credits Pay.gov Application -- This application allows obligated parties to purchase Cellulosic Biofuel Waiver Credits in the RFS2 program (per 40 CFR 80.1456)

[ ] OTAQWaiverCredits: Cellulosic Biofuel Waiver Credits Pay.gov Application -- Company Submitter Role -- Pay.gov portal: OTAQWaiverCredits is used by obligated parties to purchase cellulosic biofuel waiver credits to be applied to an obligated party's renewable volume obligation (RVO). In order to use this application, the user must know the amount of cellulosic biofuel waiver credits that the party needs. Additionally, a party may not purchase more credits than their party needs; nor may a party transfer credits to another party. This role is only applicable to refiners and importers of obligated volumes per the renewable fuel standard program. My delegate may purchase Cellulosic Biofuel Waiver Credits for my company through the OTAQWaiverCredits application in CDX.

Signed,

  
Weldon R Halterman, CEO  
buster@busterbiofuels.com  
7602940901 (phone)  
7602949420 (fax)

Date 5/18/16

Figure 26 shows the Environment Protection Agency 40 Code of Federal Regulations 79.13 notification.

**Figure 26: Environment Protection Agency 40 Code of Federal Regulations 79.13**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OCT 9 2014

Buster Biofuels LLC  
Mr. Weldon Halterman  
CEO  
1170 Industrial Avenue  
Escondido, CA 92029

OFFICE OF  
AIR AND RADIATION

Dear Mr. Halterman:

Pursuant to your September 4, 2014 notification, the following fuel has been registered per 40 CFR 79.13 (our internal identification number precedes the name):

692312311 Biodiesel

Note that per 40 CFR 79.11(g) you would be required to notify us in writing if certain information in your notification were to change. Also note the reporting requirements at 40 CFR 79.4(a)(2) concerning the use of additives not reported in your notification. In addition, note, that with your notification, you have provided assurances that you will not represent, directly or indirectly, in any notice, circular, letter, or other written communication, or any written, oral or pictorial notice or other announcement in any publication or by radio or television, that registration constitutes endorsement, certification, or approval by any agency of the United States.

Please call (202) 343-9648 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Byron J. Bunker".

Byron J. Bunker  
Director  
Compliance Division

Source: Buster Biofuels, LLC

Figure 27 shows the California Department of Tax and Fee Administration accounts including diesel fuel motor vehicle fuel sales and use taxes.

**Figure 27: California Department of Tax and Fee Administration Accounts**

The screenshot displays the user interface of the California Department of Tax and Fee Administration. At the top left is the CA.GOV logo, and at the top right is the date 02/20/18. Below the header is a dark navigation bar with the text "Registered User Services Menu" on the left and "For assistance during regular business hours call 1-800-400-7115 (TTY:711)" on the right. A horizontal line separates the header from the main content. Below the line, there is a "LOG OUT" link with a hamburger menu icon on either side. A green notification bubble indicates "Login Successful". A text instruction states: "If your account number is not displayed on this page, go to the 'Manage Another Account' section below and click on 'Link an Account'". The main content is divided into two columns. The left column is titled "Your CDTFA Accounts" and lists three categories: "Diesel Fuel Tax" with two account numbers (57250595 and 58627924), "Motor Vehicle Fuel Tax" with one account number (58604205), and "Sales and Use Taxes" with two account numbers (78021531 and 101541080). The right column is titled "Manage Another Account" and includes a "Link An Account" link, a "Reg" link, and a "User ID Maintenance" link with a list of options: Password, User ID, Forgotten Password Question, and E-mail address. At the bottom of the page is a light brown footer bar containing links for "How to Contact Us", "Accessibility", "Languages", "Conditions of Use", and "Privacy Policy".

Source: Buster Biofuels, LLC

Figure 28 shows the Internal Revenue Service biodiesel registration.

## Figure 28: Internal Revenue Service Biodiesel Registration



Department of the Treasury  
Internal Revenue Service

Buster Biofuels LLC  
1170 Industrial Avenue  
Escondido, CA 92029

Date:  
11/09/2016  
Person to contact:  
Felicia Walker  
Employee identification number:  
1000699594  
Contact telephone number:  
859-669-5352  
Contact fax number:  
281-721-7995  
Taxpayer Identification Number:  
27-1289029  
Approved registration number:  
2011-002714-AB-NB  
Effective date of registration:  
11/09/2016

### Letter of Registration

Dear Buster Biofuels LLC,

We've approved your Form 637, *Application for Registration (For Certain Excise Tax Activities)* under section 4101 of the Internal Revenue Code. Your registration number and the effective date of registration are shown above. We registered you for the following activities:

The "M" activity in your registration number signifies a blender of gasoline, diesel fuel (including a diesel-water fuel emulsion), or kerosene, producing a taxable fuel outside the bulk transfer/terminal system, including blenders of alcohol fuel mixtures, alternative fuel mixtures, biodiesel mixtures, and renewable diesel mixtures.

The "AB" activity in your registration number signifies a producer and/or importer of agri-biodiesel.

The "NB" activity in your registration number signifies a producer and/or importer of biodiesel (other than agri-biodiesel) and renewable diesel.

The "UV" activity in your registration number signifies an ultimate vendor that sells (a) undyed diesel fuel or undyed kerosene to a state or local government for its exclusive use, or (b) gasoline (including aviation gasoline) to a state or local government for its exclusive use or to a nonprofit educational organization for its exclusive use.

The enclosed Publication 5039, Terms and Conditions of Registration, explains what you must do to keep your registration in good standing.

If you have any questions, please contact the person whose name and telephone number are shown above.

Sincerely,

**Letter 3689 (8-2012)**  
Catalog Number 36285V

---

## **Terms and Conditions of Registration**

- (A) Maintain the information described in paragraph b) above at the terminal from which the removal occurred for at least 3 months after the removal to which it relates.
- (B) Maintain the information described in paragraph c) above at the terminal where the dye was received for at least 3 months after the receipt.
- e) Prohibition on providing incorrect information. —In connection with the removal of diesel fuel or kerosene that is not dyed and marked in accordance with §48.4082-1, a terminal operator may not provide any person (including the position holder with respect to the fuel) with any bill of lading, shipping paper, or similar document indicating that the diesel fuel or kerosene is dyed and marked in accordance with §48.4082-1.
- b) Keep records sufficient to show the registrant's tax liability under applicable sections of the Internal Revenue Code and of payment or deposits of the tax; and
- c) Notify the 637 Registration Group's Lead Technician (LT) of any change (such as a change in ownership) in the information the registrant gave in applying for registration, within 10 days after the change occurs.

### **2. PROHIBITED ACTIONS**

A registrant may not –

- a) Sell, lease or otherwise allow another person to use the registration;
- b) Use the registrations to avoid the payment of any tax, or to postpone or in any manner to interfere with the collection of any such tax; and
- c) Fail to secure the documentation on the exempt purpose for which the article or articles are being purchased tax-free and the registration number, if required, of the purchaser. Such information must be in writing and may be noted on the purchase order or other document furnished by the purchase order or other document furnished by the purchaser to the seller in connection with each sale.

### **B. Terms and Conditions of Registrations Issued Under IRC 4222 or 4682:**

#### **1. AFFIRMATIVE DUTIES**

Each registrant must –

- a) Make deposits, file returns and pay taxes required by the Internal Revenue Code and the regulations;

# APPENDIX F: Inspections

Figure 29 shows the City of Escondido Inspection Record Card

**Figure 29: City of Escondido Inspection Record Card**

**City of Escondido  
INSPECTION RECORD CARD**  
(Miscellaneous Commercial Building Construction)

Inspection Request Line: (760) 839-4646 (24 hours/day, 7 days/week) (Card must be available on the jobsite for each inspection)  
Planning & Building Department/Building Division, 201 North Broadway, Escondido, CA 92025-2798 (760) 839-4647

PROJECT STREET ADDRESS 1170 INDUSTRIAL AVE		PROJECT NAME		PERMIT NO. <b>B10-0874</b>
ASSESSOR PARCEL NO. 2323912000		TRACT NO.	LOT NO.	MODEL/BLDG NO.
PERMIT TYPE/SUBTYPE MISCCOMMBUILDING/ TENANT IMP		DESCRIPTION OF WORK <b>T1 FOR BIOFUEL/MANUFACTURING/RECYCLING 7300-SF</b>		SUBMITTAL DATE: 6/29/2010 PERMIT ISSUE DATE: 5/12/2011 VALUATION: \$ 75,000.00 TOTAL FEES PAID: \$ 2,205.82
LAND AREA 0	BUILDING AREA 7,077	CARPOR/GARAGE SF 0	NO. STORIES 1	OCCUPANCY GROUP: F BUILDING CODE: 2007 CBC (06 IBC)
OWNER: 1180, INDUSTRIAL L L C		CONTRACTOR: PRAVE CONSTRUCTION (760) 929-9787		

**IMPORTANT:** Approved plans must be on the jobsite and be available to the inspector, otherwise, an inspection cannot be made. When calling for inspections please furnish the **PERMIT NUMBER** and the **JOBSITE ADDRESS**. For TRACTS, please use **TRACT NUMBER, PERMIT NUMBERS** and **LOT NUMBERS**. This permit becomes void if the work authorized is not commenced within 180 days or if the work is suspended or abandoned for a period of 180 days.

INSPECTION	DATE	INSPECTOR	INSPECTION	DATE	INSPECTOR
CITY FIELD ENGINEERING APPROVALS <small>(For new buildings and prior to building inspections)</small>			INSPECTIONS TO BE MADE AFTER LATH AND WIRE ARE APPLIED		
GRADING/BLDG CORNERS			EXTERIOR LATH		
DRAINAGE			DRYWALL	12-13-13	RF
DRIVEWAY			GAS TEST		
FOUNDATION/UNDERGROUND/MASONRY			MISC. INSPECTIONS TO BE MADE ANY TIME		
SETBACKS			TITLE 24/INSUL		
<del>Slabs - Pump Overlays</del>	11/25/13	RR	TEMP. POWER		
FOUNDATION/FOOTING			TEMP. TESTING METER (ELECT)		
UNDERGRD. GAS			TEMP. TESTING METER (GAS)		
UNDERGRD. ELEC.			T-BAR CEILING (SEISMIC/ELECT/MECH)		
UNDERGRD. PLUMBING			FIRE/DEPT REQUIRED INSPECTIONS		
MASONRY: -FOOTING			ALARM/MONITORING	2/11/16	J. Bauer
-PREGROUT	11/29/13	RR	UNDERGROUND PIPING	9/24/14	J. Bauer
-DRAINAGE			UNDERGROUND PRESSURE	12/1/15	J. Bauer
TILT-UP PANELS			UNDERGROUND PIPE FLUSH	12/1/15	J. Bauer
			OVERHEAD PRESSURE	1/29/16	J. Bauer
INSPECTIONS TO BE MADE BEFORE LATH IS APPLIED			AUTO. FIRE INSPECTION		
FLOOR SHEATHING			HOOD TEST INSPECTION		
ROOF SHEATHING			FINAL APPROVAL	5/2/16	J. Bauer
FRAME EXTERIOR			Sprinkler Final	2/1/16	J. Bauer
FRAME	12-13-13	RF	FINAL INSPECTIONS		
ROUGH ELECTRICAL	12-9-13	RF	FINAL BUILDING		
ROUGH PLUMBING			FINAL ELECTRICAL		
ROUGH MECHANICAL			FINAL PLUMBING		
GAS LINES			FINAL MECHANICAL		
SHAFT			FINAL ENGINEERING DEPT.	2/25/15	RF
HOOD/EXHAUST			TEMP. OCCUPANCY		
ROOF DRAINS					

For new commercial industrial and apartment buildings a Certificate of Occupancy is required prior to occupancy. The Certificate is issued after the approval by all applicable city departments. For Single Family Dwellings all approvals are required, however a Certificate is not issued.

**INSPECTOR NOTES:**  
 11/12/13 Sump in Paved Area / 12-9-13 Pool + windows Pastalis  
 11/14/13 Rear Slab RF  
 11/15/13 Pump inside Building RF  
 1/24/14 Service upgrade approved for meter set RF  
 9/24/14 Connection to os+y manual ok J. Bauer

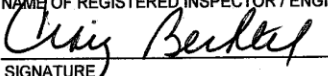
Source: Buster Biofuels, LLC

Figure 30 shows the City of Escondido Anchoring Report

### Figure 30: City of Escondido Anchoring Report

INSPECTION DATE: 05/19/2014

#### DAILY FIELD REPORT

I AM AUTHORIZED BY THE INDICATED AGENCY TO PERFORM SPECIAL INSPECTION IN THE CATEGORY CHECKED.	<input checked="" type="checkbox"/> City of San Diego	<input checked="" type="checkbox"/> DSA	<input type="checkbox"/> ASNT	<input checked="" type="checkbox"/> REINFORCED CONCRETE	<input checked="" type="checkbox"/> STRUCTURAL STEEL ASSEMBLY
	<input type="checkbox"/> CALTRANS	<input checked="" type="checkbox"/> ICBO	<input checked="" type="checkbox"/> ACI	<input type="checkbox"/> PRE-STRESSED CONCRETE	<input type="checkbox"/> DEEP FOUNDATION
	<input type="checkbox"/> OSHPD	<input type="checkbox"/> AWS		<input checked="" type="checkbox"/> REINFORCED MASONRY	<input type="checkbox"/> SPRAY-APPLIED FIREPROOFING
	<input checked="" type="checkbox"/> City of Escondido			<input checked="" type="checkbox"/> WOOD	
JOB ADDRESS <b>1770 Industrial Ave., Escondido, CA.</b>				BUILDING PERMIT NUMBER <b>B10-0874</b>	PLAN FILE NUMBER
OWNER OR PROJECT NAME <b>Buster Biofuels</b>				APPLICATION NUMBER	
CONSTR. MATERIAL (TYPE, GRADE, ETC.)	DESIGN STRENGTH	SOURCE OF MFGR.	ARCHITECT		
DESCRIBE MATERIAL (MIX DESIGN, RE-BAR GRADE & MANUFACTURER, WELD-ROD, ETC.) See Report			ENGINEER <b>AMC Consulting</b>		
			GENERAL CONTRACTOR <b>Owner builder</b>		
			CONTRACTOR PERFORMING REPORTED WORK <b>Same</b>		
ARRIVAL TIME / DEPARTURE	DETAILED REPORT OF WORK INSPECTED	LOCATION OF WORK INSPECTED, TEST SAMPLES TAKEN, WORK REJECTED, JOB PROBLEMS, PROGRESS, REMARKS, ETC.			
	<p>I observed the epoxy process of 7/8" all thread rods into the (E) concrete as noted below.</p> <p><b>Epoxy product:</b> Simpson SET XP, # 201P368P, exp. 12/2015  <b>Location:</b> (8) rods at each of (4) (N) tanks; Tank #'s T30A, T25, T40 and T60.  <b>Hole diameters:</b> 1"  <b>Effective embedment:</b> 10" into the S.O.G. (not including the housekeeping pad) per det. 3/SD1</p> <p><b>Note:</b> All holes were drilled with a rotary hammer drill and carbide tipped bit, then brushed with a nylon brush and blown out with compressed air repeatedly until dust free prior to injecting the epoxy. The entire procedure meets or exceeds plan details and ESR 2508 requirements.</p> <p><b>No discrepancies were observed or noted.</b></p> <p><b>All work is subject to City of Escondido approval</b></p>				
TIME ON SITE	TRAVEL TIME	REGULAR HOURS	OVERTIME HOURS	#OF TEST SPECIMENS	
				<b>Craig Bechtel</b> NAME OF REGISTERED INSPECTOR / ENGINEER / TECHNICIAN (PLEASE PRINT)  SIGNATURE <b>ICC 5265295-49</b> CERTIFICATE NUMBER	

CERTIFICATE OF COMPLIANCE  
 TO THE BEST OF MY KNOWLEDGE, THE ABOVE REPORTED WORK, UNLESS OTHERWISE NOTED, IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE GOVERNING STANDARDS.

Source: Buster Biofuels, LLC



# APPENDIX G: Equipment Documentation

Figure 31 shows the invoice for the purchase order of oil holding tanks.

**Figure 31: Oil Holding Tanks Invoice**

**Central Valley Tank of California, Inc.**

4752 E. Carmen Ave.  
Fresno, CA 93703  
P. 559-456-3500  
F. 559-456-3501

## Invoice

Date	Invoice #
10/11/2013	12848

Sold To

Buster Biofuels  
1170 Industrial Ave  
Escondido, CA 92029

Ship To

Will Call

Terms	50% dep/50% comp.	P.O. Number	B Halteman	Sales Rep	PB
-------	-------------------	-------------	------------	-----------	----

Item	Description	Qty	Price	Amount
Steel Tank	15,000 Gallon UL 142 Tank with Double Floor. Tank fabricated per your drawing. Tank to be fabricated per UL 142 Standards. Nozzles, manway, anchors and painted exterior included, color of choice. Tank will have an internally supported Sloped main floor with a fully welded second floor. Delivered to Site. Customer to offload. \$1,350.00 per load	4	18,000.00	72,000.00
Steel Tank	8,500 Gallon UL 142 Methanol Tank. Flat Bottom, Coned roof. Tank will be fabricated to UL Standards. Nozzles per request. anchors included. 8' dia. x 20' tall. Painted color of choice. Delivered, Customer to offload. Note: This tank will ship with 15,000 gallon tank with our special trailer. \$1,350.00 per load.	1	12,000.00	12,000.00
Add-Ons	Anchor Chairs required as per your Site Visit 12/20/13	24	125.00	3,000.00
Labor	1/09/14 Add coils to three 15,000 gallon tanks. Two men - 4 hrs per tank =8 hrs @ \$65.hr = \$520.00 x 3 tanks = \$1,560.00	1	1,560.00	1,560.00
Steel Tank	12,000 Gallon Tank T30A & T25. 9'6" dia. X 22'8" tall (Coned roof). 1/4" floor with 3/16" shell. UL 142 label. 24" Side Shell bolted manway. Anchors per drawing. Nozzles per drawing. Sloped floor with supports and secondary flat floor. Painted Black. F.O.B. Fresno, CA. *Add Customer provided coils*	2	16,550.00	33,100.00
Add-Ons	4/21/14 install Customer provided coils. 2 sets of coils	2	520.00	1,040.00

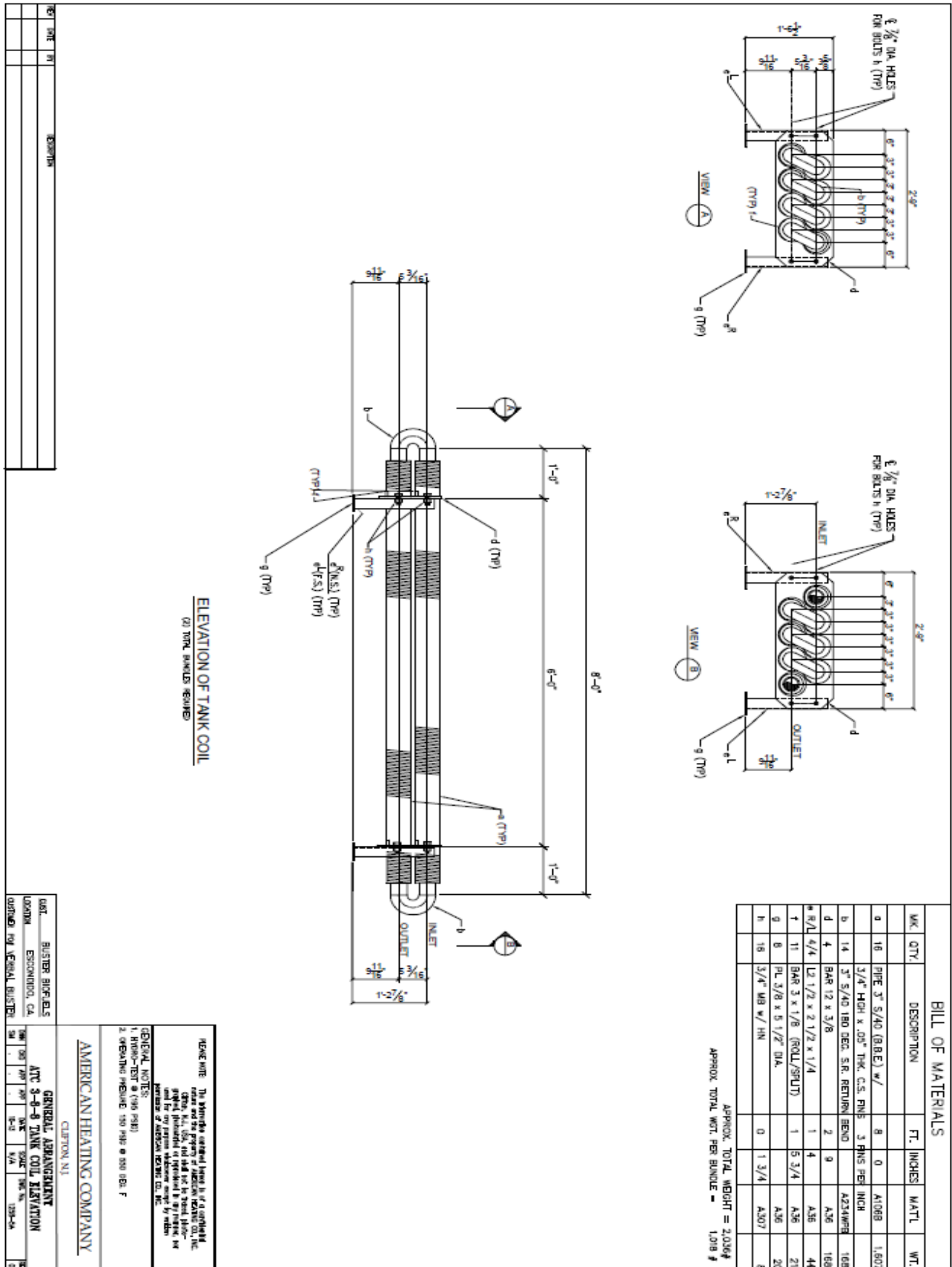
Phone #	Fax #	E-mail	<b>Payments/Credits</b>	-\$96,110.00
559-456-3500	559-456-3501	accounting.cvt@gmail.com	<b>Total</b>	\$122,700.00
		accounting.cvt@gmail.com	<b>Balance Due</b>	\$26,590.00

Please provide resale certification with order, if applicable or appropriate sales tax will be added to the net price of this invoice. Pricing may change due to steel mill costs. Carbon steel pricing is valid for 30 days, and stainless steel pricing is valid for 10 days.

Source: Buster Biofuels, LLC

Figure 32 shows fabrication reports of heating coils.

**Figure 32: Fabrication Reports of Heating Coils**



Source: Buster Biofuels, LLC

Figure 33 shows the equipment design of the hot water boiler.

**Figure 33: Hot Water Boiler Equipment Design**



## DIRECT FIRED HOT WATER BOILER

Atmospheric Gas Fired "T" Models  
300,000 to 6,800,000 BTU Gas Fired

### THE PARKER DESIGN

A time proven product backed by one of the largest and most successful manufacturers of packaged boilers. The Parker name is synonymous with quality and safety. Every boiler is thoroughly factory fire tested and is required to meet the highest standards in all phases of mechanical and operating efficiency before shipment.

Parker Hot Water Boilers are designed specifically to provide the building heating and industrial processing industries with a Superior Quality Boiler with Unequaled Advantages in Safety, Long Life Service and Economical Operation.

### BENT TUBE CONSTRUCTION

The Parker Bent Tube All-Welded construction is the most flexible and durable on the market.

### ADVANTAGES

#### 1. Safety

A Parker Boiler has never been known to internally explode nor has it been possible to induce an explosion under severe tests. Thermal shocks are readily absorbed without damage due to the unique flexible design and extra heavy steel welded construction.

#### 2. Large Heating Surface

A large amount of heating surface provides increased efficiency, long boiler life and minimizes chances of scaling.

**PARKER BOILER CO.**  
5930 Bandini Boulevard  
Los Angeles, CA 90040  
Tel (323) 727-9800  
Fax (323) 722-2848  
www.parkerboiler.com  
BROCHURE 201 0J5

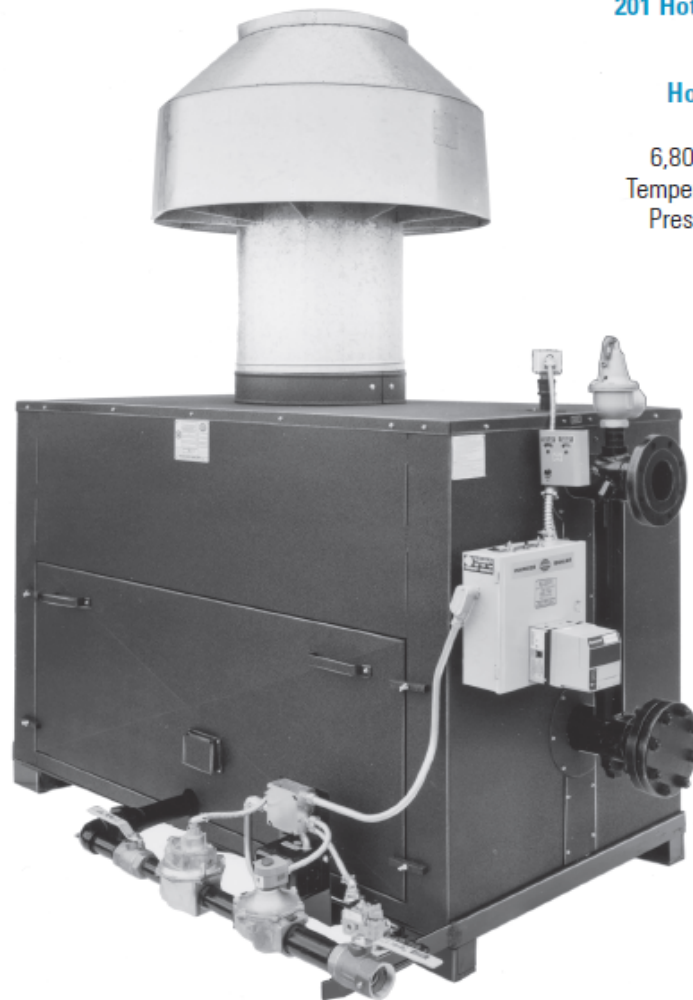
#### 3. Simplicity

The Atmospheric Burner System, the control system and entire boiler are furnished so that it is simple to operate by regular personnel. Simplicity is a decided advantage as there are no expensive blowers, complicated controls, or burner adjustments, as is necessary on many boilers.

#### 4. Codes

All Parker Hot Water Boilers are manufactured in accordance with the ASME Power & Heating Boiler Codes and registered with the National Board of Boiler and Pressure Vessel Inspectors. The standard natural gas fired model is furnished as an Underwriters' Laboratories, Inc. Listed Gas Fired

Boiler Assembly and displays their symbol on the nameplate. Outdoor, propane and Low NOx models are ETL listed. Canadian models are C-ETL Listed Industrial and Commercial Gas Fired Packaged Boilers certified to CAN/CGA 1-3.1 and UL 795.



201 Hot Water Boilers

**Direct Fired  
Hot Water Boiler**  
300,000 to  
6,800,000 BTU Input  
Temperatures to 400°F  
Pressures to 300 PSI



**"Never a Compromise for Quality or Safety"**



201 Hot Water Boilers

Source: Buster Biofuels, LLC