

Carbon Green BioEnergy, LLC Position Description

Position Title:	<u>Laboratory Manager</u>		Signature
Department:	<u>Management</u>		Date
Rev 3 Aug 2017	Supervisory	<input checked="" type="checkbox"/>	Non-Supervisory
	Exempt	<input checked="" type="checkbox"/>	Non-Exempt
Position Title of Supervisor:	<u>Plant Manager</u>		

Position Summary

Position ensures primary accountabilities and essential functions of the QC Laboratory are met. This includes but is not limited to lab testing of in-process quality control, process monitoring and coordination of contract lab testing. Implementation of Federal and State compliance programs for NPDES permit and Food Safety Programs.

Principal Duties/Responsibilities

1. Ensure laboratory compliance to all Carbon Green BioEnergy and industry standards.
 - a. **Quality Control**
 1. Perform quality control tests in all aspects of alcohol production. Examples of these tests include but are not limited to:
 - a. HPLC analysis on fermentation, yeast propagators, beer well, thin stillage tank, beer column bottoms, side stripper bottoms, and distillates or as needed.
 - b. Run Grain sieve analysis
 - c. Determine DE and TS (% solids) of liquefaction and slurry tanks. Evaluate enzyme performance and make recommendations for optimization.
 - d. Monitor and record all aspects of the biochemical processes and make recommendations for changes to recipes, and operational parameters.
 - e. Determine WIP and final product ethanol proofs, pHe, Karl Fischer, and acidity. Make recommendations to operational and maintenance groups for improvements.
 - b. **Quality Assurance**
 1. Work with the operations and maintenance groups to ensure that all products, including distiller's grains and ethanol, meet the minimum quality specifications as set forth by industry standards, marketing agreements or CGBE management.
 - a. Perform all testing required to complete the certificate of analysis (COA) and makes recommendations to maintain product quality within specified ranges.
 - b. Collect, prepare and send samples of any distillers grain products, ethanol and corn samples to third party labs for analysis. Documents and communicates results with appropriate parties. Makes recommendations for operational changes to maintain product quality.
 - c. Perform toxin testing and reports results.
2. Manage the laboratory in the testing of in-process quality control, process monitoring and critical system monitoring.
3. Supervise the performance of all required boiler, RO, cooling tower, and outfall water tests. Work with water Treatment Company to continually optimize water treatment systems.
4. Perform methanator testing, make appropriate chemical additions and monitor the overall condition and operation of the methanator system to ensure appropriate performance.

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5. Properly document all testing results.
6. Monitors staff schedule, vacation time, paid time off, Time card record keeping and reporting.
7. Manage and control the laboratory budget to meet company objectives.
8. Maintain lab equipment in compliant working condition. Ensure the laboratory is clean and organized.
9. Order and ensure laboratory supplies are maintained.
10. Ensure Operations department are trained and proficient on Lab Standard Operation Procedures.
11. Hiring, training and development of subordinates.
12. Participate in managerial meetings as well as daily production meetings and communicate issues with laboratory and/or operations.
13. Ensure laboratory data is recorded, tracked and presented as needed.
14. Work schedule is Monday through Friday 40 hrs per week, and on call as needed basis.

Minimum Job Requirements

Work Experience:

Five years laboratory experience with three years management/supervisory experience.

Education and Training:

Bachelor's degree in Chemistry, Biology related Science field.

Skills:

1. Thorough knowledge of generally accepted laboratory principles.
2. Effective oral and written communication skills.
3. Ability to train, supervise and evaluate the performance of subordinates.
4. Extensive knowledge of all standard laboratory operating procedures and principles.
5. Time management skills.
6. Computer skills, ie., Excel, Microsoft Word, Chromatography Data System software.

Working environment:

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- a. While performing the duties of this job, the employee is regularly exposed to work near moving mechanical parts
- b. The employee is occasionally exposed to wet or humid conditions; must be able to climb ladders and to work in high, precarious places; and outdoor weather conditions. Must also be able to lift objects up to and including 50 pounds.
- c. The employee may be occasionally exposed to high noise environments.