



VECTOR CORROSION SERVICES, INC.

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JOB TITLE:	Engineer I		
COMPANY / DIVISION / DEPARTMENT:	Vector Corrosion Services		
REPORTS TO:	Brian Pailes – Senior Project Manager		
SIGNATURE OF APPROVAL:	Approved by:		
	Date Approved:		
	Reviewed:		
HUMAN RESOURCES SIGNATURE:	Signature:		
	Date:		

1. COMPANY OVERVIEW

Vector Corrosion Services (VCS) specializes in extending the service life of existing and new structures through nondestructive testing, corrosion engineering, material science, cathodic protection (CP) design and structural health monitoring services. Utilizing the most modern tools and techniques, our engineers and technicians perform on-site evaluations and develop a sound understanding of the cause and extent of deterioration. Once we define the durability challenges facing structures, our experience allows us to implement practical, cost-effective repair and rehabilitation solutions, even in the most severe environments. VCS engineers have significant experience in corrosion of embedded metals in concrete and masonry, service life estimation, and corrosion mitigation techniques. VCS technicians and engineers undergo industry safety training and hold various NACE Certifications, including the highest level available in the field of cathodic protection (CP): Cathodic Protection Specialist (CP4).

Non-destructive testing

- Concrete sampling and testing
- Corrosion rate testing
- Corrosion potential surveys
- Ground penetrating radar surveys
- Electrical resistivity surveys
- Infrared thermography
- Impact echo and pulse velocity
- Borescope inspection
- Post-tension system investigation services

Cathodic protection consulting

- Materials and equipment selection
- Contract document preparation
- QA/QC services

- Contractor training and support
- Commissioning
- On-site and remote monitoring
- CP system troubleshooting

Durability Consulting

- Concrete design and troubleshooting
- Durability modeling
- Asset Management
- Life cycle cost analysis

StructureView® Monitoring Solutions

- Corrosion monitoring
- Cathodic protection monitoring
- Structural monitoring
- Construction site conditions
- Remote collection and data access

We Save Structures™

2. JOB SUMMARY

Engineer I is a mid-level salaried position with Vector Corrosion Services, Inc (VCS). Specific responsibilities will vary corresponding with the individual's experience, training, and certification. Engineer I is expected to complete tasks such as: condition assessments/investigations, support in the design of cathodic protection systems including calculations and drawings, cathodic protection quality control testing, non-destructive testing, install and troubleshoot instrumentation, prepare test reports, conduct research activities, and generally support other Engineers and Project Managers as required. Engineer I will work alongside Engineering Technicians to complete field work.

3. DUTIES & ACCOUNTABILITIES

VCS promotes the personal health and safety of each employee. Safety is the direct responsibility of the chairperson, president, chief executive officer, members of the executive, and every manager, supervisor and employee.

I. Conduct condition assessments and investigations of structures

- a. Lead a team of technicians in the field to conduct testing and data collection.
- b. Collect field measurements and accurately prepare field notes and other documentation.
- c. Develop a professional report regarding work performed and conclusions that meet VCS quality standards and Client's expectations.
- d. Execute work in a timely and professional manner in accordance with VCS and industry safety requirements.
- e. Follows VCS' Quality Management Process.

II. Technical Support

- a. Support in the design and installation of cathodic protection systems
 - i. Perform design calculations and develop design drawings
- b. Provides support for Senior Project Engineers and Project Managers on general technical issues.
- c. Effective and timely communications.

III. Assist with Project Estimating and Proposals

- a. Carefully inspect prospective job information, project sites and accurately.
- b. Work with project managers to recommended scope of work that will fit within budget.
- c. Prepare quantity takeoffs and cost estimates to perform the required work.
- d. Professional communication with prospective clients.

IV. Support the development and execution of the VCS Service Offering

- a. Quality control testing and inspection of cathodic protection systems
- b. Structural health monitoring
- c. Proficiency in various non-destructive testing equipment
- d. Develop and manage materials testing and quality control
- e. Service life modeling

V. General Duties and Accountabilities

- a. Promotes and maintains positive professional business conduct with co-workers and Clients
- b. Ensures a cooperative and progressive co-worker relationship with the staff focused on achieving company goals.
- c. Cooperates and supports others in training and development activities as required.

- d. Develops and pursues a formal plan for personal and professional growth/learning.
- e. Performs such other duties and accountabilities as may be assigned.

4. QUALIFICATIONS

I. Education

- a. Graduate degree in Civil, Structural, Materials Engineering discipline.
- b. Or Bachelor degree in Civil, Structural or Materials Engineering discipline with an equivalent combination of experience.

II. Experience

- a. Minimum of 2 years of experience in an area of Specialized Knowledge and Skills

III. Specialized Knowledge and Skills

- a. Concrete materials
- b. Structural analysis of existing structures
- c. Condition assessment of reinforced concrete structures
- d. Concrete repair technologies and techniques
- e. AutoCADD
- f. Concrete corrosion and cathodic protection
- g. Non-Destructive testing of infrastructure

5. COMPETENCIES

I. Core Competencies

Competency	Description
Innovativeness	The ability to effectively implement new ideas and apply novel solutions using original thinking to improve processes, methods, systems, services and products.
Resource Management	The ability to effectively and efficiently manage human, financial, and operational resources to execute operational and business plans to meet VCS's corporate goals and improve its overall performance.
Working Safely	A dedication to always working safely, including taking personal responsibility for your individual health and safety and ensuring that your actions do not adversely affect the health and safety of other people and/or the environment.
Communication	The ability to present information in a compelling, honest, persuasive, and articulate manner, ensuring the message is clear, understood and consistent with VCS's values.
Collaborative Relationship-Building	Understanding the techniques required to develop, maintain and strengthen business relationships while securing support and forming alliances with both internal and external stakeholders, including working collaboratively with others, forging connections with key industry stakeholders, cultivating win-win relationships and building coalitions in line with VCS's values that facilitate the accomplishment of broader organizational objectives.
Client-Focused	Providing outstanding service to both internal and external clients by focusing efforts on discovering and meeting their needs, establishing

	rapport, facilitating the delivery of solutions that meet their underlying and unexpressed needs, while balancing VCS’s corporate goals, values and priorities.
Integrity	Serving clients and performing with honesty, fulfilling promises and always remaining true to VCS’s values one’s own ethics even when circumstances make it difficult to do so. Building respectful, inclusive relationships and safe work environments where decisions and transactions are transparent and fair. Holding oneself, one’s employees/coworkers, partners and stakeholders accountable for their actions.
Teamwork	Demonstrating effective interpersonal skills and working cooperatively and effectively within and across organizational units to achieve common goals.
Results-Oriented	Concentrating efforts on achieving quality results, seeking to constantly improve personal and organizational performance and remaining true to Vector’s values.

II. Additional Required Competencies

Competency	Description

6. WORKING CONDITIONS

I. Environmental Conditions

- a. Corporate office, Tampa, Florida
- b. Wide variety of on-site project conditions
 - i. Interior and exterior environments including sun exposure, cold temperate and variety of precipitations
 - ii. Working on construction sites at heights, over water, active bridges, and confined space

II. Hours of Work

- a. Standard work hours – 8 am to 5 pm, 40 hours per week
 - i. Some specific field work requires night shift or weekend work due to limitations on access and client needs. This is not typical but does occur.
- b. Additional work as required to meet priorities and deadlines

III. Required Travel

- a. Travel is an important aspect of VCS work.
- b. Travel is to be expected between 25 to 50% of the time.
- c. Travel with short notice may be required due to client and business expectations.

IV. Physical Demands

- a. Field work may be physical demanding.
 - i. Working on one's feet for a 10-hour day in the field
 - ii. Handle medium sized power tools like a hammer drill and grinder
 - iii. Working from heights including climbing ladders, stairs and scaffolding

V. Sensory and Mental Demands

- a. Multi-tasking – ability to successful manage of multiple projects
- b. Capability to work independently and the flexibility to handle changing priorities

7. EMPLOYEE ACKNOWLEDGEMENT AND ACCEPTANCE

By signing and dating this job description, I acknowledge that I have reviewed and accept the information contained herein.

EMPLOYEE NAME:	
EMPLOYEE SIGNATURE:	
DATE:	