

## FIRM

Soteria Company, LLC  
2018 - Present

## EDUCATION

- M.S. Technology Management, Indian Institute of Technology, New Delhi, India
- M.S. Technology in Cryogenic Engineering, Indian Institute of Technology, West Bengal, India
- B.S. in Electrical Engineering, Regional Engineering College, Kurukshetra University, Haryana, India

## AREAS OF EXPERTISE

- HAZOP and FMEA of Light Railway Projects
- HAZOP and FMEA of Heavy-Duty Haulage Equipment
- HAZOP/FMEA/RCA of Engineering Infrastructure Projects
- Environmental Compliance
- Dispersion Modeling

## YEARS OF EXPERIENCE

19 Years

## REGISTRATIONS & CERTIFICATIONS

- Member, Canadian Safety Engineers and Professional Association
- Member, Professional Engineers, Ontario PEO, Ontario
- Member, The Association of Professional Engineers and Geoscientists of Alberta
- Member, American Chemical Society

## EMPLOYMENT

- Soteria Company, LLC  
2018 – Present
- Vale Canada  
2012 – Present
- General Hydrogen Corporation  
2008 – 2012
- Praxair  
2005 – 2008
- Air Liquide  
2001 – 2005

## TECHNICAL EXPERIENCE

Mr. Sengupta has extensive experience and expertise in safety and security planning, certification, assurance, analysis, demonstration and support for transit projects in the United States and Canada. His experience includes the following:

- Safety and Security audits of light railway projects
- Provides rail system safety planning, analysis and certification support for transit projects in Canada and the United States
- HAZOP and FMEA of Light Railway Projects
- Verification of Design and Construction Safety and Security program management of Light Railway projects
- HAZOP and FMEA project leader for semi-autonomous electrical heavy-duty haulage equipment
- In depth experience in process safety management of Electrical, Chemical and Cryogenic Systems
- Senior Process Safety Manager for world leading chemical and Industrial Gas companies Praxair and Air Liquide
- Engineering Lead for performing HAZOP/FMEA/RCA of various light railway and engineering infrastructure projects
- Project Engineering Lead, Focused R&D projects with the University of Western Ontario, London in the field of power generation with Hydrogen and Cryogenic integrated systems
- Predictive Maintenance and Electrification of Fixed and Mobile Equipment
- Quality Assurance and Six Sigma Green Belt Project Leadership
- Environmental compliance and fugitive emissions audit and modeling

## RELEVANT AND RELATED EXPERIENCE WITH SOTERIA

### Soteria Company, LLC

2018 - Present

#### Mr. Sengupta's Role: Senior Transit Safety Engineer

Responsibility: As Senior Transit Safety Engineer, Sujit brings his expertise to ongoing Soteria projects:

- Rail system safety security, planning, analysis and certification support for ongoing design-build transit projects.
- Support reliability, availability and maintainability planning, analysis and demonstration tasks and activities for ongoing rail transit projects.
- Provide systems engineering support for various light rail design and construction projects
- Verification of safety and security program management including, design and construction checklists and Critical Hazard Management Database
- Engineering Design and Project Management of large engineering projects in transit, light railways, and infrastructure projects

## **Edmonton Valley Line LRT Project, Edmonton, Canada**

May 2016 – Present

The Edmonton Valley Line LRT Project connects the Mill Woods area with downtown Edmonton. It is comprised of low-floor, urban styled LRVs which run on a dedicated right-of-way that is integrated into the city landscape. The System consists of approximately 13km of dual guideway, with approximately 2km of the guideway elevated.

Soteria is leading the Safety and Security Certification Program and the Independent Verification and Validation (IV&V) Process, including supporting development of the System Safety Program and System Security Plan, as well as support in the areas of design and construction, training requirements, Safety and Security Verification, and operational readiness.

**Mr. Sengupta's Role:** Transit Safety Engineer

Sujit is part of the Soteria IV&V team working with OMJV, TransED and Bombardier Transportation. He is responsible for the complete review and certification of Safety and Security Systems of the Edmonton project before Revenue Operations, as a Professional Engineer. His participation in the project started at the design verification stage, including the review of the design and Hazard management database, and will continue through construction and commissioning.

## **ADDITIONAL RELEVANT AND RELATED EXPERIENCE**

### **Vale Canada**

2012 - Present

**Mr. Sengupta's Role:** Senior Maintenance/Reliability Engineer and Energy Coordinator

Responsibility:

- Responsible for the maintenance of underground mining, crushing and mobile equipment, including electrical haulage trucks
- Designed and implemented safety systems in the mine, including first-of-a-kind safety hydraulic toggle
- Implemented Electrical safety systems across the division
- Implemented several process improvement and recovery systems in the refinery for nickel and copper
- Led the Captive Power and Power Optimization initiative for the company's flagship mine
- Spearheaded the Reliability and Maintenance program across several Vale sites
- Led RCA for several mission critical assets
- Working on digital transformation, artificial intelligence and automatic triggers and maintenance planning based on criticality analysis

### **General Hydrogen Corporation**

2008 – 2012

**Mr. Sengupta's Role:** Senior Vice-President, Safety and Engineering

- Led design and construction of Thermal, Hybrid and Hydrogen Power Plants with Energy Storage Design (Enhanced gaseous Hydrogen storage)
- Engineering and Operations Project Management, Process Design, and Design and Construction of several multi-million dollar projects
- Expert on Environmental Compliance, Dispersion Modeling, and requirements for permitting
- Engineering Lead for HAZOP/FMEA of projects

## **Praxair**

2005 – 2008

**Mr. Sengupta's Role:** Senior Process and Safety Manager

Responsibility:

- Process Safety, Quality and Validation of several successful cryogenic projects
- Engineering and Operations project management, design and construction for several projects in Canada and across North America
- Expert on Environmental compliance and dispersion modeling, and in dealing with the Government bodies on environmental permitting
- Led cross-functional, multidisciplinary and multi-location teams successfully
- Engineering Lead for HAZOP/FMEA of projects
- Quality Assurance and Six Sigma Green Belt

## **Air Liquide**

2001 – 2005

**Mr. Sengupta's Role:** Production Specialist and Risk Management Representative

Responsibility:

- Responsible for all Canadian projects and for Northeast USA Projects
- Led the process design and hydrocarbon safety audit across air separation plants across North America and Indian Business units
- Led the safety, quality and reliability systems and process trouble-shooting functions