Industrial Hygiene Intern at Ad Astra Rocket Company

The Ad Astra Rocket Company (Ad Astra) is in Webster, TX. The company primarily is developing the VASIMR[®] technology for in-space propulsion. The technology is electrically driven and only operates in the vacuum of space, so the center piece of the operation is a 150 m³ vacuum chamber to simulate the space environment. High power radio frequency (RF) drives the rocket that comprises a superconducting magnet and special materials that are compatible with the high-power plasma process. The propellant is pure argon, an inert gas, so there are very little health risks associated. Ad Astra builds and assembles many of the special components in-house. Most of the industrial hygiene topics in the operation are typical laboratory, electronics, and machine shop related. Most chemicals are used in small quantities, except for a large volume of liquid nitrogen for the vacuum chamber operation. There are interesting and unique chemical processes that occur in the vacuum along with high-power plasma operation.

Ad Astra is open to an unpaid intern position that would work to improve and support the company's Safety and Health Plan (SHP), especially in the area of industrial hygiene. This could be part time work with a flexible schedule for a local student.

The following is a representative list of the potential functions associated with the internship.

- 1. Perform worksite surveys to assess chemical use, storage, labels and signage.
- 2. Improve or write Job Hazard Analyses.
- 3. Eliminate hazards or improve controls to mitigate hazards.
- 4. Improve and establish OSHA compliant procedures to support the SHP.
- 5. Improve processes for acquiring and tracking the chemical inventory.
- 6. Assess PPE availability, use and training.
- 7. Help improve chemical clean up and disposal methods.
- 8. Support and improve any other SHP functions as time allows.
- 9. Assist in analyzing chemicals that may form during rocket testing.
- 10. Analyzed new chemicals and material that are being assessed for rocket application.

These functional areas cut across nearly all aspect of the company development activities. While working these topics, the intern will interact with all the company staff and visiting professionals. The intern will learn about the exciting challenges of high-power electric rocket development for spaceflight.

For more information please contact:

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