

Charles D. Leonard, CIH

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ACCOMPLISHMENTS

- Managed Pilot Plant production and maintenance resulting in \$5 MM product contribution margin and over \$1 MM raw material savings.
- Managed up to 35 employees in production and environmental regulatory compliance laboratories, product & process development, quality control and process chemistry for a multi-product chemical plant.
- Coordinated REACH pre-registration for products sold to the European Union and authored associated Safety Data Sheets.
- Experienced with air, water and waste regulatory compliance.
- Developed and directed ISO-9000 Quality System and Industrial Hygiene programs.

EDUCATION

BS Chemistry, Publications, Life Science minor. Louisiana State University, Baton Rouge, LA
Certified Industrial Hygienist, comprehensive practice, 1990. #4699

EXPERIENCE

ASLAN Group, LLC (1991- present)

- Project CIH for a fifteen month Lead abatement project at the US Custom House. Sampling included lead area and personnel monitoring for lead dust and ventilation assessments.
- Project CIH for LEED Air Quality Sampling including sampling for mold, formaldehyde, 4-Phenylcyclohexene (4-PCH), Total Volatile Organic Compounds (TVOC's), Dust (PM10 & PM).
- Project CIH for respirable silica exposure monitoring for a sand blasting operation.
- Project CIH for asbestos abatement project at NASA Michoud Assembly Facility.
- Asbestos Project Designer for abatement projects including Loyola University of New Orleans.
- Authored export compliant Safety Data Sheets and developed an Access database and SQL queries for GHS classifications and associated Safety Data Sheet phrases.
- Asbestos, lead, mold, moisture mapping and remediation plans for storm response.
- Established radiation safety program and RAM license application for a sealed-source user.
- Assessed air emissions testers and commercial environmental labs to LELAP, NELAP (ISO-17025) and quality systems assessments to ISO-9001.
- Industrial hygiene related litigation support.
- Energy ratings and recommendations to improve home energy efficiency and comfort.
- Remediated distressed properties for fun and profit.
- Electrokinetics, Inc.: Directed Quality Assurance activities for an EPA-sponsored emerging technology conducting electrochemical soil remediation. Quality Assurance Project Plan (QAPP) development & compliance audits, and trained project engineers and chemists on project documentation requirements and metrics.
- Enabling Technology, Inc: Laboratory Information Systems software design review.

Development & Lab Manager / REACH Coordinator (Nov 2005 - December 2008)

Lion Copolymer LLC, Baton Rouge, LA

- Conducted ventilation surveys and exposure assessments
- Wrote export compliant Safety Data Sheets for products, intermediates and new chemical processes. Radiation Safety Officer. Asbestos and lead inspector. HAZMAT team member.
- Implemented company intranet access to product and safety data sheets, raw material and product specifications, production recipes, product technology data and production quality metrics.
- Developed multivariate statistical models for feed-back and feed-forward process control and product property prediction.

QA/QC Manager (2003-Nov 2005)

Development Specialist & ISO Coordinator (1997-2003)

Quality Control Manager (1992-1997)

DSM Copolymer, Baton Rouge, LA

- Designed and implemented safe scale-up for a new polymer hydrogenation process using hydrazine and hydrogen peroxide (**US Patent & publication**). Performed exposure monitoring, risk & hazard assessments, PSM. Led commercial design and Process Hazard Analyses at prospective production sites.
- **Star Award** for a new product commercial success.
- Technical presentations to major customers to support sales and future business.
- Developed ISO-9001 processes and maintained registration for two sites. Lead auditor for ISO-9001 internal and supplier audits and assisted major customers registration effort (Goodyear, Firestone Building Products, DSM Fine Chemicals).
- Trained TQM teams & facilitators.

Water: Implemented multiple NPDES & LWPDES permit compliance, including Form 2C applications, biomonitoring, monthly and annual compliance monitoring and two successful Toxic Reduction Evaluations. Coordinated regulatory inspectors, replied to nonconformance and completed Discharge Monitoring Reports. Attained EPA-DMRQA "Special Recognition" for twenty years' blind sample performance.

Air: Compiled chemical & usage inventories for SARA 313 TRI, utilized solid waste summaries as source reduction metric. Performed site-specific HON fugitive emissions testing and operated pilot unit subject to HON regulations. Developed test protocol included in MACT regulations (40 CFR 63 Appendix A) and participated in presentations to EPA and Texas Air Control Board. Performed stack sampling to characterize emissions and MACT compliance (butadiene, styrene, acrylonitrile). Wrote QA Plan and instrument maintenance requirements for compliance with 2004 DEQ Ozone Administrative Order. Provided updated data for Title V permit application.

Waste: Coordinated contract lab services for RCRA and non-RCRA wastes (SW-846, TCLP, etc). Participated in installation and had direct oversight for analyses of initial and routine groundwater monitoring well analyses and reporting. Characterized samples for Petro-Processors CERCLA/NPL (Superfund) site. Provided support for TSCA Section 8 reports.

Health: Developed and directed Industrial Hygiene program that included butadiene, styrene, acrylonitrile, hydrazine, ammonia, particulates, asbestos, noise and silica. Wrote Chemical Hygiene

plan. Representative on IISRP committee evaluating butadiene exposures and monitoring techniques. Contributor to IISRP *Popcorn Resource Handbook*.

CERTIFICATIONS & AFFILIATIONS

- Certified Industrial Hygienist, American Board of Industrial Hygiene (1990), Cert #4699CP
- Radiation Safety Officer. Radiation Safety Academy, 2005.
- LDEQ Lead (Pb) Inspector and Risk Assessor
- NIOSH 582 (asbestos).
- LDEQ & AHARA Asbestos Project Designer, Inspector & Management Planner
- ASTM D-11 Rubber, D-22 Air Quality & D-24 Carbon Black (former D24.71 Chairman)
- IQA/ RAB approved ISO-9001 Lead Assessor Training Courses
- ISO-17025/ NELAC Environmental Laboratory Assessor
- Louisiana Certified Energy Rater (ERHL-2000-51, lapsed)
- AIHA Deep South Section Treasurer, 1993-97, President 2011
- Current 40-hr HAZWOPER & TWIC
- Association of Consulting Chemists & Chemical Engineers, Cert # 956
- Southeastern Louisiana University OSH&E Advisory Committee member, 2011-present

PUBLICATIONS & PATENTS

- IISRP Source Emissions & Popcorn Polymer Committee. Contributor to *IISRP Butadiene Popcorn Polymer Resource Handbook*.
- IISRP Source Emission Analytical Ad-hoc Committee: "*Determination of residual styrene in crumb rubber*" by L. Levi, R. Wu, G. Ghebremeskel, C. Leonard, G. Frisone, G. Collins, D. Daugherty and T. Gurley, Houston, TX (1992).
- 40 CFR 63 Appendix A, EPA Method 312A--*Determination of Styrene in Latex Styrene-Butadiene Rubber Through Gas Chromatography* (MACT compliance test)
- Process for Producing Hydrogenated Polymers, US Patent # 60/317979
- New Guaianolides from *Berlandiera pumila* and *B. texana*, and the X-Ray Crystal Structure of Pumilin. JD Korp, I Bernal, NH Fischer, C Leonard, I Lee, N LeVan. *J. Heterocyclic Chemistry*, 19, 181 (1982).
- Innovations in the Production of HNBR, W Belt, O Aagaard, C Leonard, T Tsai and N van der Aar. Rubber Division, American Chemical Society, Cleveland, Ohio, October 16-19, 2001.