

# **Robert B. Hohl**

**Associate  
Waste Science Inc.**

## **PROFESSIONAL CERTIFICATIONS, AWARDS, CLEARANCES, AND MEMBERSHIPS**

"Secret" Security Clearance (12 years, currently inactive)  
"Employee of the Month" Award, URS Telecommunications 2002

## **PROFESSIONAL EXPERIENCE**

### **Engineering and Technical Skills**

- Electronics packaging, cabling, circuit boards and electromechanical design, from concept to production, including size, weight, and cost reduction, and vibration testing and analysis.
- Electrical AC power distribution and grounding systems, for telecommunications equipment at new or existing land and commercial building sites.
- Assembly prototyping (design of sheet metal and machined components, welded assemblies, parts procurement, documentation).
- Heating, cooling, and ventilation of electronic assemblies and cabinets.
- Can provide engineering calculations.
- Knowledge of radio frequency integrity including TEMPEST.
- Knowledge of national standards (eg DOD standards) and codes (National Electrical Code).
- Skilled in engineering documentation practices, including engineering change procedures with electronic files and hardcopies. Knowledge of national standards (ANSI standards, geometric tolerancing).
- Computer skills, including word processing (WordPerfect, Microsoft Word), spreadsheets (Quattro Pro, Excel), Computer Aided Drafting & Design (AutoCAD 2002, CATIA, Intergraph), and use of internet, and other programs.
- Supervisor and part owner of Frederick Sport & Ice Arena; involved in all technical operations of ice skating facility. Supervised employees in multiple departments. Performed monitoring and maintenance of refrigeration and HVAC systems. Skilled at ice making and maintenance.

### **Management Experience**

- Project Manager for \$189K development project that retrofitted a commercial Seiko color hardcopier to TEMPEST specifications (a technology to control unwanted radio frequency emissions). This included manufacture and delivery of ten prototypes which resulted in on-time

## **Summary of Experience and Accomplishments**

Mr. Hohl has extensive work experience in the defense and aerospace industries, both in design and management. Notable experience includes the design of parts and assemblies for high altitude and passenger aircrafts. Environmental experience includes vibration and thermal analyses, hazardous paint removal comparison studies, component design for nuclear waste sites, and writing of reports and test procedures. Mr. Hohl also has strong oral, written, and IT skills, including CAD. He has worked successfully in laboratory and field environments.

### **Education**

B.S. Mechanical Engineering, The Ohio State University, 1977.

delivery and \$150K in sales. Supervised 3 engineers and 1 drafter; prepared work breakdown structures, allocated manpower, purchased materials, made schedules, and tracked costs. Reported project progress to upper management through monthly written reports and by preparing and giving formal presentations. Developed documentation control and tracking system to meet special customer requirements and accelerated schedule (Atlantic Research Corp).

- Managed geotechnical engineering research laboratory involved in \$250K/year funded research. Coordinated work of 6 graduate students. Conducted undergraduate and graduate level instructional laboratories (tri-axial and shear tests). Supervised and performed field work. Authored procedures manual for manufacture of laboratory latex rubber membranes (Ohio State Univ. Engineering Experiment Station)
- In charge of all drafting activities on receiver project (E-Systems).
- Oversaw up to six draftsmen over several years (various companies).
- Wrote 'request for service' letters to local power companies. Prepared documentation for permitting and construction. Coordinated work with clients, engineers, power company representatives, construction managers, and county inspectors to meet aggressive schedules (KCI and URS).
- Documented and kept records of all phases of design on projects, using spreadsheets, drawings or sketches, handwritten notebooks, communication logs, photos, etc. (various companies).

#### **Mechanical Engineering Experience**

- Designed HVAC systems (with assistance from other mechanical engineers) for new rooms in commercial buildings to contain telecommunications equipment (URS).
- Designed racks, enclosures, and brackets for mounting electronic assemblies into a modified Bradley Fighting Vehicle. Designed all components to withstand a 40G shock load. Selected parts by working with vendor engineering departments. Made precision assembly layouts. Developed grounding and cable routing system (Gichner Shelter Systems).
- Performed comparison study of several hazardous paint removal systems for US Army at Aberdeen Proving Ground. Analyzed abrasive grit blasting, ultra-high pressure water blasting (40,000 psi), a vacuum system, and others. Environmental investigations included the separation and disposal of hazardous waste. Wrote technical report with cost analysis (SFA).
- Designed components for air temperature sensing system for the Pratt & Whitney PW4168 jet engine. Managed task to create and revise interface control documents among 4 companies, for thrust reverser design on PW4168 engine (Martin Marietta).
- Designed and tested sonar hoses and electro-mechanical towcables for use in submarine towed arrays (US Navy). Provided design support for Vertical Launch Systems program (US Navy). Held SECRET security clearance (Martin Marietta).
- Designed and built pneumatic control system to control air flow into proposed 3700 feet deep borehole near Hanford WA for nuclear waste disposal. Held SECRET security clearance. (ENSCO).
- Designed avionic receivers for high altitude aircraft to pass environmental and electrical testing requirements of Mil-Std-810 (vibration, temperature, altitude, moisture), using high density electronics packaging techniques. Supervised engineers, drafters, and technicians for

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prototype development from design phase through production. Held SECRET security clearance (E-Systems).

- Designed, supervised fabrication, and operated magnesium vibration test fixtures, which resulted in recurring savings and improved scheduling because vibration tests could be performed directly in-house. Tested avionic receivers for vibration stability using the test fixtures mounted on shaker tables, with random and sinusoidal test frequencies and amplitudes per Mil-Std-810. Also tested simulating high altitude conditions for temperature, altitude, and moisture. Analyzed results after testing. Was primary author of quality control test procedure for a new receiver assembly (E-Systems).
- Recommended multilayer printed circuit board documentation procedures after researching manufacturing methods and industry standards, which resulted in adoption as company standard (E-Systems).
- Designed shielding, screening, and gasketing components for computers and data equipment to conform to TEMPEST specifications. Held SECRET security clearance (Atlantic Research Corp).
- Laboratory work in geotechnical engineering research lab. Tested stress-strain relationships in underground steel culverts by bonding strain gages to the metal (underground), and recording the strains in the metal under load and no-load conditions. Designed and supervised fabrication of lab and field research equipment (e.g. a telescoping frame for performing on-site stress-strain tests for soils and a fixture for manufacturing latex rubber membranes). Provided maintenance and control for often-used lab equipment, such as dial gages, proving rings, pressure and vacuum gages, regulators, tubing, fittings, etc. Designed and built concrete floor with controlled drainage slopes for a 100% humidity room. Initiated capital equipment purchasing and inventory (Ohio State Univ. Engineering Experiment Station).
- Extensive field work (highway construction sites; soil testing in remote countryside areas; underground coal mines; oil drilling rig sites; rail cars en-route; factories; high-rise building rooftops and electrical rooms; raw land sites (various companies).

### **Electrical Engineering Experience**

- Designed systems to provide and distribute electrical AC power and grounding to telecommunications equipment and cellular telephone antennas on building rooftops and land sites, all conforming to National Electrical Code and local codes. Designed cable routing systems through commercial buildings for AC electrical power, grounding, and coaxial signal cables. Supervised work of two drafters. Wrote 'request for service' letters to local power companies. Worked with power company and county inspectors to correct problems with submitted designs. Responsible for making electrical engineering design sheets on submitted drawings (KCI and URS).

### **Graphics**

- AutoCAD 2002 for design of land and building sites and for all documentation; CATIA (3D) for design of aircraft engine components and for all documentation; Intergraph for design of computer components and for all documentation.

### **PROFESSIONAL POSITIONS**

Associate, Waste Science Inc.

2005-Present  
Rockville, MD

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Electrical Engineer, URS Corporation, Telecommunications Group	2000-2003 Washington, DC
Electrical Engineer, KCI Technologies	1999-2000 Laurel, MD
Senior Engineer, SFA/Frederick Manufacturing Division	1997-1997 Frederick, MD
Senior Engineer, Gichner Shelter Systems	1995-1995 Dallastown, PA
Senior Engineer, Martin Marietta Aero & Naval Systems	1990-1993 Baltimore, MD
Senior Engineer, Science Applications International Corporation	1989-1990 Vienna, VA
Senior Engineer, Reaction Instruments, Inc.	1989-1989 Herndon, VA
Senior Mechanical Engineer, Atlantic Research Corporation	1985-1988 Alexandria, VA
Senior Mechanical Engineer, E-Systems, Melpar Division	1979-1985 Falls Church, VA
Mechanical Engineer, ENSCO, Inc.	1978-1979 Springfield, VA
Electronics Technician, Ohio State Univ. Engineering Experiment Station	1974-1977 Columbus, OH