



CURRICULUM VITAE

Rusty Boicourt, P.G.
Materials Specialist
Veritas Material Consulting
11051 West Leilani Drive, Boise, Idaho 83709
208-870-9728 rusty@veritasmaterial.com

Materials Science & Engineering (MSE) is the study of how material properties effect performance. Non-Destructive Evaluation (NDE) is the science of identifying material properties using a variety of tools and observations. Forensics is the discipline of collecting trial-quality evidence. These activities all relate to each other and often overlap as part of a comprehensive study. The synthesis of these disciplines provides an understanding of how a material works, what caused deterioration or how much useful life remains.

EDUCATION & TRAINING:

Materials Science & Engineering, 2009 to present – Boise State University, ID
Radan Bridge Modeling using GPR, 2011 – GSSI North Salem, NH
StructureScan Optical & TerraSIRch System 3000 for NDT GPR, 2004 – GSSI, North Salem, NH
Concrete Petrography Workshop, 2000 – Portland Cement Association (PCA), Skokie, IL
B.S. Geology, 1993 – Boise State University, ID
Geology Major Course Study, 1987-1992 – San Jose State University, CA

RELEVANT CERTIFICATIONS:

International Concrete Repair Institute (ICRI) Concrete Slab Moisture Technician – Grade 1
Master Certificate in Concrete Repair – World of Concrete Seminars, 2011, Las Vegas, NV
Master Certificate in Concrete Production – World of Concrete Seminars, 2006, Las Vegas, NV
Master Certificate in Floors/Slabs – World of Concrete Seminars, 2005, Las Vegas, NV

PROFESSIONAL AFFILIATIONS:

ICRI Committee 150 Member, ACI 562 Code Requirements
ICRI Committee 120 Member, Environmental Health and Safety
American Concrete Institute (ACI) International
Idaho Chapter of the Associated General Contractors of America (AGC)
Idaho AGC
Geological Society of America (GSA)
State of Idaho Registered Professional Geologist #983, 1999

PROFESSIONAL EXPERIENCE:

Failure Investigation of concrete is commonly needed in the construction industry. Failure can include everything from age-related degradation to a sudden, unexpected event. Some failures which I have investigated include aesthetic cracking on the surface of slabs; damage to concrete decks from long-term exposure to weathering; rupture and collapse of structural beams; eruption of post-tensioned cables; corrosion of reinforcing in concrete columns and beams, and many others. Failure Investigation always involves recording visual observations and performing simple field testing. Often, it also includes using various sophisticated tools or laboratory testing to determine the present condition of a material. Failure can be caused by material defects, problems in workmanship, over-loading, and aggressive environments.

Non-Destructive Evaluation (NDE) involves the use of various tools and devices to employ electro-magnetic, acoustic, or kinetic energies to identify the physical properties of materials such as concrete or steel. Properties commonly identified include compressive strength, hardness, penetration resistance, location of reinforcing, degree of carbonation, presence and degree of corrosion, density, homogeneity, size and shape of flaws, presence of chemical attack and others. Using a synthesis of testing data and observations, the evaluation builds a picture of the present condition of an element and the factors that contributed to its present condition. To-date, I have completed over 65 individual, limited and comprehensive NDE projects.

Failure investigation and NDE often include an estimate of the remaining **service-life** of concrete. Once the mechanisms of deterioration are known, the rate at which those mechanisms cause damage can be estimated. Using a concrete's present age, and having identified the degree of deterioration, one can estimate the time at which the material is no longer feasible or safe to use. Service-life can be extended by repair, protection or modification of use. Knowing the remaining life span of a material is essential to proper maintenance and budgeting for repair and replacement.

Making **Repair Recommendations** to restore concrete elements is becoming increasingly necessary as the construction industry moves from new construction to rehabilitation and re-purposing of buildings. Both the American Concrete Institute and the International Concrete Repair Institute have produced guidelines for the proper repair of various types of concrete damage, including: spalls, reinforcing corrosion, structural cracking, cathodic protection, strengthening, PT repair, and others. Using these guidelines, I have provided detailed and comprehensive repair procedures and recommendations as well as repair inspection and oversight on dozens of projects in recent years.

PRESENTATIONS:

As a service to clients and the general industry, I have made multiple presentations to architects, engineers, building owners and developers regarding technical aspects of concrete. These include:

American Institute of Architects (AIA), Boise Chapter
Association of General Contractors (AGC), Idaho Chapter
Building Owners & Managers Association (BOMA)
Boise State University (BSU) Petrography Lecture
CSHQA Architects
CTA Architects/Engineers
DC Engineers

Idaho Power Company
Meridian Joint School District
Pinnacle Engineers
Structural Engineers Association (SEAI)
The Land Group
ZGA Architects/Planners

RELEVANT EXPERT TESTIMONY:

Fellom vs. Ponderosa Paint, et al., **deposed by:** John Howard of Howard, Lopez & Kelly rep. Ponderosa Paint Company.

Burns vs. Sears Roebuck, et al., **deposed by:** Grant Burgoyne of Mark & Burgoyne, rep. Contract Floors; Clint Coddington of Hall Farley, rep. Velocity Insurance; Brad Dixon of Moffet Thomas, rep. Sears Roebuck.

Allen Construction, Inc. vs. SE/Z Construction, LLC (CV-2007-255), **deposed by:** Angelo Rosa, Capitol Law Group, PLLC rep. Allen Construction.

Idaho Press Tribune vs. Sage Construction, et al., **deposed by:** Eugene Ritti, Hawley Troxell; William Pope, Kerry Perkins; Robert Mills, Anderson Julian Hull; Robert Lewis, Cantrell Skinner; Martin Hendrickson, Givens Pursley.