



Jean Randolph

AFFILIATED PETROGRAPHER

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In her 35+ year career, Ms. Randolph has performed thousands of petrographic and microscopical analyses of concrete and concrete materials, including petrographic examination of hardened concrete, air-void system analysis of hardened concrete and aggregate, and consulting on field and laboratory testing interpretation. Ms. Randolph's experience in concrete evaluation ranges from building components like flooring, roofs, and walls to infrastructure systems such as bridges, wastewater tunnels and treatment plants, pavements, and dams. Ms. Randolph has performed examinations to assess the quality and condition of concrete, analyzing strength and setting issues, freeze-thaw and chemical-related deterioration, and debonding and delamination. In addition to her work in materials

Industry Experience

6 Years with CTLGroup

25 Years with Other Firms

31 Years Industry Experience

Credentials

B.S. in Geological Sciences
University of Texas at Austin,
1981

Affiliations

American Concrete Institute,
Michigan Chapter

The Society of Concrete
Petrographers

Contact Information

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Relevant Project Experience

Condition Evaluation of Prairie Island Nuclear Generating Plant | Minnesota

- Petrographic examination, ASTM C856, of concrete for overall condition evaluation

Several Condition Evaluations of Various Bridge Deck Structures for New Jersey Turnpike Authority | New Jersey

- Petrographic examination, ASTM C856, and air-void system analysis, ASTM C457, of concrete for overall condition evaluation, as well as cause of surface distress.

Pennsylvania DOT AA Low-Strength Project | Pennsylvania

- Petrographic examination, ASTM C856, of concrete, to evaluate cause for low compressive strength.

Several General Motors Milford Proving Ground Track Evaluations | Michigan

- Petrographic examination, ASTM C856, of concrete for overall condition evaluation to evaluate cause of pavement deterioration.

Concrete Pavement Evaluation for Manitoba Infrastructure and Transportation | Canada

- Petrographic examination, ASTM C856, of concrete to evaluate cause for cracking and distress.

North-South Freeway, I-43 Shotcrete Evaluation | Wisconsin

- Air-void system analysis, ASTM C457, of numerous shotcrete test samples, to evaluate their air-void parameters and volume percentages of the concrete components.

Several Mix Verification Projects | Pennsylvania

- Air-void system analysis, ASTM C457, to evaluate air-void parameters and volume percentages of concrete, for verification of concrete mix design.

Several Concrete Evaluations for Road Commission for Oakland County | Michigan

- Petrographic examination, ASTM C856, and air-void system analysis, ASTM C457, of concrete to assess concrete condition, air-void parameters, and evaluate for the presence of ASR.

Airfield Runway + Pavement Experience

Condition Evaluation of Prairie Island Nuclear Generating Plant | Welch, MN

Petrographic examination, ASTM C856, of concrete for overall condition evaluation; evaluation for quality of concrete; paste quality; and any deleterious occurrences in the concrete, including chemical attack, degradation, and/or alteration; alkali-aggregate reaction, cracks, and microcracks.

Petrographic Examination for Detroit Metropolitan Wayne County Airport | Romulus, MI

Petrographic examination, ASTM C856, and air-void system analysis, ASTM C457, of newly-placed runway concrete pavement for evaluation of possible causes of surface distress, low flexural strength, and questionable air content.

Levy County Project | Tucson, AZ

Evaluation of low-strength issue in test concrete panels.

Materials Testing and Analysis for Alpena ANG Base Apron Reconstruction | Alpena, MI

Petrographic examination, ASTM C856, of concrete to evaluate for the presence of alkali-aggregate reaction, as well as any other deleterious reactions in the concrete.

LAX vs. Brosamer | Los Angeles, CA

Selected by council and Brosamer to assist with the Forensic Engineering and Litigation Support regarding Runway 25L that was constructed in 2007.

WTP + WWTP Experience

DuPont Changers Works Water Treatment Plant | Deepwater, NJ

Performed a petrographic analysis on cores to evaluate the properties and condition of the concrete.

KCMO Digester Rehabilitation | Kansas City, MO

Performed petrographic analysis on concrete cores to evaluate the properties and condition of the concrete; identify deterioration mechanisms and their extent.

Annapolis Water Treatment Plant | Annapolis, MD

Performed petrographic analysis on concrete cores to evaluate the properties and condition of the concrete; identify cause for low concrete strength.

Granger Wastewater Treatment Plant | Des Moines, IL

Performed petrographic analysis on concrete cores, to evaluate properties and condition of the concrete, and identify possible cause(s) for the concrete cracking.

Folly Hill Reservoir Tank | Cambridge, MA

Performed petrographic analysis on concrete cores, to evaluate properties and condition of 100-year-old concrete.

Two River Water Reclamation Authority Sewage Treatment Plant | Monmouth Beach, NJ

Performed petrographic analysis on concrete cores, to evaluate properties and condition, and identify deterioration mechanisms and their extent.

Oakland County Sewer | Bloomfield Township, MI

Performed petrographic analysis to evaluate concrete properties, condition, and deterioration.

Hoods Creek Attenuation Basin | Racine, WI

Performed petrographic analysis to determine concrete properties.