

Nuclear Materials Testing & Analysis

M+P Labs has extensive experience in providing materials testing and analysis support for the nuclear power industry. We offer a complete range of services, including chemical, mechanical, electrical, and thermal testing. We also maintain compliance with 10CFR50 Appendix B.



- **Commercial-grade dedication testing** to verify composition, dimensions, and performance of parts or materials for safety-related application in a nuclear environment. We have extensive experience across a spectrum of both metallic and non-metallic materials, such as o-rings, gaskets, tapes, adhesives, penetrants, fuels and lubricants.

- **Failure analysis** to help determine root cause of a component or materials failure. We have the technology, experience, and depth of materials knowledge to identify complex failure modes in a wide range of parts, products, and materials. Our complete in-house physical and chemical testing capabilities can provide the data needed to quickly unlock clues in the investigation. For metals, services include extensive metallography and metallurgical evaluation capabilities, including fractography performed by scanning electron microscope. We specialize in power generation equipment and materials.

- **Material identification** to help pinpoint the source of unwanted materials or contaminants, or to verify an unknown material or alloy. Analyses may be conducted on both organic or inorganic materials.

- **Acceptance testing** to ensure incoming materials meet property specification requirements. M+P Labs can conduct testing for suppliers directly, either on a regular basis or with surveillance audits.



INDUSTRY EXPERIENCE

Examples of the wide array of nuclear-related analyses we've conducted include:

- Comparison of material footprint of various safety-related materials: oil seals, o-rings, tapes, epoxy resins, magnetic wires, gaskets, springs, washers, etc.
- Elemental analysis of metal components to verify compliance with specifications
- Failure analysis of under-voltage relays
- Evaluation of crevice corrosion in generator stator bar braze joints
- Characterization of insulator materials: composition, dielectric strength, mechanical properties

QUALITY ASSURANCE

M+P Labs has a comprehensive quality assurance program, which is in compliance with 10CFR50 Appendix B, as required by the nuclear utility industry. The QA program is also in compliance with other prestigious industry standards, including ISO 17025 and Nadcap (aerospace and defense industries). These rigorous QA requirements are applied to every job we perform, regardless of whether it requires conformance to any of these accreditations.

OUR COMMITMENT

We are dedicated to a cooperative, analytical approach to materials problem-solving. The accuracy and precision of our results, as well as our meticulous reporting procedures, are second to none. This world-class service allows our clients to make critical decisions based on reliable, accurate information.



All testing is performed in compliance with the quality requirements mandated by:



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TESTING | ANALYSIS | CONSULTING

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