



Post-disaster Assessments

Providing Solutions Through Expert & Objective Analysis

When disaster strikes, whether it is a natural or man-made occurrence, we are faced with many questions that must be addressed. Could the impacts from the disaster have been avoided or lessened? How can we learn from the event to protect people and property in the future? What data should be gathered and analyzed to answer these critical questions, and how can the answers be used to diminish the effects of future incidents?

Decades of Post-disaster Assessment Experience

Over the past three decades, RJ Lee Group has been called into action in regions impacted by disasters to assist early responders in conducting damage and risk assessments relating to infrastructure (bridges, buildings, roadways, concrete structures, etc.) and human health (toxic emissions, chemical impact to materials, air quality testing, water analysis, etc.). Our strengths lie in our broad range of expertise, decades of experience, and analytical capabilities that can be utilized for a wide range of post-disaster disaster assessments, including train derailments, hurricanes, and terrorist attacks. RJLG experts provide sampling and analytical support to evaluate material damage; environmental contaminants in the air, water, and soil; and to assist in remediation planning.

Physical changes in structures impact people and our environment whether they are intentional as in a building renovation or bridge demolition, or accidental as in a structural failure or a natural disaster. RJ Lee Group has extensive experience in designing and implementing dispersion and receptor modeling plans, conducting air monitoring to measure particulate matter, asbestos, dust, vapors, metals and crystalline silica, PCBs, PNAs and dioxins, and conducting environmental site assessments.

Environmental Post-assessment Disaster Services:

- » Physical and environmental damage assessment
 - Flood, fire, earthquake, explosion, or other catastrophic events
- » Emergency response
 - Deployable field team and mobile laboratory
 - Coordination, oversight, and logistics
 - On-site, real-time data collection
- » Environmental & materials sampling and analysis
 - Air, soil, water, and wastes
 - Source contamination apportionment
 - Particulate characterization
 - Construction materials (concrete, composites, aggregates, steel, fibers)

From the initial site assessment to the final air quality assessment, RJ Lee Group can build the team to provide post-disaster stability and remediation. For more information on post-disaster assessments, please contact us at 1.800.860.1775.

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DELIVERING SCIENTIFIC RESOLUTION

Hurricane Katrina

Hurricane Katrina devastated New Orleans and the surrounding area, and the full extent of the damage was assessed over the next few years. Water damage was revealed as the water receded, including mold that quickly began to grow in the buildings and homes affected by the storm. RJLG provided oversight of the remediation of the mold, as well as conducted damage assessments and environmental contamination analysis involving potentially hazardous contaminants. During the housing boom that followed in the mid-2000s, a shortage of domestic building materials led to the import of Chinese-manufactured drywall to meet the new demand. Within months, homeowners who had utilized the Chinese drywall encountered sulfur-like fumes, blackened metal surfaces, and failing air conditioning systems. Property owners were faced with significant repair costs. RJ Lee Group's experts were instrumental in the testing of this drywall, and helped the Consumer Product Safety Commission (CPSC) establish remediation guidelines for US drywall manufacturers.



Super Storm Sandy

Our mobile laboratory provided aid in the assessment and monitoring of organic contaminants in Hurricane Sandy's aftermath. This unique analytical technology supported investigations of volatile toxic compounds, suspect odors, and organic chemical releases into the environment. The mobile laboratory was deployed directly to areas in New Jersey and New York to deliver real-time volatile organic compound (VOC) data where contamination was suspected. Tested areas included confined building spaces and tunnels; damaged transportation systems, chemical storage and use facilities; hospitals, stadiums, and other areas that experience large-scale public traffic and potential exposure from VOCs.

World Trade Center Collapse

Following the catastrophic events of 9/11 and the collapse of the World Trade Center Towers, RJ Lee Group was retained by building owners to assess the environmental impact to buildings damaged by the Event. Thousands of dust samples were collected from various systems throughout the buildings. The samples were analyzed for potential contaminants including fuel oil, diesel fuel, jet fuel, asbestos, heavy metals, PCBs, PNAs and dioxins-furans. The project involved the development of detailed sampling protocols for the systemic collection of samples from various building systems including interior spaces, wall cavities, cell systems, structural steel, fireproofing and concrete. To aid in the systematic collection of data for each sample collected and to reduce the amount of time spent, RJ Lee Group developed software for Personal Data Assistants (PDAs) for use in sample collection. The data was uploaded electronically to RJLG's laboratory tracking systems.

In addition, remediation studies were conducted in the buildings to determine the efficacy of cleaning the contaminants to acceptable levels. We teamed with architects, engineers and toxicologists during this extensive study. Detailed expert reports were prepared and hearing testimony was given. Throughout the course of this investigation, our experts were in dialogue with the EPA and NYC officials and provided them with summaries of our results. All of our reports and raw data were provided to the EPA. Based on RJLG's extensive analyses and post-disaster assessment, a signature ("fingerprint") unique to WTC dust was established which demonstrated the unique characteristics of the finely pulverized dust that resulted from the WTC Events and which was used to indicate areas of impact in the building.

Chemical Spill as a Result Train Derailment

A tank car holding 60 tons of chlorine gas ruptured and the contents were released into the nearby environment when a train derailed. RJ Lee Group dispatched a scientific team to the site of a chemical release immediately following the incident to assess resulting material property damage. Months of on-site services resulted in hundreds of residential and commercial property inspections and assessments. Systematic visual assessments documented with digital photographs and GPS coordinates, together with on-site field testing and laboratory analysis of surface wipes and lift samples, established the nature and extent of material damage. Expert reports and data were produced and testimony was provided.

