Industrial Hygiene Case Study: Lead Abatement at Quarters A, Washington DC – Official Residence of the Vice President of the United States

Objective:

To create, monitor, and achieve lead paint stabilization and disposal, while eliminating the resident's exposures and maintaining the contractor's compliance with OSHA and Environmental Disposal Standards.

Scope of Service:

KES was contracted to provide industrial hygiene and environmental disposal services during the lead abatement project at Quarters A, Washington D.C. The project required the removal of lead-based paint from certain areas of the kitchen and all the portico while the residence was occupied by the Vice President and his family. The primary objective was to ensure the safety of all residents and personnel while minimizing disruption to the household and adhering to all regulatory requirements for lead abatement.

Key Services Provided:

1. **Project Planning and Coordination:**
    - KES worked closely with the Department of the Navy to develop a project plan that met the safety, regulatory, and logistical requirements of performing lead abatement in an occupied residential building.
    - The project plan outlined detailed procedures for isolating work areas, minimizing lead exposure, and ensuring that all abatement activities would be completed with minimal disruption to the household.
2. **Risk Assessment and Hazard Identification:**
    - KES conducted a thorough risk assessment of the kitchen and portico areas to identify the presence of lead-based paint and evaluate the risk of exposure to lead dust.
    - Historical data on the construction materials and paint used in Quarters A was reviewed to determine areas most likely to contain lead-based paint.
    - Environmental monitoring strategies were developed to assess lead dust levels in real-time and ensure that airborne concentrations remained below regulatory limits.

3. **Lead Abatement and Containment:**

    - KES supervised the abatement process, ensuring that the work was conducted according to strict EPA, OSHA, and local regulatory standards for lead removal.
    - Areas of the kitchen and portico that were to undergo lead abatement were carefully contained using physical barriers, plastic sheeting, and negative pressure systems to prevent lead dust from spreading into other areas of the residence.
    - The main abatement work consisted of chemical stripped of the portico, as well as wet scraping in the kitchen, HEPA vacuuming, and the safe removal of lead-based paint from surfaces such as walls, trim, and cabinetry.
4. **Air and Surface Sampling:**

    - KES conducted air and surface sampling before, during, and after the lead abatement activities to monitor the effectiveness of containment and removal techniques.
    - Air monitoring using NIOSH Method 7082 for lead dust was performed to ensure that airborne concentrations remained within safe limits and that workers and residents were not exposed to hazardous levels of lead dust.
    - Surface wipe sampling was also conducted to ensure that lead dust did not settle on surfaces outside the abatement areas.
5. **Occupant Safety and Protection:**

    - KES implemented a range of safety measures to protect the Vice President's family and other occupants of the residence. This included providing clear communication about the scope of work, the timeline, and safety protocols.
    - Specialized protective measures were used to safeguard the family's living areas, such as HEPA filtration units, to ensure that no lead contamination entered occupied spaces.
    - KES worked closely with the contractor to schedule abatement work during times when the residence was less occupied or when residents could be temporarily relocated, minimizing their exposure to any potential hazards.
6. **Compliance with Regulatory Standards:**

    - KES ensured that all aspects of the lead abatement process complied with relevant local and federal regulations and standards.

- KES ensured that the abatement team was trained in lead-safe work practices, and that all necessary documentation, including lead abatement clearance reports, was provided to the Department of the Navy and other stakeholders.

7. **Post-Abatement Clean-Up and Clearance:**

    - After the abatement work was completed, KES conducted a final cleaning and clearance process to ensure that all lead dust and debris had been removed from the affected areas.
    - HEPA vacuuming and wet wiping were used to clean all surfaces, and clearance testing was conducted to ensure that lead levels in the air and on surfaces met safety standards before allowing the family to re-enter the space.

8. **Reporting and Communication:**

    - KES provided detailed reports throughout the project, documenting air and surface sampling results, abatement activities, and compliance with safety protocols.
    - A final report was provided outlining the results of the lead abatement work, including clearance sampling data and recommendations for ongoing lead-safe practices.

Program Results and Impact:

1. **Successful Lead Abatement Without Disruption:**

    - The lead abatement process was completed successfully with minimal disruption to the Vice President and his family. Through careful planning, KES ensured that work was conducted in a manner that prioritized the safety and comfort of the residents while the work was being done.
    - Temporary relocation of the family was arranged during the most invasive parts of the abatement process, ensuring that they were never exposed to any lead hazards.

2. **Compliance with All Safety and Regulatory Standards:**

    - The lead abatement process met all relevant federal and local regulatory requirements, including EPA's RRP Rule and OSHA lead standards, ensuring that the work was conducted safely and in compliance with industry best practices.

3. **Protection of the Residence and Occupants:**

    - All containment and safety measures, such as HEPA filtration, air scrubbers, and specialized cleaning procedures, were successful in preventing lead dust from spreading to unaffected areas of the residence.
    - Post-abatement clearance testing confirmed that all work areas were free from lead contamination and safe for the Vice President and his family to return to.

Conclusion:

KES's work on the lead abatement project at Quarters A demonstrated the company's expertise in managing sensitive and high-profile projects in occupied spaces. By coordinating closely with the Department of the Navy and employing advanced containment, monitoring, and abatement techniques, KES ensured that the Vice President's residence remained safe and secure throughout the lead removal process. The project was completed on time, with no health or safety incidents, and in full compliance with all relevant regulations, ensuring the continued safety of the Vice President and his family.