



# ANALYSIS & Recommendation

## • Testing and Solutions

With a unique perspective gleaned from decades of relevant experience and hundreds of comprehensive tests, Novinda provides a powerful combination of quantitative results and qualitative analysis, leading to accurate testing data and reliable recommendations for implementing genuine solutions.

## • Vast Experience = Quality Solutions

### *Leadership and Results*

Novinda can evaluate both process and air pollution control equipment function to ensure optimal performance for permitting purposes. Understanding the intricacies of each plant's integrated system, Novinda's team of professionals can compare boiler performance to original design parameters, evaluate combustion practices or conduct parametric testing for combustion and/or air pollution control.

## Stack Testing — Compliance and Diagnosis

### • *Onsite and Immediate*

From simple in-stack filtration to complex instrumental analyzer monitoring systems, Novinda can provide the equipment and expertise to offer the complete range of routine and non-routine emissions testing services. Offering immediate results, Novinda's integrated team of experts can provide a thorough diagnosis and recommend appropriate solutions.

### **Key Chemicals:**

*HCl, HF, SO<sub>2</sub>, SO<sub>3</sub>, and Hg*

## • Case Studies:

### **HCl Control Demonstration**

#### *Kentucky*

**Challenge:** Portable hydrated lime injection full-scale demonstration on a 300 MW circulating fluidized bed (CFB) coal-fired electric power plant equipped with a flash dryer absorber (FDA) and fabric filter baghouse (FFBH) for multi-pollutant control of HCl, HF, SO<sub>2</sub>, SO<sub>3</sub>, and metals.

**Approach:** Performed DSI services & testing with hydrated lime. Testing included air pre-heater inlet and FFBH outlet sampling for halogens with next-day analytical results.

#### **Result:**

- Injection reduction of halogen acid gases to levels less than 1 ton/yr.
- Boiler limestone injection reduced with supplemental lime injected to the FDA for control of SO<sub>2</sub>.
- 40% reduction in limestone usage rate with a co-benefit 20% reduction in NO<sub>x</sub> emissions.

### **Multi-Pollutant Control Testing**

#### *Maryland, Pennsylvania*

**Challenge:** Trona and powder activated carbon (PAC) injection, full-scale demonstration test on 320 MW and 100 MW coal-fired electric power plants for removal of SO<sub>2</sub>, SO<sub>3</sub>, HCl, and Hg.

**Approach:** Testing was conducted in three coal campaigns including CAPP coal (bituminous), PRB (sub-bituminous) and Adaro (Indonesian sub-bituminous). Testing included unit inlet and outlet (stack) continuous mercury monitoring system (CMMS) in conjunction with Ontario Hydro Method (OHM) at the inlet and outlet.

**Result:** Impact to PM<sub>2.5</sub>/10/CPM and speciated VOC emissions were carefully evaluated.



**Novinda**  
Advanced Air Quality Technologies