



# INJECTION vs. INCINERATION DISPOSAL

Milestone Industrial™ is your single source for efficient and responsible waste management. Our solutions include deep well injection – a clean and safe approach that is proven and preferred for its environmental benefits. **Here's how our solution stacks up against incineration disposal.**

|                          | Deep Well Injection Disposal  | Incineration Disposal  |
|--------------------------|---|--|
| Overall Assessment       | Class I underground injection has been identified by the EPA as an effective disposal method with a lower potential for environmental release when compared to other disposal options. <sup>1</sup>   | While incineration of wastewater can reduce waste volume and destroy certain contaminants, it is an energy-intensive, costly process that raises concerns about efficiency, air emissions, and overall sustainability as a long-term solution. |
| Environmental Impacts    | Waste is contained deep underground below impermeable rock layers that prevent contamination of drinking water, soil, and surface water, minimizing ecosystem risks.  | Without proper controls, incineration can pollute the air with carbon dioxide, nitrogen oxides, and particulates.  |
| Human Health Impacts     | Studies by the University of Miami and the EPA (2000, 2001) suggest that, due to the secure isolation of wastewater, injection wells have the least potential for impact on human health when compared to ocean and surface discharges. <sup>2</sup>                                | Harmful pollutants such as dioxins, furans, heavy metals, and particulates can be released into the air, which can cause respiratory issues, cancer, reproductive problems, stunted development, and other long-term health conditions.        |
| Containment Reliability  | Injected into a thoroughly assessed, impermeable geological formation far below drinking water aquifers, the waste is permanently isolated, ensuring long-term containment while minimizing future risk and liability.  | Residual ash often contains concentrated heavy metals and other toxins and must be sent to a special waste landfill.   |
| Regulations              | The EPA's Underground Injection Control program is regulated under the Safe Drinking Water Act. Operators must obtain permits, conduct geologic studies, monitor continuously, and comply with strict reporting requirements to prevent contamination of underground water sources. | The EPA regulates incineration facilities, setting strict emission limits for pollutants and stringent requirements for design, operation, monitoring, and permitting to ensure proper waste disposal and minimal environmental impact.        |
| Monitoring and Reporting | Subject to rigorous EPA oversight, deep well injection requires continuous monitoring, mechanical integrity testing, and detailed reporting to ensure permanent containment. The process offers full traceability and long-term compliance assurance.                               | Continuous inspections, cleaning, and monitoring are needed to ensure proper facility function and regulatory compliance.  |

<sup>1</sup> SOURCE: [Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances](#)

<sup>2</sup> SOURCE: [Wastewater Deep Injection Wells for Wastewater Disposal – Industries Tap a Unique Resource](#)