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Title: **Innovative NOX Control Technologies**

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Summary:

De-NOX Technologies maintains several proprietary and Patent protected technologies which provide practical, cost-effective NOX control solutions. Starting in 1985, with the design and installation of the first SNCR system on a large municipal solid waste incinerator, DNT now has a SNCR reference list of over 25 boiler installations, over five different fuel types, both ammonia and urea. This expertise has been utilized to simultaneously improve performance and reduce capital costs for boiler facilities needing add-on SNCR equipment. De-NOX Technologies knows how to, where, and how much reagent to inject into boiler systems to maximize NOX reduction with the lowest possible chemical consumption. The combination of a superior design and low overhead results in project costs which are substantially lower than the competition.

For example, De-NOx Technologies has developed a better urea injector for SNCR applications. They have been proven to have a longer service life on high chloride refuse incinerators, will not clog internally using low quality dilution water, and have superior atomization/performance. As well, DNT's dry urea SNCR technology has been installed on a 40 MW power boiler. This Patent Pending technology eliminates the heat rate penalty associated with water spraying, reduces the annual cost of chemical reagent, and still produces substantial NOX reduction.

DNT also designs and manufactures modular on-site urea solutionizers, which further enhances the economics of larger SNCR operations. These systems are fully shop prefabricated and receive dry urea in 1 ton supersacks or bulk truck. The economic payback is good if the facility consumes more than 200,000 gallons of concentrated urea solution on an annual basis. The system is proven in industrial operation, fully automatic PLC controlled, accurate, and reliable. Cost savings are accrued by eliminating the cost of hauling water to your site, increasing the number of suppliers within economic hauling distance, and eliminating the middleman/distributor/blender.

Increasingly, the process limitations of the two primary urea-to-ammonia processes are becoming known. Those flaws are corrosion, sludge accumulation, reagent precipitation,

and AIG nozzle plugging. De-NOX Technologies has filed US Patent Applications for a Process which should solve these critical Process Flaws. Scheduled publication is late fall '03. The approach takes a different path than the large heated-pressure-vessel technique. The key is the application of high temperatures over a very short period of time. In this way, equipment size/cost is minimized and scaling/precipitates and eliminated. Overall energy consumption is equivalent to the standard pressure vessel technique. DNT has also reserved Patent Rights to retrofit the technology to existing urea to ammonia pressure vessel reactors. This technology has been developed independent of any government assistance.

Lastly, DNT is active in the small scale SCR systems market. This segment has not been well served by the traditional vendors and requires innovation and cost effective approaches. Industries served are stationary IC engines, flares, incinerators, nitric acid manufacturing, and small industrial steam generators. With Strategic Partners, DNT provides provide a seamless, single point of contact, for entire systems – fully preassembled for easy field installation.

DNT provides testing and consulting services to those facilities evaluating technologies and/or wishing to Test/Improve existing operations.