

Primary Hot Spots for Waste Water Treatment

PUMPS - Motors located outside of buildings, sometimes several hundred feet away, often run aerators, bar screens, mixing devices and other equipment. These motors have severe lightning exposure and need to be protected accordingly.

SUPERVISORY CONTROL & DATA ACQUISITION (SCADA) - Modern treatment facilities have some of the most sophisticated and critical computer systems made. These systems are subject to internally generated surges as well as external surge activity, and the equipment is extremely susceptible and delicate in nature. **The results of data loss can be as costly, or more so than even equipment failure.**

MOTOR CONTROL CENTER - MCCs provide power to drives, motors and electrical panels. Loads at the MCCs may be the strongest producers of internally generated **surges in the facility.**

LABORATORIES - All water and waste water treatment plants have sophisticated laboratories that use sensitive equipment to test the quality of the material being processed at various stages of their processing.

SECURITY/VIDEO MONITORING SYSTEMS - These are **extremely critical** and always subject to surge related issues. Larger facilities rely on these systems to monitor many different applications. In addition, large municipal facilities can have multiple layers of security (cameras, electronic barricades, gates, touchpads...) each with the possibility of needing SPDs.

BUILDING WIRING - It is a little known fact that a major amount of damage to building wiring is associated with surge activity. Surges tend to reduce the quality of wiring connections within the building, which eventually leads to electrical failure. This is why a system-wide surge protection system is essential.

RESERVE POWER - Back up power systems, such as generators, require protection at the automatic transfer switches (ATS). The electronic controls in the ATS are vulnerable to surges. If the ATS fails to transfer power, the results can be serious. Also; especially on start-up, generator power may not be an acceptable grade for use on electronic equipment and other sensitive loads.

EXTERNAL LIGHTING - External lighting systems are prone to high energy transients due to environmental exposure.

NOTE: *Due to the sensitive nature of some equipment, most of these applications will require the use of **Sine Wave Tracking** SPDs. However, care should be taken to use non N-G tracking products (Option N) to prevent interruption of commonly used GFI systems, where present.*