Appendix F: ITS Technical Facilities: Preventative Maintenance approach

ITS conducts regular preventative maintenance on the power equipment in the various ITS managed Data Center and Electronic Communication Hub (ECH) facilities. This document outlines the maintenance details, the estimated outage, impact on services in the Data Center, and a tentative schedule for 2009.

Annual preventative maintenance

**Uninterrupted Power Systems (UPS) and UPS battery cabinets**
Annual preventative maintenance is conducted on UPS and UPS battery cabinets at all ITS managed Data Center and ECH facilities. The maintenance work involves taking measurements of the batteries within the UPS units as well as checking the physical connections to ensure proper torque settings and general cleanliness. Additional measurements and checks are performed on the UPS electronics, housings and cable assemblies. This maintenance typically takes 2 hours per UPS and UPS battery cabinet. Services, Servers and other equipment protected by those UPS and Battery systems should not be affected during the preventative maintenance.

**Generator**
Generator compliance testing is done once every year to ensure that in an emergency, the generators will function as designed. Power to the facility being tested is turned off to simulate an outage and the generators are activated to provide alternate backup power. Measurements are taken and power to equipment is verified. This maintenance takes between 2 and 6 hours dependent on the generator size and the amount of equipment supported by the generator. Services, Servers and other equipment protected by those UPS and Battery systems should not be affected during the preventative maintenance.

Semi-annual/quarterly preventative maintenance

**Uninterrupted Power Systems (UPS) and UPS battery cabinets**
Semi-annual and quarterly preventative maintenance is conducted on UPS and UPS battery cabinets at all ITS managed Data Center and ECH facilities. The maintenance work involves taking measurements of the batteries within the UPS units as well as checking the physical connections to ensure proper torque settings and general cleanliness. This maintenance takes 2 hours per UPS and UPS battery cabinet. Services, Servers and other equipment protected by those UPS and Battery systems should not be affected during the preventative maintenance.

Uninterrupted Power Systems (UPS) and UPS battery cabinets
Quarterly preventative maintenance is conducted on UPS wet cell battery strings at all ITS managed Data Center and ECH facilities. The maintenance work involves taking measurements of the batteries within the UPS units as well as checking the physical connections to ensure proper torque settings and general cleanliness.