Appendix I

Underground Utilities Confined Space Entry Policy

The purpose of this policy is to identify and control hazards before initiating entry into a confined space as outlined in 29 CFR 1910.268 and 1910.269. If conditions exist and/or hazards are not controlled in the application of this policy the permit-entry confined space policy must be used to ensure that adequate controls are used.

All employees required to enter below grade unventilated locations, as a portion of their work responsibilities, shall receive formal training on confined space entry before performing such work.

Guarding of Manholes and Street Openings

Upon removal of a manhole lid or hatch one of the following methods will be used to prevent an accidental fall through the confined space opening:

- Use of a portable railing to enclose the opening or;
- Use of cone to demarcate the opening or;
- Any other equally effective means.

Entry opening located where safety hazards are created by traffic patterns (i.e., vehicle or pedestrian) require:

- Placement of flags, cones or other traffic control devices placed conspicuously to alert on coming traffic or;
- Placement of a vehicle as a barrier in the direction of the on coming traffic.

Pre-entry Requirements for Manholes and Un-vented Vaults

- An evaluation shall be conducted to check for the excessive heat, pressure by touching and then carefully removing the manhole lid;
- Testing of the internal atmosphere for oxygen content (Safe Entry Level . 19.5-23.5%) and the presence of combustible gases or vapors (Safe Entry Level - < 10% Lower Explosive Limit LEL) shall be conducted before initiating entry; and
- If unsafe conditions are identified: oxygen level (< 19.5% or > 23.5%) or a combustible atmosphere is present (> 10% LEL) the atmospheric level must be brought back into safe entry levels with the use of portable forced air ventilation (refer to Appendix E).

If the testing identifies levels outside the safe entry ranges forced air ventilation may be used to bring the atmospheric levels back into the safe entry ranges before entry is initiated. Refer to Appendix E when using forced air ventilation

Continuous atmospheric monitoring shall be conducted when conditions require forced air ventilation to be used before entry.

A ladder shall be used to enter and exit all locations greater than 4 foot in depth.
An employee trained in basic first-aid shall be available at the work site during entries if any of the following conditions exist:

- Entry is required into a manhole or vault where utilities exist and consist of energized electrical power;
- Where the opening to the underground location cannot be adequately guarded to prevent an accidental fall through the opening or from foreign objects entering the location; or
- Where adequate controls (e.g., lights, barricades etc.) cannot be placed to provide employees a safe work environment from the hazards generated from traffic.

For the purpose of inspection, housekeeping, taking readings or other similar work, an employee working alone may enter, for brief periods of time, a manhole where energized electrical equipment is in service, if it can be demonstrated that the employee will be protected from electrical hazards.