CITY OF NICEVILLE

CONFINED SPACE SAFETY PROGRAM

PROCEDURE POLICY

The following Confined Space Safety Program is hereby approved by the City Manager of the City of Niceville, Florida to comply with the provisions as set forth in the Florida Statutes, Chapter 440.56, the Florida Workers' Compensation Law, "Safety Rules and Provisions; Penalty" and the minimum requirements as set forth in the Occupational Safety and Health Standard (29CFR 1910.146).

The department supervisor is responsible for the immediate and effective implementation and enforcement of this program in its entirety as adopted.

Each subordinate supervisory employee shall share joint and general responsibility in the implementation and the enforcement of this program in accordance with his/her level of authoritative position.

No management nor supervisory implementation or enforcement responsibilities shall be compromised, delegated or reassigned.

The respective supervisor or foreman shall be directly responsible for the training and for the safety of the entire operation.

Every employee that may be required to enter a confined space shall be properly trained in all of the following subjects:

1. Potential hazards that could be confronted.
2. Safety precautions, emergency procedures and treatment for potential hazard exposure.
3. Proper testing and monitoring of confined space atmospheres.
4. Proper selection, fitting, use and limitations of self contained breathing apparatus.
5. Inspection, fitting and use of safety harnesses and life lines.
6. Cardiopulmonary (CPR) resuscitation and first aid.
7. Setting up and proper use of fresh air blowers and exhaust fans, proper ventilation procedures.
8. Traffic Control and jobsite protection.
9. Electrical, mechanical and isolation lock out procedures.
10. Decontamination of hazardous spaces.
11. Emergency entry and exit procedures including solo escapes.
12. Personnel protective clothing and equipment.

13. The confined space safety program total concept.

14. No smoking or heat producing devices allowed in a confined space or close proximity.

Proper training means that the training shall not be considered complete until by actual demonstration (by the employee), the Supervisor, Foreman or Safety Officer judges the employee has attained an acceptable degree of proficiency for entering and working in confined spaces.

All Water Services locations that are not designed for human occupancy, have limited access and egress, are underground, receive or have any degree of chemical or biological process taking place which releases or increases the atmospheric concentrations of toxic or combustible gases, or so designed that a person could become entrapped or injured shall be designated as a confined space and shall be subject to compliance with Florida Statue Chapter 8AS-15-HA 1969 hazardous atmospheres in confined spaces.

The concentration of toxic or combustible gases may not be high enough to cause physical harm, however the biological or chemical process taking place may use up the oxygen in the atmosphere and create an oxygen deficient atmosphere which will cause asphyxiation and death.

The following facilities are designated class "C" hazardous spaces:

1. All wastewater wet wells.

2. All space adjacent to any of the above that are not separated by a wall and provided with adequate mechanical ventilation (air flow exchange of 500 cu. ft. per min.)

3. All sewer lines.

4. All manholes.

5. All water well pump houses.

6. All underground metal and concrete can stations.

All class "C" hazardous spaces shall be identified by warning signs with the exception of manholes and sewers.

No entry shall be made into any class "C" hazardous space until the atmosphere has been tested with a gas detector that has been calibrated on a scheduled basis as recommended by the manufacturer.

A class "C" hazardous space is a potential hazard and does not require any modification of the standard safe working procedures and direct communication with workers from outside the confined space.

When the pre-entry atmosphere test for toxins, combustibles of oxygen deficiency exposes any concentrations or alarms, the specific location shall be made and all procedures required of a class "A" or "B" hazard shall be complied with prior to, during and after confined entry is made.

Class "B" hazard is when the gas detector gives the alarm of either oxygen deficiency (16.19% to 19.4%), or excess concentration of 25%, or toxic alarm concentration 10-19%. The space is dangerous, but not

immediately life threatening. The facility shall be ventilated and the atmosphere cleaned to acceptable limits before any person is allowed to enter or to work inside the confined space.

In the event a rescue is required, one individual fully equipped with safety harness, life line, self contained breathing apparatus including positive pressure demand type face piece, visual or audio communications with outside workers, shall make the rescue. There shall be no routine work conducted in any class "A" or "B" hazardous atmospheres.

An oxygen deficiency below 16% or an excess of 25% any concentrations above 20% toxic or greater of the lower explosive limit shall upgrade any confined space to a class "A" hazard and the hazard is not a permit entry space. All permit entry requirements, rules and regulations must be complied with prior to during and after entry into a class "A" hazard space.

PERMIT ENTRY SYSTEM REQUIREMENTS:

When it is necessary for compliance with the permit entry program, a permit shall be prepared by the respective department. The permit shall have provisions for recording the following specifics and shall be tailored to meet the needs of the specific department.

1. Address and specific identification of the confined space.
2. Specific description of the work that is to be done.
3. The person requesting the permit, and the person issuing the permit.
4. Specific description of the hazards that may be encountered and specific actions to be taken to protect against the hazards.
5. Check off list for employee training, personnel protective equipment, tools, rescue equipment and ventilation system.
6. Specific crew assignments.
7. Lights and communication equipment.
8. Traffic control and jobsite safety.
9. Emergency procedures.
10. Atmosphere testing and continuous monitoring.
11. Lock outs, isolation or additional protective procedures.
12. Step by step procedure approval.
13. Atmospheric concentration readings throughout the operation.

When the permit has been issued the Supervisor/Foreman shall follow the Confined Space Safety Program explicitly and will provide the supervisory leadership to complete the permit entry project as safely and as expediently as practical.

All permit entry files, training records and permits must be kept on file a minimum of 5 years from the date of the last training, inspection, test maintenance or entry.

CONFINED SPACE VENTILATION PROCEDURES:

1. Underground Sewer Lines and Manholes:

All underground sewer lines and manholes will be tested for hydrogen sulfide, methane gas contamination and oxygen deficiency before permitting any person to enter. The gas detection will continue to be monitored as long as workers are in the lines or manhole.

Spaces that have been detected as contaminated, or without sufficient oxygen, shall be ventilated and prepared before any employee is permitted to enter. The following procedures shall be used in providing proper ventilation:

A. The term atmospheric contamination exceeds acceptable limits mean the gas detector unit gives an alarm, the atmosphere is beyond acceptable limits. With indicator type detectors, the permissible limits shall be between 19.5% and 25% Oxygen concentration. Hydrogen sulfide and Methane concentration shall not exceed 20 parts per million.

B. All manhole covers both upstream and downstream shall be removed. Structures over any manhole shall be opened for ventilation. Appropriate traffic cones, barricades or markers shall be put in place prior to starting the work to protect both the workers and the general public. Should contamination of the atmosphere remain above accepted limits, the following shall be accomplished.

C. An air supply free of carbon monoxide, oil vapor and oil mist shall be used to provide fresh air circulation into the sewer line or manhole. The standard trailer mounted or stationary air compressors are not considered as approved by OSHA and they will not be used. 500 cu. ft. per minute required.

D. A fresh air blower shall be placed in position to direct the fresh air into the manhole or sewer line. Do not permit internal combustion engine exhaust near the blower, or upwind of the blower.

E. An exhaust blower shall be positioned to remove the atmospheric contamination from the sewer line or manhole. The discharge of the inlet fresh air blower and the intake of the exhaust blower shall be positioned so as to maintain a circular type air exchange within the sewer line or the manhole. Should contamination of the sewer line or the manhole remain above accepted limits, the following procedures shall be used.

F. Bypass pumps shall be used to bypass the flow of sewage around the manhole or the sewer line. Pipe plugs shall be used to completely isolate the upstream and the downstream lines from the work area while artificial air ventilation continues to remove the contamination.

G. No employee shall be permitted to enter, nor work in any sewer line or manhole in which the atmospheric contamination exceeds acceptable limits. Entry into a contaminated sewer line or manhole shall be only for the purpose of emergency rescue of another

employee, and shall be accomplished with the use of a complete self contained breathing apparatus, or line fed fresh air pack, body harness and lifeline being used by the rescuer.

H. Larger line shall be evacuated by the manual operation of the adjacent pumping stations. Coordination between the pumping station operator and the sewer crew shall be by direct radio contact.

Prior to the work start, the pumping station operator shall determine the safe length of time the particular station can remain off and shall inform the sewer crew foreman of this time limit.

The sewer crew foreman shall plan his work assignment in accordance with the limited time available during the pumping station shut down.

When the sewer crew is ready to actually begin work, the station operator shall be notified. The station operator shall pump the wet well down to its lowest level and shut down all sewage pumps and notify the sewer crew foreman that the pumps are off.

The sewer crew shall begin work as soon as the flow subsides.

The station operator shall radio the sewer crew foreman when one half (½) of the available time has expired and thereafter in ten minute increment intervals. Five minutes prior to required start up time, the station operator shall radio the sewer crew to get all personnel out of the sewer line or manhole.

The sewer crew foreman shall insure that all personnel are out of the sewer line or the manhole and shall notify the pumping station operator.

The pumping station operator shall not start up the sewage pumps until notified that the members of the sewer crew have exited the sewer line or the manhole.

NOTICE:

IN ACCORDANCE WITH FLORIDA STATUTES:

ONLY EMERGENCY WORK SHALL BE PERMITTED WHERE CONDITIONS REQUIRE THE USE OF APPROVED SELF-CONTAINED BREATHING APPARATUS OR HOSE MASK WITH APPROVED OIL FREE, CARBON MONOXIDE FREE AIR SUPPLY. HYDROGEN SULFIDE REMOVAL FROM WASTEWATER WETWELLS AND PUMPING STATIONS.

MANHOLE AND LIFT STATION ENTRY PROCEDURES:

Pumping stations and wetwells that have been detected as having hazardous atmospheres shall be ventilated as follows:

1. Open all outside manhole covers, open all roll up doors and all windows.

2. Allow for natural ventilation for a minimum of at lest one (1) hour.

3. Re-test the atmosphere. If still contaminated:

4. Wearing any approved self contained breathing apparatus, or line fed oil and carbon monoxide free air supply and a full face shield breathing face piece with positive pressure demand type supply, using a steam jenny wash down the entire facility. Remove all garbage cans, containers and other non-structural items and materials from the facility.

5. Following the complete washing down of the facility use a clean air type forced air blower to force in outside air into the facility, and in conjunction with the forced air into the facility, use an exhaust blower to discharge the inside air from the facility.

6. Re-test the atmosphere and continue the blower and the exhaust procedures until the atmosphere reaches safe and acceptable limits.

7. Continue the atmosphere testing as long as employees are required to work inside of the facility.

8. Under no circumstances will an employee be permitted to remain inside of any confined space facility in which the atmosphere does not test safe within the guidelines of safe atmosphere.

9. Entry into a contaminated atmosphere shall be permitted only for the purpose of rescuing an employee, and full protection including safety harness and life line shall be worn by the rescuer.