



Standard Operating Instruction: EMS-0100.015 Name: Wastewater Treatment Division Maintenance	Corresponding Requirements: ISO Standard: 4.4.6 EMS Manual: 4.4.6 Revision #: 0
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**Wastewater Treatment Division Maintenance
Standard Operating Procedure**

1.0 Purpose

- 1.1 The City of Gastonia Wastewater Treatment Division (WWTD) must maintain its equipment in proper working order to ensure adequate treatment of the wastewater prior to discharging it into the receiving stream. Both corrective and preventative maintenance are required. The WWTD, although it is responsible for scheduling of maintenance, does not have maintenance staff within the Division.
- 1.2 Through an Inter Department Cooperation Agreement and the City's Hansen Work Order System, the Field Operations/Facility Maintenance Division performs all required corrective and preventative maintenance, with the exception of certain specialized maintenance activities that are performed by contracted vendors.
- 1.3 Contracted vendors perform corrective and preventative maintenance on items in the Operations area of the Division such as: generators, screw pumps, instrumentation, blowers, large pumps, chlorination/dechlorination equipment, and scales. Contracted Vendors perform maintenance in the Laboratories on equipment such as: ICP-mass spectrophotometry, microwave digester, spectrophotometer, fume hoods, environmental rooms, FIAS, and balances. Contracted vendor activities are addressed through purchase orders, maintenance contracts, and warranties, where applicable.

2.0 Associated Equipment

- 2.1 None

3.0 Associated Reference Material

- 3.1 *Inter Departmental Cooperation Agreement – WWTD Files*
- 3.2 *Hansen Work Order System*
- 3.3 *Reference Material Document Control Matrixes (WLC-0101.000, WLC-0101.100, WCR-0101.000, WCR-0101.100, WPR-0101.000, WRF-0101.000)*
- 3.4 *Maintenance Meeting Agenda (EMS-0101.015A)*
- 3.5 *Maintenance Meeting Minutes (EMS-0101.015B)*
- 3.6 *Maintenance Contracts and Warranties – identified on the Legal and Other Requirements (EMS-0101.001)*
- 3.7 *Purchase Orders – Division Files*

4.0 Procedure

- 4.1 The need for maintenance, both preventative and corrective, is identified by WWTD staff who inform the area supervisors of what maintenance is required.
 - 4.1.1 If maintenance activity is non-routine and Facility Maintenance has not previously performed the work, check with the Superintendent of the WWTD to determine if the maintenance activity will be performed by Facility Maintenance or a Contracted Vendor.
- 4.2 **Activities performed by Facility Maintenance**
 - 4.2.1 If maintenance activity is to be performed by Facility Maintenance, designated WWTD staff will generate work orders using the Hansen Work Order System.
 - 4.2.1.1 Under certain circumstances (i.e. emergency situations) work may begin prior to completion of a work order. However, a work order must be done immediately thereafter for tracking purposes.
 - 4.2.2 Once the work order is generated it is then tracked to completion per the attached diagram.
 - 4.2.3 Work Orders are completed and entered into the computer system for record keeping and tracking purposes.
- 4.3 **Activities performed by Contracted Vendor**
 - 4.3.1 If maintenance activity is to be conducted by a Contracted Vendor, WWTD Staff must determine if there is a current contract with a Vendor to supply maintenance for this piece of equipment using the Legal & Other Requirement List (EMS-0101.001).
 - 4.3.2 If a contract is in effect with a vendor for this piece of equipment contact the vendor and make necessary arrangements for the maintenance to be performed.
 - 4.3.2.1 Dependent upon the contract and/or warranty arrangements may include the writing of a purchase requisition and scheduling.
 - 4.3.3 Records of preventative maintenance activities shall be documented and maintained via reports and/or invoices from Contracted Vendor.
 - 4.3.4 It is the responsibility of the respective ORC and/or area supervisor to ensure that Contracted Preventative Maintenance activities are performed via the contract identified in the Legal and Other Requirements (EMS-0101.001) and that corrective maintenance is requested and performed as needed.
- 4.4 All maintenance personnel, whether City employees or Contracted Vendor, shall follow all applicable EMS policies and procedures while performing work on WWTD equipment.
 - 4.4.1 It is the responsibility of the ORC and/or area supervisor to ensure that Contractors are informed of the Divisions EMS policies and procedures.

4.4.1.1 All Contracted Vendors and Facility Maintenance have been informed of the Divisions Environmental policy via mail and/or training.

4.5 Maintenance Meetings

4.5.1 Maintenance meetings are held at a minimum of once per month. Maintenance activities conducted by Facility Maintenance as well as contracted maintenance must be addressed.

4.5.2 Agendas (EMS-0101.015A) are issued to requested attendees via e-mail.

4.5.3 Meeting Minutes (EMS-0101.015B) are kept and issued to all attendees along with all Management personnel within the affected Divisions.

5.0 Environmental Impacts

5.1 The Environmental Aspects of each process and effluent parameters may be affected by this procedure for each WWTD location.

5.2 This procedure will help to ensure that WWTD equipment is maintained appropriately to prolong the life of the equipment and to enable optimum performance of processes to reduce the risk of overflows and minimize the impact of the facilities on the soil quality, groundwater quality, surface water quality, and the use of energy resources.

5.3 This procedure will also help to ensure compliance with relevant laws and regulations.

5.4 Not following this procedure may allow processes to operate inefficiently, which may result in non-compliance events and an increased use of energy resources.

5.5 Not following this procedure may result in equipment such as pumps and blowers breaking down, which may result in overflows or decreased removal of pollutants. Both of which may adversely impact the soil, groundwater, and surface water quality.

6.0 Deviations from this procedure must be documented by completing a Corrective/Preventative Action Report (EMS-0101.004).

ROUTING OF MAINTENANCE DETERMINED TO BE PERFORMED BY FACILITY MAINTENANCE

