***Colchester ~ East Hampton***

 Water Pollution Control Facilities

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 **Administration Operations**

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 Joint Facilities Pump Station Checks

Standard Operating Procedure

Odor Control Station

* Intersection of Flat Brook Road and the Airline Trail, East Hampton CT

Effective date: xxxxxxxxxx

**RATIONALE / PURPOSE**

* Odor Control stations should be inspected at least weekly. (Based on system design and capacity, more frequent inspections may be required).
* Records of these inspections must be maintained through the use of written notes, logs, notebooks, and /or computer format.
* These are to be referenced by management, operations, and maintenance crews, to ensure established procedures are being followed to ensure the maximum lifespan of all facilities and equipment.
* Documentation may also be required by outside regulatory agencies and insurance companies in the event of a spill, equipment failure, or property loss.

**INSPECTIONS**

* WEEKLY
* Trash pickup.
* Ensure drainage ditch is flowing freely.
* Snow cleanup.
* Inspect vault hatches, locks, Mission system alarm antenna, Eversource meter, and vents for damage or vandalism.
* Inspect control cabinet, Mission cabinet, and compressor vault padlocks to ensure operation.
* Inspect the drainage track around the hatch frame.
* Insect site lighting.
* Inspect vault lighting.
* Check oil in compressor.
* Check for water and air leaks.
* Empty dehumidifier.
* Check operation of sump pumps.
* Check vault flooding float.
* QUARTERLY – Jan, Apr, Jul, Oct
* Change Oil.
* Check pulley belts for wear and tension.
* Exercise shutoff valves.
* Clean inside the control cabinet.
* Clean inside the vaults.

**METHODS / PROCEDURES: WEEKLY CHECKLIST**

* For Weekly inspections start buy picking up any trash on the property.
* Then clear debris and sediment buildup from the drainage ditch and place it outside the flow path.
* During the winter shovel snow and place ice melt on walking surfaces and in front of the control cabinet.
* Inspect the Mission antenna and ensure it is in place and not damaged.
* Inspect the Eversource meter for damage.
* Inspect the vents for damage.
* Inspect the control cabinet and mission cabinet making sure the locks work.
* Unlock the control panel doors.
* Ensure that the cabinet lighting is working by turning the spring timer switch clockwise and note any alarms present on the panel.
* Ensure the site lighting is working by turning the spring timer switch clockwise.
* Unlock both vault hatch doors.
* Make sure the vault hatch doors latch and lock and are secure.
* Verify the vault lighting is working by turning the spring timer clockwise.
* Start the portable generator, plug in and turn on portable blower, insert the blower hose into the vault and evacuate the old air for 3-5 minutes.
* Start Confined Space Protocol (Appendix A).
* Inspect the drainage track around the hatch frame and clear any debris.
* Inspect vault walls and ladder for structural damage this includes heavy rust or degrading components.
* Check vault penetrations for leaks.
* Inspect visually and audibly the compressor lines, pipes and valves to ensure no leaks are present.
* Check oil level in compressor and add if low.
* Remove the bottom tank of the dehumidifier by firmly pulling upward and outward, drain the water into the sump pump.
* Ensure that the sump pump is working by lifting up their attached float and pumping down the humidifier water.
* Inspect the vault heater attached to the ceiling and make sure it is on, working and set to 55 degrees (winter only).
* Lift the vault flooding alarm and verify that it is functioning properly.
* Finish Confined Space Protocol (Appendix A).
* Verify that both vault lids are closed and locked and finish up confined space permit.
* Return to the control cabinet and make sure compressor controls remain in “Auto” Position.
* Note anything unusual and record it on the Odor Control Station checklist, write it in log book, and notify the Superintendent and Colchester Utilities Administrator by text or email.
* Before leaving the pump station ensure that all lights are turned off, and the doors and hatches are locked.
* Report to Superintendent as to the general outside condition of the odor control station including control cabinet, shutoff switch, Mission cabinet, latches and locks.
* Report any potential safety conditions observed to the Superintendent and Colchester Utilities Administrator.

**METHODS / PROCEDURES: QUARTERLY INSPECTION**

* For quarterly inspections unlock the control cabinet and open the doors.
* Clean out dust, dirt, wiring pieces etc. from inside the control cabinet.
* Open the vault hatches and secure the locking arms.
* Verify the vault lighting is working by turning the spring timer clockwise.
* Start the portable generator, plug in and turn on portable blower, insert the blower hose into the vault and evacuate the old air for 3-5 minutes.
* Start Confined Space Protocol (Appendix A).
* Descend carefully down to the vault ladder.
* When you are safely inside the vault position yourself near the shutoff ball valve on the outlet side of the air compressor.
* Have the attendant shut off and lock and tag out the air compressor breaker.
* Close the shutoff valve closest to the compressor discharge as soon as the compressor stops.
* Close the other three ball valves on the discharge line.
* Visually and audibly check for any water or air leaks coming back from the force main.
* Once you have confirmed the compressor has been locked and tagged out on the left side of the compressor remove the belt shroud.
* Check pulley belts for uneven wear, cracking and tension. The belts should have approximately ½” of movement when normal downward thumb pressure is placed on them.
* To change the oil, place a bucket under the drain plug and remove both the fill and drain plugs. Once the oil has all drained into the bucket reinstall the drain plug. Install the funnel into the fill plug and pour the compressor oil into the compressor until it reaches the level of the fill plug. Reinstall the fill plug.
* Reinstall the compressor shroud and position yourself near the shutoff valve.
* Open the three ball valves furthest from the compressor discharge.
* Have the attendant remove the lock and tag from the compressor breaker and have him re-energize the equipment when you are ready to open the valve closest to the compressor discharge.
* The valve must be opened very shortly after the compressor kicks on.
* Use a broom and dustpan to dust ceiling, walls, machinery and sweep floors.
* Clean up any oils and grease deposited on equipment.
* Ascend the ladder back to the surface when finished with the inspections.
* Finish Confined Space Protocol (Appendix A).
* Verify that both vault lids are closed and locked and finish up confined space permit.
* Note anything unusual and record it on the Odor Control Station checklist, write it in log book, and notify the Superintendent and Colchester Utilities Administrator by text or email.
* Before leaving the pump station ensure that all lights are turned off, and the doors and hatches are locked.
* Report to Superintendent as to the general outside condition of the odor control station including control cabinet, shutoff switch, Mission cabinet, latches and locks.
* Report any potential safety conditions observed to the Superintendent and Colchester Utilities Administrator.

Appendix A

**Start**

* Turn on the Drager X-am 2500 gas meter (Figure: 1) by holding down the green ok on button for three seconds.
* Dräger’s X-am® 2500 accurately detects Ch4, O2, H2S and CO.
* Tie Drager X-am 2500 gas meter to a 50 feet long rope and lower down the stairwell tube to make sure the air at all levels is safe to enter.
* OSHA considers a space to have a **hazardous atmosphere** if it has any of the following conditions:
	+ >10% of Ch4 of flammable gas or vapor.
	+ Hydrogen sulfide level must be maintained below 10 ppm H2S.
	+ Oxygen, levels must be above 19.5% and not exceed 23.5% oxygen.
	+ Carbon monoxide, levels must remain below 35ppm.
* If anyone of these conditions is present down inside of the chamber there will be high pitched audio alarm, visually red flashing light and the Drager X-am 2500 gas meter will be vibrating.
* If an alarm should sound and acceptable levels are exceeded, secure the area and notify supervisor immediately.
* The gas monitoring device shall remain with the entrant while in the confined space during the entire maintenance process when entry is required.

Fill out confined space alternate entry checklist before descending with the Drager X-am 2500 gas meter attached to your belt.

Perform prescribed work.

**Finish**

* Ascend to the surface, turn off the blower, close the hatch and shut off lights. Turnoff the Drager X-am 2500 gas meter by holding down the blue + button along with the green ok on button for three seconds.

Figure: 1

