**Pumper/Service Provider/Septic Technician/Service Technician/Septic Tank Service Provider/Septic Tank Service Technician – Need to Know**

1. **The professional will understand the various techniques and responsibilities for performing tank maintenance.**
   1. Review Job Order
      1. Correct address
      2. Photo of actual address provides proof of location
   2. Parking Safely
      1. Cones
      2. Flashers
   3. Look Professional
      1. Appropriate clothing
         1. Uniforms preferred
         2. Appropriate headwear, footwear
      2. Clean clothing
      3. Personal grooming
      4. Clean vehicle
      5. No spitting of any kind
      6. Show some kind of identification
         1. Business card, e.g.
   4. Overview of What Activities Will be Taking Place and Why
      * 1. Customer invited to observe so knowledgeable of what is happening
           1. State safety precautions while observing
   5. Document Surrounding Area
      1. Photos help document how the area looked like before the service activity begins
   6. Underground Tank Location Techniques
      1. Electronic devices
      2. Plumber’s snake
      3. Witching
      4. Records
      5. Electronics and camera
   7. Once Tank is Located
      1. Driver should be aware of driving surface
      2. Check clearances, obstacles
      3. Be cautious of driving on grass if dragging a hose will cause less damage
   8. Removing the Maintenance Hole Cover
      1. Locating and removing all access lids/covers
      2. Buried lid – Must pump through manhole and not observation hole
      3. Landscape protection
         1. Tarps for soil removal to uncover access
         2. Sod removal
      4. Safety concerns - Blue Stake
         1. Tools needed
         2. Slip and fall
      5. Above-ground lid
      6. Concrete lid
         1. With loops
         2. Without loops
      7. Plastic lid
         1. Special wrench
      8. Tools needed
         1. Bar/hooks
         2. Pull/strap/chain
         3. Tool box with various screwdrivers
         4. Shovels
   9. Replacing and/or Adding a Manhole Lid
      1. Legal requirements
         1. New systems
         2. Existing systems
            1. Requirements apply to non-complying tank

Inform homeowner about safety concerns

Replace the unsafe lid

* + - * 1. Secure unsecured lids
  1. Manhole and Lid Specifications
     1. Adding risers
        1. Determine if permit needed
        2. Determine if service technician needs a license to add riser
        3. Pumper’s authority to add risers
           1. AZ current = recommendation only
           2. future = requirement?
        4. Plastic risers
           1. Advantages
           2. Disadvantages
           3. Riser requirements – strength, height, diameter
           4. Riser-to-tank seal – check for watertight seal
           5. Lid-to-riser seal – check for watertight seal
        5. Concrete risers
           1. Advantages
           2. Disadvantages
           3. Riser requirements – strength, height, diameter
           4. Riser-to-tank seal – check for watertight seal
           5. Lid-to-tank seal – check for watertight seal
  2. Observation Port(s) on the Tank (for OBSERVATION purposes ONLY)
     1. Locating
     2. Check for damage
     3. Cap/cleanout
     4. For observation purposes only, not for pumping
  3. Checking Tank Operation
     1. Identify all compartments
        1. How many
        2. Condition
     2. Checking liquid levels
        1. Low level and high levels (surging)
           1. Identification

observation of liquid level at air-water interface of inlet and outlet

liquid level should be at the invert of the outlet and below the invert of the inlet

indications of high-water level

indications of low-water level

* + - * 1. Significance

low level indicates

roots

cracks

leakage

high levels indicate

high peak instantaneous flow

leaking fixture

hydraulic overload (undersized system)

blocked outlet baffle

baffle no longer in place

scum levels too thick

blocked supply pipe (solids, grease, wipes)

improper installation or settled in outlet pipes

supply pipe sloped in wrong direction

tank installed backwards

tank not level (outlet higher than inlet)

pump not operating

failing drainfield

check liquid levels in inspection pipes

* + - * 1. Reporting low-level or high-level observations

if possible, provide cause

if possible, provide recommendations to remedy

* + 1. Checking stratification
       1. Identification methods
          1. Sludge judge
          2. Stick w/towel and stick with foot
          3. visual evidence of scum layer
          4. Identification of toxic substances (odor, color, told of discharge, factory process water connected to plumbing etc.)
       2. Significance of no stratification
          1. Toxic substances
          2. Recently pumped
          3. Medicine
          4. Leaks
          5. Peak flow flushing
          6. No baffles
          7. Hot water discharge
          8. Water softeners
          9. Fabric softeners
          10. Enzymes
          11. Bath salts
          12. Paint
       3. Toxic/hazardous waste response
          1. Signs

odor

color

* + - * 1. Procedures when encountering toxic/hazardous waste

[need to flesh this out]

* + 1. Checking baffles
       1. Identifying and assessing/evaluating baffles
          1. Inlet
          2. Outlet
          3. Interior
       2. Construction types
          1. Concrete
          2. Plastic
          3. Wood
          4. Clay
          5. Orangeburg
          6. Cast iron
          7. Other
       3. Observation methods
          1. Mirror
          2. Camera & other technology
          3. Manhole cover removal
          4. Observation pipe
       4. Significance of no baffles
          1. Regulatory
          2. Operational
       5. Repair baffles
          1. Determine if permit needed
          2. Determine if service technician needs a license to repair baffle
          3. Authorized to repair baffle

current: recommendation

future: requirement to repair?

* + - * 1. Methods of repairing baffles
  1. Safety
     1. Electrical
        1. Hazards
        2. Precautions
     2. Pathogens
        1. Hazards
        2. Precautions
     3. Gases
        1. Poisonous
           1. Hazards
           2. Precautions
        2. Explosive
           1. Hazards
           2. Precautions
        3. Confined space entry
     4. Needles
        1. Hazards
        2. Precautions
     5. Chemicals
        1. Hazards
        2. Precautions
  2. Removal of Material
     1. Safety
        1. Keep persons/animals away from immediate area
     2. Equipment
        1. Truck
           1. Suction/lift requirements

backwash capabilities

lift/distance capabilities

know your vehicle’s operations (liquid capacity, e.g.)

* + - * 1. Hose location

hose whipping may damage landscaping and nearby fixtures

* + - * 1. Know your Department of Transportation regulations

know the requirements for road travel

which roads are affected (state, county, township, city streets)

what are the typical limits

dates typically imposed

weight restrictions (how to calculate with the truck)

* + - * 1. Know the requirements for drivers
        2. Avoid sewage spills by never allowing hose to come out of tank until valve on truck is closed
    1. Back flush/complete removal
       1. Significance
       2. Methods
    2. Post cleaning
       1. Do not disinfect septic tank
       2. Do not add starters
       3. Follow manufacturer’s recommendations
    3. Dewatering and return filtered liquid to tank (requires special equipment)
    4. Additives
    5. Spills
       1. Know your reporting requirements
  1. Dosing Chamber
     1. Tools required
     2. Manufacturer’s recommendation
  2. Other Pumping Situations
     1. Grease traps
     2. Pumping requirements
  3. Know Your Local Disposal Requirements