



TECHNOLOGIES, INC.

— THE ART & SCIENCE OF WASTEWATER TREATMENT —

Equipment Application Questionnaire

Please fill out as completely as possible

Following is our general application questionnaire. The questions below may or may not apply to your specific application. Please supply information as completely and accurately as possible. If available, please include any additional information not covered in our questionnaire. Do not worry if you do not know the answers to any of the following questions. This is intended as a general fact finding statement and will help us in determining the size and type of equipment you may need for your application. Please feel free to contact one of our applications engineers if you have any specific questions or need guidance in regard to your application.

1. CLIENT INFORMATION:

- 1.1.1. Date:
- 1.1.2. Company Name:
- 1.1.3. Industry
- 1.1.4. Street Address 1:
- 1.1.5. Street Address 2
- 1.1.6. City:
- 1.1.7. State:
- 1.1.8. Zip:
- 1.1.9. E-Mail Address:
- 1.1.10. Phone:
- 1.1.11. Fax:
- 1.1.12. Contact Name:
- 1.1.13. Title:
- 1.1.14. How did you hear about Hydro-Flo Technologies?

2. APPLICATION INFO:

- 2.1.1. Briefly describe your application.
- 2.1.2. Is this a potable water application?
- 2.1.3. Is this a process water application?
- 2.1.4. Is this a wastewater treatment application?
- 2.1.5. What contaminants are targeted for removal (ie; metals, oils, solids, etc.)?
- 2.1.6. What are your treatment goals (ie: pH neutralization / adjustment, removal of suspended solids, removal of oil & grease, effluent quality, ppm allowed, etc...)?
- 2.1.7. If this is a wastewater treatment application, Is a discharge permit required (Yes or No)?
- 2.1.8. If so, please attach a copy of your discharge permit if available.
- 2.1.9. Where will the discharge go? (ie; sanitary sewer, river or stream, reuse/recycle)

3. CAPACITIES:

- 3.1.1. NOTE: The flow profile is very important for the proper evaluation of your application.
- 3.1.2. What are the hours per day that the wastewater is generated?

3.2. Flow Profile:

- 3.2.1. Daily Flow (total volume):
- 3.2.2. Min
- 3.2.3. Max
- 3.2.4. Average

3.3. Hourly Flow (total volume):

- 3.3.1. Min
- 3.3.2. Max
- 3.3.3. Average

3.4. Typical Flow Rates (GPM).

- 3.4.1. Min
- 3.4.2. Max
- 3.4.3. Average

3.5. What temperature is the wastewater (F)?

- 3.5.1. Norm:
- 3.5.2. Min:
- 3.5.3. Max:

4. TREATMENT DATA (PROPOSED OR EXISTING):

- 4.1.1. Is this equipment for a new installation, replacement of existing equipment, updating an existing facility, etc...?
- 4.1.2. Is any treatment equipment is currently in place? If so, please describe and provide a diagram if possible.
- 4.1.3. Are you currently using any chemical flocculants/coagulants or other wastewater conditioning chemicals, if so please list them along with their purpose and approximate dosage rates:

5. LIQUID CARRIER (POTABLE WATER, PROCESS WATER, WASTEWATER, ETC...) CHARACTERISTICS:

- 5.1.1. Is there any analytical data available for the water (please attach)?
- 5.1.2. If the major fluid (liquid carrier) is other than water, please describe.
- 5.1.3. What, if any, chemicals are known to be present in the wastewater (ie; solvents, chlorine, oils, hydrocarbons, detergents, etc.)?
- 5.1.4. Does the water have any volatile (VOC) content (if so please describe):
- 5.1.5. What is the pH of the wastewater?
- 5.1.6. Lowest influent pH
- 5.1.7. Highest influent pH
- 5.1.8. What is the source of acidity
- 5.1.9. What is the source of Alkalinity
- 5.1.10. Concentrated Acids
- 5.1.11. Concentrated Bases

6. TOTAL DISSOLVED SOLIDS (TDS):

- 6.1.1. What are the average TDS present (in ppm):
- 6.1.2. TDS:

7. SUSPENDED SOLIDS:

- 7.1.1. Are there suspended solids present in your water? (If so state types and approximate quantities of suspended solids to be removed, attach an MSDS if available)
- 7.1.2. What is the current solids loading rate (lbs/hour)?
- 7.1.3. What is the specific gravity of the solids?
- 7.1.4. Are the solids reusable in your process?

8. BIOLOGICAL OXYGEN DEMAND (BOD) & CHEMICAL OXYGEN DEMAND (COD):

- 8.1.1. What are the average BOD/COD present (in ppm):
- 8.1.2. BOD:
- 8.1.3. COD:

9. OIL & GREASE:

- 9.1.1. Is there oil present in the waste stream (If so state types and approximate quantities of oil to be separated, attach an MSDS for each oil if available)?
- 9.1.2. Specific Gravity Of Water Carrier:
- 9.1.3. What is the specific gravity of oils?
- 9.1.4. Concentration Of Oil (In mg/L OF TOTAL FLOW):
- 9.1.5. Viscosity Of Oil (in poise @ xx degrees F):
- 9.1.6. Quantity Of Oil (% concentration by weight):
- 9.1.7. Is there any other floating material present (please explain)?

9.2. For the purpose of oil/water separation, the American Petroleum Institute has divided oil into five (5) classes:

- 9.2.1. FREE OIL: Oil droplets 150 microns in diameter and larger
- 9.2.2. DISPERSED OIL: Oil droplets from 20 to 150 microns in diameter
- 9.2.3. MECHANICALLY EMULSIFIED OIL: Oil droplets less than 20 microns in diameter
- 9.2.4. CHEMICALLY EMULSIFIED OIL: Oil droplets less than 20 microns in diameter with a chemical bond to other molecules
- 9.2.5. STABLE EMULSION/DISSOLVED OIL: Oil in solution with its carrier (i.e. machine cooling solutions)
- 9.2.6. State Class Of Oil To Be Separated: 1____, 2____, 3____, 4____, 5____

10. MATERIALS OF CONSTRUCTION:

- 10.1.1. Does the wastewater have an aggressive nature tending to attack certain materials (please explain)?
- 10.1.2. Is the wastewater compatible with the following materials, (indicate Yes or No):
 - 10.1.2.1. Carbon Steel
 - 10.1.2.2. Fiberglass
 - 10.1.2.3. Stainless Steel
 - 10.1.2.4. Polypropylene
 - 10.1.2.5. PVC
 - 10.1.2.6. Polyethylene
- 10.1.3. Do you have a preference for specific materials of construction?

11. SLUDGE DATA:

- 11.1.1. Are you currently using sludge dewatering equipment (ie; filter press, filter, etc., please describe)?
- 11.1.2. Do you have a sludge retention pond or storage tank (please describe)?

12. EFFLUENT INFORMATION:

- 12.1.1. Effluent Discharge Limits
- 12.1.2. Effluent Temperature Limits
- 12.1.3. Gravity Flow to drain
- 12.1.4. Distance to discharge point

13. ELECTRICAL DATA:

13.1. What is the environment classification: explosion hazard, Etc...

- 13.1.1. class:
- 13.1.2. group:
- 13.1.3. division:

13.2. What is the available power at the site

- 13.2.1. Volts
- 13.2.2. Hertz
- 13.2.3. Amps

14. GENERAL INFORMATION:

- 14.1.1. Does the equipment need to be covered or fitted with vapor recovery equipment?
- 14.1.2. Will the equipment be installed indoors or outdoors?
- 14.1.3. Must the equipment be protected from freezing?
- 14.1.4. What power is available (voltage, amps, phase)?
- 14.1.5. Is compressed air available? If so, what pressure and volume (PSI & CFM)?
- 14.1.6. When does this system need to be operational?
- 14.1.7. Are you employing an engineering or consulting firm, if so please provide the firm name, the contact name and the phone number

Please include any additional information that might prove helpful for us in the evaluation of your application.