



ecoTop Oil Water Separation technology

Standard Specification

PART 1.00 - GENERAL

3.01 GENERAL INFORMATION

This scope covers the design, fabrication, and delivery of an above grade oil/water separation system with a peak intermittent flowrate of _____. The contractor shall provide the complete system as described. The Contractor shall be responsible for providing all major components specifically mentioned in this specification plus any minor components not mentioned, but required to complete a self contained system capable of separating a continuous flow of an oil/water mixture.

3.02 REFERENCES

The publications listed below form a part of this specification to the extent applicable. The publications are referenced in the text by their basic designation only.

ANSI C2	National Electric Safety Code
ASTM A276	Stainless Steel Bars and Shapes
ASTM D709	Specification for Laminated Thermosetting Materials
AWS D1.1	Structural Welding Code - Steel
DIN 1999	Oil Water Separation Systems
EN 858	Separation of light liquids performance testing.

3.03 SUBMITTALS

Submittals are due 15 days after contract award.

- A. CE, EN-858 Separator Performance Certification: Submit certification of the proposed separator to meet performance requirement called for in this specification.
- B. Shop Drawings: Before system is fabricated, detailed drawings must be approved showing locations of oily water inlet, oil storage reservoir, and optional automatic oil draw off device. Over all dimensions of major components shall be annotated in English units.
- C. Operation and Maintenance Manuals: Electronic copy within 30 days of owner's acceptance of equipment.
- D. Automatic Oil Draw Off Device technical literature.

PART 2.00 - APPROVED MANUFACTURER:

ecoTop, Above Grade Oil/Water Separator as manufactured by Royal Environmental Systems, Stacy, Minnesota 800-817-3240, or approved equal.

2.01 OIL / WATER SEPARATOR**A. Design Criteria**

Separator shall be designed for intermittent, variable or continuous flows of water, oil, and/or a combination of oil/water mixtures. Separator shall process uncontrolled surges of water, oil, or oil/water mixtures ranging from zero flow up to ___ gpm and produce a clean water effluent quality of 5 mg/l or less of oil droplets 30 microns and larger of non-emulsified, free and dispersed oils. Separator shall be constructed for transport to job site as one integral unit, ready for immediate installation. Field splicing or field fabrication is unacceptable.

B. Oil/Water Separation Chamber

The separation chamber shall be packed with cross-fluted oleophilic, coalescing media made of soft, open pored polyurethane-polyether foam. The media shall be packed in an easily removable stainless steel frame. The media pack shall be designed to create a quiescent zone, a laminar flow pattern to facilitate the impingement of oil on the media, and will provide numerous impact sites and changes of flow direction.

C. Clean Water Effluent Chamber

The cleansed water will flow under the oil retention baffle, over the water weir and into the effluent chamber.

D. Oil Reservoir

An independent oil reservoir shall be provided by owner for the temporary storage of separated oils. Minimum reservoir volume shall be 10 gallons.

E. Tank Construction

The tank shell, baffles, cover, and external structural members shall be constructed ASTM A276 type, 304 stainless steel and anodized after welding. The separator shall have a cover that provides complete closure of the tank.

2.02 AUTOMATIC OIL DRAW OFF DEVICE (OPTIONAL)

The separator shall be equipped with an Automatic Oil Draw-Off Device (not an oil skimmer) designed and made specifically for the proposed separator by the separator manufacturer. At static or low flow conditions, this device draws oil and water into its separation compartment and through a series of weirs and floats, separates oil from the mixture and deposits the oil to the oil storage compartment. The separated water is then discharged back to the outlet effluent line.

PART 3.00 - EXECUTION

3.01 OPERATIONS AND MAINTENANCE DATA

- A. 3.1.1 An Operations and Maintenance manual shall be provided.
- B. 3.1.2 Operations data shall include operating instructions, procedures, sequences, precautions, and description of parts. Subcontractors, suppliers, and manufacturers shall be coordinated to assure complete submittals on interrelated components. Instructions shall be included for all systems designed or furnished.
- C. 3.1.3 Maintenance data shall include instructions for installation, dismantling, assembly, repair and adjustment, parts catalogs, electric schematic and connection diagrams, control and interlock system diagrams, and lists of special tools required.

END OF SECTION