MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

NUTRIENT-REDUCING WASTEWATER TREATMENT SYSTEM DESIGNATION FORM

DATE: April 11, 2011

APPLICATION SUBMITTAL DATE(S): February, 2011; March 2, 2011; April 2011

SYSTEM MANUFACTURER: Orenco Systems, Inc.

SYSTEM NAME(S): AX20RT

DESIGNATED TREATMENT LEVEL[2]: Level 2 (Can use 24 mg/L for effluent nitrate (as N) concentration in nitrate sensitivity analysis)

CONDITIONS:

A. Approval extends to future model sizes of the AdvanTex AXRT technology if the same treatment technology and AdvanTex treatment media is used.

B. Due to start-up time lag associated with all biologically mediated nutrient reduction systems (for example, recirculating sand filters), AXRT systems may not be suitable for commercial-type systems (for example, campgrounds, RV parks, etc) that are designed to be used seasonally. The applicability of AXRT systems for nutrient reduction purposes at seasonal commercial-type systems should be based on a case-by-case analysis.

C. Approval is valid for residential and non-residential facilities for residential strength wastewater (not high strength wastewater), with no limit on design flows as long as all other applicable laws, rules and design circulars are met.

D. For AXRT systems that do not pressure dose to the final disposal area (i.e. use gravity drainage), which are Modes 1A and 3A, the system must include a separate dosing tank with a pump to discharge the treated effluent to the final disposal location. The separate dosing tank with pump is necessary to meet the hydraulic barrier requirements in ARM 17.30.718(9). Modes 1B and 3B systems that have a pump discharge included in the treatment pod do not need the separate dosing tank. Mode 1 models have a separate recirculation tank; Mode 3 models recirculate to the septic tank.

APPROVED BY: Eric Regensburger

NOTES:

2 The definitions of level 1a, level 1b, and level 2 are in ARM 17.30.702(9), (10) and (11), respectively.