NSF Standard(s) Impacted: NSF 347 - 6.3.2, 6.4.2, 6.5.2, 6.6.2

Background:

The above standards measure energy usage (6.3.2), reduced water consumption (6.4.2), waste minimization (6.5.2) and greenhouse gas reduction (6.6.2).

The standards as written do not take into account the level of membrane production. Membrane production levels will change from year to year. The above metrics should be normalized to actual production levels based on volume such as per square meter of membrane produced per year.

In addition, the 5-year rolling average will quickly yield diminishing returns. The 5-year rolling average could be used for data submitted when applying for NSF 347 certification; however, a 10-year rolling average could be used after the certification is achieved. Otherwise the benefits of having made significant improvements will be lost, and companies having made great steps will be disadvantaged with regards to these credits. This is especially important as further incremental improvements become disproportionally more difficult (if not impossible) to achieve.

Recommendations:

6.3.2 Reduction of environmental impact of energy input (maximum 7 points)
The manufacturer shall demonstrate overall reduction in the environmental impact of its energy inputs. Measurement shall be based on a reduction calculated from one year of data over the past five years prior to certification, carried through (starting from the most recent audit) a ten-year period after certification is achieved. Energy inputs shall be expressed per square meter of membrane production.

6.4.2 Reduced water consumption (maximum 1 point)
The manufacturer shall demonstrate overall reduction in water consumption. The manufacturer can earn a maximum of 1 point and the measurement shall be based on a reduction calculated over a five-year period prior to certification and a ten-year period after certification as detailed below:

- □ the manufacturer shall receive 1 point for an average 1% per year reduction of water use and consumption normalized per unit of membrane production; or
- □ the manufacturer shall receive 1 point for utilizing internal cooling loop processes to reduce water discharges.

6.5.2 Waste minimization (maximum 1 point)
The manufacturer shall demonstrate overall reduction in waste to landfill from manufacturing facilities. The manufacturer may receive a maximum of 1 point and the measurement shall be based as follows:

- □ the manufacturer shall receive 1 point for demonstrating a year to year waste to landfill generation reduction rate of at least 2% per year normalized per unit of membrane production (calculated as a five-year rolling average prior to certification and ten-year rolling average after certification); or
- □ the manufacturer shall receive 1 point for demonstrating an annual average total waste to landfill generation rate of less than 2% of plant production on a weight basis normalized per unit of membrane production.

6.6.2 Greenhouse gas reductions (maximum 3 points)
The manufacturer shall demonstrate overall reduction in greenhouse gas loadings. Measurement shall be based on a reduction normalized per square meter of membrane production over a five-year period from the established baseline prior to certification and a ten-year rolling average after certification.
Supplementary Materials (photographs, diagrams, reports, etc.):

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