

Engineer's Certification of Technical Requirements for Design of Ultraviolet (UV) Facilities for Disinfection of a Public Water Supply

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

This Engineer's Certification is required by the New York State Department of Health (NYS DOH) for proposed drinking water facilities using ultraviolet (UV) light disinfection units. This certification applies to UV light disinfection units designed for flows greater than 30 gallons per minute (GPM) and/or to comply with USEPA Long Term 2 (LT2) Enhanced Surface Water Treatment Rule.

The *USEPA Ultraviolet Disinfection Guidance Manual* is the official reference standard for the validation, installation, and operation of ultraviolet (UV) light disinfection units at drinking water facilities in New York State:

Ultraviolet Disinfection Guidance Manual for the Final Long Term 2 Enhanced Surface Water Treatment Rule (commonly referred to as "the UVDGM"), November 2006

Published by the United States Environmental Protection Agency (US EPA)

UV units validated in accordance with the German DVGW or Austrian ONORM standards shall be acceptable. In all cases (UVDGM, DVGW, ONORM) a third-party certification of validation must be submitted (in English).

New construction should meet all applicable standards including, but not limited to: AWWA, ANSI/NSF, and OSHA Standards; Recommended Standards for Water Works; and Building Code of New York State. The NYS DOH reserves the right to reject the proposed use of any UV unit not validated in accordance with at least one of the three standards noted above.

Applicant _____ PWSID Number _____

DWSRF Project Number, if applicable _____

Authorized Representative (print) _____

Signature _____ Date _____

Project Description

Date of Plans and Specifications _____

Engineering Firm _____

Address _____

Contact Person _____

Phone _____ E-mail _____

By the signature and seal hereby provided I certify that:

1. I am legally licensed by the State of New York to practice professional engineering in accordance with Article 145 of the New York State Education Law.
2. The referenced UV disinfection facilities were designed in accordance with the applicable New York State requirements and relevant guidance for drinking water facilities.
3. The proposed UV light reactor was validated using a procedure that is in accordance with (Check one or more):
 - The German DVGW (Application must include a copy of the test certificate and Verwnedungshinweise/Bemerkungen sections of the validation report; also referred to as the Application Notes/Comments section of the validation report.)
 - Ascertained maximum flow capacities and their corresponding intensity (W/m^2) and spectral attenuation coefficients (SSK-254) are enclosed.
 - The Austrian ONORM standard (Application must include copy of the test certificate.)
 - Procedure Previously Approved by NYS DOH (Letter dated _____)
 - USEPA UVDGM (Application must include a copy of the validation report.)
 - Third-party certification in attestation is enclosed with the validation report. All deviations are listed in the certification and justified in the validation report. OR
 - Third-party certification in attestation is enclosed with the validation report. All deviations are listed in the Certification, but not justified in the validation report. I have listed those deviations below and provided explanation, with supporting evidence, how each deviation affects the results in terms of being more, equal to, or less stringent than a validation done in strict accordance with the USEPA UVDGM. Where a deviation in a UV validation methodology, design, or proposed installation will be less stringent than the USEPA UVDGM, the applicant must explicitly state the proposed measures that will be used to result in at least an equivalent level of disinfection.
4. I have reviewed the appropriate validation materials, and I have determined that the proposed reactor is capable of providing the disinfection performance required by the design.

Deviations from Applicable Validation Protocol (attach additional pages where appropriate):

1. Chapter _____ Section _____
Proposed Deviation _____

2. Chapter _____ Section _____
Proposed Deviation _____

- 3 Chapter _____ Section _____
Proposed Deviation _____

Design Engineer's Seal and Signature



NOTE: The NYS DOH and/or its designated City/County Health Departments reserve the right to review any and all submittals for accuracy and for consistency/compliance with all applicable design reference standards including, but not limited to, the latest edition of the Recommended Standards for Water Works and the USEPA UVDGM. The Department and its designees reserve the right to request additional information, documentation, or clarification related to project submittals.