



The State of New Hampshire  
DEPARTMENT OF ENVIRONMENTAL SERVICES

AR-049



Thomas S. Burack, Commissioner

August 16, 2010

PSNH – Schiller Station  
Ms. Felicia Giordano  
Environmental Coordinator  
400 Gosling Road  
Portsmouth, New Hampshire 03801

Subject: National Pollutant Discharge Elimination System (NPDES)  
Compliance Evaluation Inspection (CEI)  
PSNH – Schiller Station, Portsmouth, NH  
NPDES Permit # NH0001473

Dear Ms. Giordano:

On August 11, 2010, as a representative of the New Hampshire Department of Environmental Services (DES) Wastewater Engineering Bureau, I conducted a NPDES CEI at PSNH – Schiller Station (Schiller Station). Objectives of a CEI include determining compliance with NPDES permit conditions, verifying the accuracy of permit-required information, and verifying the adequacy of permittee sampling and monitoring.

The following people were present during this CEI:

Felicia Giordano, Environmental Coordinator, Schiller Station  
Randy Rudolph, Chemistry Laboratory Supervisor, Schiller Station  
David Corliss, Working Foreman, Schiller Station  
Roy D. Gilbreth, Environmental Inspector, DES

**DEFICIENCIES: (Response required).**

During the inspection the following deficiencies were noted:

1. The TSS drying oven thermometer is not calibrated yearly to ensure it is accurate. The thermometer must be checked against an NIST-calibrated thermometer or replaced each year with an NIST-certified thermometer.
2. None of the in-house bench sheets indicate what edition of Standard Methods the test is referencing. The Standard Methods edition must be included with the test method on all bench sheets.

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Please mail your inspection response to:

Roy D. Gilbreth  
NHDES/WD-WWEB  
P.O. Box 95  
Concord, NH 03302-0095

Enclosed is a copy of EPA Form 3560 – Water Compliance Inspection Report. If you have any questions, please call me at 271-1494.

Sincerely,



Roy D. Gilbreth  
Environmental Inspector  
Wastewater Engineering Bureau

cc: DES, WD, WWEB/File  
Tracy Wood, P.E., Compliance Engineer, WWEB  
Joy Hilton, USEPA Water Technical Unit

Attachments: EPA Form 3560 – Water Compliance Inspection Report  
Model 51910 Platinum Series pH Electrode Instruction Manual pp. 43-44



## Section 3 Electrode Maintenance

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The Platinum Series pH electrode contains a sensing glass bulb and a liquid reference junction optimized for performance in difficult, cold, neutral, and low ionic strength (LIS) solutions. This sensitive instrument has been designed to give trouble-free use, but requires careful handling to extend longevity. This section explains methods for conditioning, cleaning, and storing the Platinum Series pH electrode.

### 3.1 Storing the Electrode

Proper electrode storage requires different approaches based on how long the electrode will be stored, how quickly the electrode needs to be used, and the type of sample being measured. Storage affects the reference electrolyte gel, the Ag/AgCl reference element, and the pH sensing glass bulb.

**Intermittent storage:** Between uses, store the electrode in solutions of similar ionic strength and pH to the samples of interest. Before measuring a new sample, refresh the reference electrolyte gel by clicking the dispenser until fresh gel emerges. Carefully rinse the electrode to prevent sample contamination.

**Overnight storage:** Store the electrode in Hach pH electrode storage solution to keep the electrode hydrated. The KCl will not leach excessively from the electrolyte gel overnight. Prior to use, click the electrolyte gel dispenser. A dilute gel/storage solution will initially be ejected from the reference junction tube. The reference gel of thicker viscosity will follow. Eliminating the dilute gel/storage solution will guarantee continuity of the reference junction with the sample. Blot the reference junction with a tissue to clearly see that the electrolyte gel, not gel diluted with storage solution, is emerging.

→ **Longer-term storage:** To store electrodes for longer periods, soak the electrode in storage solution (*Overnight storage*, above) and re-establish gel at the reference junction on a daily basis to keep the electrode ready for use. If the electrode soaks for longer periods without purging the diluted electrolyte, the