

**New York State Department of Environmental Conservation**  
**Division of Environmental Permits, Room 538**  
50 Wolf Road, Albany, New York 12233-1750  
Phone: (518) 457-2224 • FAX: (518) 457-7759  
Website: [www.dec.state.ny.us](http://www.dec.state.ny.us)



February 14, 2000

Mr. Rick Hall, Jr. ||  
Permits Manager  
Millennium Pipeline Company, L.P.  
P.O. Box 2002  
Binghamton, N.Y. 13902-2002

Dear Mr. Hall:

The New York State Department of Environmental Conservation has reviewed your January 31, 2000 request for modification of the 401 Water Quality Certificate issued on December 8, 1999 to Millennium Pipeline Company, L.P.

General Condition Number 2 is hereby modified as indicated in the attached Certificate. All other terms and conditions of the Certificate remain the same. The current Certificate, with which Millennium Pipeline Company, L.P. must comply, contains 14 pages dated February 14, 2000.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lenore R. Kuwik'.

Lenore R. Kuwik  
Deputy Chief Permit Administrator

cc with attachment:

Mr. David P. Boergers, FERC  
U.S. Army Corps of Engineers  
Pittsburgh District  
Buffalo District  
New York District

U.S. Fish and Wildlife Service, Cortland Office  
New York State Department of State, Division of Coastal Resources & Waterfront Revitalization  
New York State Department of Public Service



DEC PERMIT NUMBER  
0-9999-00055/00003

FACILITY/PROGRAM NUMBER(s)

FERC #CP 98-150-000



EFFECTIVE DATE

December 8, 1999

EXPIRATION DATE

Concurrent with expiration  
of federal license**PERMIT**

Under the Environmental Conservation Law (ECL)

TYPE OF PERMIT (Check All Applicable Boxes)

 New  Renewal  Modification  Permit to Construct  Permit to Operate

<input type="checkbox"/> Article 15, Title 5: Protection of Water	<input type="checkbox"/> Article 17, Titles 7, 8: SPDES	<input type="checkbox"/> Article 27, Title 9: 6NYCRR 373: Hazardous Waste Management
<input type="checkbox"/> Article 15, Title 15: Water Supply	<input type="checkbox"/> Article 19: Air Pollution Control	<input type="checkbox"/> Article 34: Coastal Erosion Management
<input type="checkbox"/> Article 15, Title 15: Water Transport	<input type="checkbox"/> Article 23, Title 27: Mined Land Reclamation	<input type="checkbox"/> Article 36: Floodplain Management
<input type="checkbox"/> Article 15, Title 15: Long Island Wells	<input type="checkbox"/> Article 24: Freshwater Wetlands	<input type="checkbox"/> Articles 1, 3, 17, 19, 27, 37: 6NYCRR 380: Radiation Control
<input type="checkbox"/> Article 15, Title 27: Wild, Scenic & Recreational Rivers	<input type="checkbox"/> Article 25: Tidal Wetlands	<input type="checkbox"/> Other _____
<input checked="" type="checkbox"/> 6NYCRR 608: Water Quality Certification	<input type="checkbox"/> Article 27, Title 7; 6NYCRR 360: Solid Waste Management	

PERMIT ISSUED TO Millennium Pipeline Company, LP		TELEPHONE NUMBER (607)773-9100
ADDRESS OF PERMITTEE PO Box 2002 Binghamton, NY 13902-2002		
CONTACT PERSON FOR PERMITTED WORK Richard E Hall Jr.		TELEPHONE NUMBER (607)773-9116
NAME AND ADDRESS OF PROJECT/FACILITY Millennium Gas Pipeline		
LOCATION OF PROJECT/FACILITY Town of Ripley, Chautaugua County to Mt. Vernon, Westchester County		
COUNTY Multiple	TOWN Multiple	WATERCOURSE/WETLAND NO. Multiple
NYTM COORDINATES E: N/A . N: 4 .		
DESCRIPTION OF AUTHORIZED ACTIVITY Installation and operation of a 36 inch diameter natural gas transmission pipeline which will start in Canada, cross under Lake Erie, traverse the Southern Tier, cross the Hudson River at Haverstraw Bay, and terminate at a point in Mt. Vernon, Westchester County.		

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, the General Conditions specified (See Page 2) and any Special Conditions included as part of this permit.

DEPUTY PERMIT ADMINISTRATOR Lenore R. Kuwik	ADDRESS 50 Wolf Road, Rm.538, Albany, N.Y. 12233-1750	ESR
AUTHORIZED SIGNATURE 	Date 2/14/2000	Page 1 of 14

**NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS****Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification**

The permittee expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees, agents, and assigns for all claims, suits, actions, damages, and costs of every name and description, arising out of or resulting from the permittee's undertaking of activities or operation and maintenance of the facility or facilities authorized by the permit in compliance or non-compliance with the terms and conditions of the permit.

**Item B: Permittee's Contractors to Comply with Permit**

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

**Item C: Permittee Responsible for Obtaining Other Required Permits**

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

**Item D: No Right to Trespass or Interfere with Riparian Rights**

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

**GENERAL CONDITIONS****General Condition 1: Facility Inspection by the Department**

The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71-0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

**General Condition 2: Relationship of this Permit to Other Department Orders and Determinations**

Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

**General Condition 3: Applications for Permit Renewals or Modifications**

The permittee must submit a separate written application to the Department for renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing.

The permittee must submit a renewal application at least:

- a) 180 days before expiration of permits for State Pollutant Discharge Elimination System (SPDES), Hazardous Waste Management Facilities (HWMF), major Air Pollution Control (APC) and Solid Waste Management Facilities (SWMF); and
- b) 30 days before expiration of all other permit types.

Submission of applications for permit renewal or modification are to be submitted to:

NYSDEC Regional Permit Administrator, Region < >  
<street>, <city>, <state> <zip>, telephone: < >

**General Condition 4: Permit Modifications, Suspensions and Revocations by the Department**

The Department reserves the right to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

- a) the scope of the permitted activity is exceeded or a violation of any condition of the permit or provisions of the ECL and pertinent regulations is found;
- b) the permit was obtained by misrepresentation or failure to disclose relevant facts;
- c) new material information is discovered; or
- d) environmental conditions, relevant technology, or applicable law or regulation have materially changed since the permit was issued.

DEC PERMIT NUMBER

0-9999-00055/00003

PAGE 2 OF 14

**401 Water Quality Certificate Conditions for the Millennium Gas Pipeline**  
**December 8, 1999**

**1 General Conditions:**

- A. The New York State Department of Environmental Conservation (DEC) hereby certifies that the subject project will not contravene effluent limitations or standards as provided for under Sections 301, 302, 303, 306, 307 and 401 of the Clean Water Act of 1977 (PL 95-217) provided that all of the conditions listed herein are met.**
- B. All activities authorized by this Certificate must be in strict conformance with the Construction Alignment Sheets, dated November 10, 1999 (CAS); Environmental Construction Standards dated July 1999 (ECS); and the October 22, 1999 DEC Data Responses (DDR) submitted November 10, 1999, and the November 19, 1999 Transmittal from GAI consultants to Richard C. Benas of DEC.**
- C. Any provision included in the CAS, ECS or DDR or any other application materials that are in conflict with the conditions included in this 401 Water Quality Certificate are superseded by these conditions.**
- D. All the individuals listed in Appendix A of this Certificate must be notified 5 working days prior to the start of any stream or wetland crossing.**
- E. Millennium shall provide to the Chief of DEC's Environmental Analysis Unit, Division of Environmental Permits (CEAU), as built drawings and construction notes for all stream and wetland crossings.**
- F. For Oquaga Creek wetland Millennium shall provide specific details identical to those referred to in the DDR on page 18 a) 1-7.**

**2. Within 90 days of the effective date of the License issued by the Federal Energy Regulatory Commission, but in no event later than ninety (90) days prior to the start of construction, Millennium shall:**

- A. Employ a third party inspector that will report directly to DEC**
- B. Submit a 3rd party inspection program to the Ecotoxicology Section Head (ESH), Bureau of Habitat of DEC for review and approval that identifies and details the responsibilities of the 3rd party environmental inspector. Such plan may include provisions for cooperation between State and Federal agencies of 3rd party inspector services.**
- C. Submit a training program plan that details all environmental protection aspects of this project to the CEAU and ESH for review and approval. Such training program should include all environmental protection aspects of the ECS, CAS, DDR, these 401 Water Quality Certificate conditions, and all other appropriate environmental protection precautions.**

D. Make provisions that its construction staff, contractors, sub-contractors, environmental inspectors, and 3rd party inspectors complete the training program and prior to start of construction be prepared to implement all environmental protection aspects of the project. Such training shall be made available to DEC staff listed in Appendix A of this Certificate.

E. File a contingency plan with the CEAU that details and commits all necessary extra equipment and personnel, on stand-by basis, that may be used for environmental protection and construction should unforeseen events be encountered during stream or wetland crossings and construction on steep slopes.

F. Submit to CEAU, for Department review and approval, a signed agreement with Southern Energy, owner of the first hydro-electric generating facility upstream of the Mongaup River pipeline crossing location, that Southern Energy will schedule an outage for its Mongaup Falls generating units during Millennium's construction and crossing of the Mongaup River. The agreement must include a clause meeting Southern Energy's stated requirement of proper advanced notice and planning from Millennium and a commitment from Southern Energy to reduce flow to the minimum allowed under its Federal Energy Regulatory Commission license to operate the facility for the full duration of construction activities to cross the Mongaup.

G. Submit a surface waters and wetland restoration monitoring plan to the CEAU for review and approval.

F. Provide to CEAU a critical path chart that shows all the submittals required by this Certificate.

3 Not less than 60 days prior to the start of construction Millennium shall:

A. Update the CAS, ECS, and the DDR to identify any changes from the original alignment that could in any way affect streams, wetlands, or rare, threatened and endangered species. All changes must be highlighted on the final drawings.

B. Submit to CEAU a storm water management plan for all permanent access roads and facilities and temporary staging and extra work zones.

C. Establish and maintain a 50' un-grubbed buffer around all water bodies until trench construction begins on the water body crossing as indicated in the ECS as supplemented by the November 19, 1999 transmittal from GAI consultants to Mr. Richard C. Benas of DEC.

D. Clearly identify the boundary of all environmentally sensitive areas using brightly colored fencing or silt fencing. Each boundary will also be identified with a clearly legible sign, that can be read from a distance of 30 feet, as the "50 foot non-grubbing stream buffer boundary" or "DEC wetland buffer zone boundary" or "DEC wetland boundary," and any other environmentally sensitive areas as "environmentally sensitive area."

E. Develop rare, threatened and endangered species management plans for the crossings of the Neversink and Susquehanna Rivers, and the Olean and Catatonk Creeks, and file such plans with the CEAU for review and approval prior to commencing any construction at these streams. Such plans will include the following for these water bodies:

1. Neversink River

- a. Millennium will notify the DEC Endangered Species Unit (ESU) at least 5 working days before vegetation clearing and set-up for the drilling operation is begun on the banks of the Neversink River.
- b. Millennium will notify the ESU, by telephone, within 7 days of when construction and restoration has been completed .

2. Olean Creek:

- a. Millennium shall conduct field surveys for the bean villosa (*Villosa fabalis*) and the longhead darter (*Percina macrocephala*) as indicated in the DDR (comment #6, p.15-17).
- b. The plans for these surveys shall be submitted to ESU for approval no later than 30 days before the surveys are scheduled to be conducted.
- c. The results of the surveys must be submitted to ESU no later than 14 days after their completion and at least 30 days before construction begins at the stream crossing. The survey plans should contain proposed protection measures for *Villosa fabalis* and *Percina macrocephala*, if found, and the proposed time frames for these protection measures.
- d. Millennium will notify the ESU, by telephone, at least 5 working days before any construction is performed at the creek.
- e. Millennium will notify the ESU within 7 days of when construction has been completed.

3. Catatonk Creek:

- a. Millennium shall conduct field surveys for the green floater (*Lasmigona subviridis*) as indicated in Millennium's November 10, 1999 submission to DEC.
- b. The plans for these surveys shall be submitted to ESU for approval no later than 30 days before the surveys are scheduled to be conducted.
- c. The results of the surveys must be submitted to ESU no later than 14 days after their completion and at least 30 days before construction begins at the stream. The survey plans should contain proposed protection measures for *Lasmigona subviridis*, if found, and the proposed time frames for these protection measures.
- d. Millennium will notify the ESU, by telephone, at least 5 working days before any construction is performed at the creek.
- e. Millennium will notify the ESU within 7 days of when construction has been completed.

**4. Susquehanna River:**

- a. If the conventional bore method for crossing the Susquehanna River fails, no work will be performed in the River which involves alteration of stream flow or substrate until Millennium completes a survey for *Lasmigona subviridis* and DEC approves an alternate crossing method.
- b. The plans for these surveys shall be submitted to ESU for approval no later than 30 days before the surveys are scheduled to be conducted.
- c. The results of the surveys must be submitted to ESU no later than 14 days after their completion and at least 30 days before construction begins at the stream. The survey plans should contain proposed protection measures for *Lasmigona subviridis*, if found, and the proposed time frames for these protection measures.
- d. Millennium will notify the ESU, by telephone, at least 5 working days before any construction is performed on the creek whether by drilling or an alternative procedure.
- e. Millennium will notify the Endangered Species Unit within 7 days of when construction has been completed.

**4. Not less than 20 days prior to the start of construction Millennium shall:**

- A. Require 3rd party inspectors be in place at each spread. 3rd party inspectors will report to appropriate designated Regional Habitat Protection Program Managers (HPM) listed in Appendix A of this Certificate.
- B. Submit pre-clearing photographs of all stream crossings to CEAU and each HPM. Photographs of the crossing will be taken from both sides of the stream showing the ROW where it will cross the stream. Upstream and downstream calibrated stakes indicating in-stream pre-construction sediment elevations must be provided if required by the 3rd party inspector. Post construction evaluation of stakes will be made to determine sediment deposition due to the project. Millennium must place stakes and take photos at locations and times determined by the 3rd party inspector.
- C. Consult with the 3rd party inspector on the location for any approved equipment stream crossings for the purpose of clearing of the ROW. The 3rd party inspector will make final decisions on the location of any approved equipment crossing after consultation with the contractor and the HPM.

**5. During Construction Millennium shall:**

- A. Require all contractors performing stream crossings have oil booms and other sheen control devices on proximal standby. Millennium and its contractors must be trained in their deployment and maintenance. Oil booms and other appropriate oil control devices as needed shall be installed to contain any oil sheen generated during sediment removal at stream crossings. Silt fences and oil booms will also be required to prevent potentially contaminated ground or surface waters from entering any waterbody from exposed upland pipe trenches or excavations.

**B. Promptly collect and dispose of any in-stream oily material observed during dredging, or any other project activity, at a facility approved by the DEC Regional Engineer (RE) as identified in Appendix A,**

**C. Ensure that activities do not result in erosion of soils, siltation into water bodies or fugitive dust emissions on the site during construction and operation of the project.**

**D. Implement all erosion control and environmental protection measures described in the CAS, ECS, DDR and these Certificate conditions.**

**E. With the exception of the Hudson River, restore all stream crossing areas, except for temporary access roads, to preexisting contours and grades to a distance of 50 feet from edge of the stream within 24 hours of backfilling the trench.**

**F. Restore wetland crossing areas, except for temporary access roads, to pre-existing contours and grades to a distance of 100 feet from the edge of the wetland within 48 hours of backfilling the trench.**

**G. Not reduce any stream's flow by more than 10% of its flow at the time of withdrawal of hydrostatic test water.**

**H. Backfill the trench at the Olean Creek with clean washed stone, as approved by the 3rd party inspector. All material excavated from the trench shall be disposed of at a location approved by the RE.**

**I. With the exception of the Hudson River, not start construction of any open cut (dry or wet) stream crossing in the event of a National Weather Service weather forecast that contains a 40 percent or greater chance of precipitation that may affect the area of the crossing during the projected duration of the construction for the subject crossing unless the environmental inspector authorizes the work to begin. The environmental inspector must document the weather conditions in the vicinity of the crossing and the upstream watershed. Environmental inspectors must keep an up to date log of all authorizations and at all times make the log available for DEC inspection. In the event that an unforecast rainfall event occurs, after a crossing has begun, Millennium shall, upon receiving the approval of the 3rd party inspector, proceed to work on a 24 hour basis in order to complete the crossing as quickly as possible.**

**J. Monitor the status of all open cut (dry or wet) crossings 24 hours per day until the crossing has been completed and the stream and stream banks have been restored. In the event of any potential or actual failure of the crossing, Millennium must have adequate staff and equipment available to take necessary steps to prevent or avoid adverse environmental impacts.**

**K. Provide for safe passage or portage of navigational boaters or canoeists at all stream crossings designated by the HRM. Such safety measures must provide an adequate upstream warning that is readily understandable by all travelers.**

**L. Ensure that equipment crossings are constructed in such a way that soil cannot fall into water bodies through cracks in the crossing or over the edge of the crossing or at the banks. All equipment crossings shall be installed and removed within the timing restrictions set forth in the CAS unless a change is approved by the 3rd party inspector after consultation with the HRM. If Millennium proposes to maintain an equipment bridge during the timing restriction contained in the CAS, that bridge must be a span structure.**

**M. Implement the erosion and sedimentation control measures for trench de-watering activities contained in the ECS and CAS. Millennium shall ensure that all other necessary measures are taken to prevent pollutants from reaching any water bodies.**

**N. Meet with the contractor, environmental inspectors and the HRM, on site, 30 days prior to beginning any open cut wet trench crossing to confirm the specific crossing methods to be used by the contractor.**

**O. Employ blasting in Lake Erie or any other water body only during the time periods allowed in the CAS.**

**P. Conduct all blasting using inserted delays of a fraction of a second per hole, and stemming, in which rock is placed into the top of the borehole to damp the shock wave reaching the water column, thereby reducing fish mortalities from blasting.**

**Q. Employ sonar with all blasting operations to detect the presence of fish at all streams designated by the HRM. There shall be no blasting during passage of schools of fish.**

**R. Only clear, grade and excavate within DEC regulated wetlands in conformance with site specific specifications included in the CAS and the ECS (Section IVB). All such activities will be limited to only that necessary to install the pipeline. Grubbing within a DEC regulated wetland will be confined to the immediate area of the trench. Equipment shall be operated on removable mats to reduce soil disturbance and compaction within wetlands unless other wise directed by the 3rd party inspector. If there are conflicts between methods outlined in the ECS, CAS, DDR and other the site specific measures specified by DEC in this Certificate, the site specific measures will apply. Where conflicts as to proper construction methods exist, the 3rd party inspector will make final decisions after consultation with the contractor and the HRM. The 3rd party inspector may authorize limited grubbing or clearing to accommodate safe equipment passage and operation, after consultation with the HRM.**

**S. Design all trench line barriers, breakers, and stream crossing buffers as shown in figures 12 and 29 in the November 19,1999 Transmittal from GAI consultants to Mr. Richard C. Benas of DEC.**

**T. Conduct instream backfilling, for all open cut wet ditch trenches, in such a manner to reduce the amount of resuspension of sediments into the water column. Millennium must substitute clean gravel or other suitable material as backfill if the environmental inspector determines that the excavated material contains an excessive amount of fine grained material. Backfill material shall be released from construction equipment as close to the**

streambed surface as possible. Discharge of backfill material from above the water surface is not allowed.

**6. Olean Creek:**

**A. Millennium must conduct a geotechnical evaluation of soils showing grain size and distribution at the proposed crossing location to evaluate the suitability of using a closed environmental bucket for the trenching and backfilling operations. Samples collected for geotechnical evaluation shall also be analyzed for polycyclic aromatic hydrocarbons (PAHs), total organic carbon (TOC) and grain size.**

**B. Millennium must perform all trenching operations using a closed environmental bucket such as the Cable Arm bucket as detailed in the DDR. No other type of trenching and backfilling equipment is approved for the Olean crossing. All equipment shall be sized and operated in such a manner to minimize the resuspension and transport of sediments into the water column. Sizing, operation and maintenance of this and all other equipment shall be in accordance with the manufacturer's specifications. Specifically, this may require Millennium to perform bucket washings during each cycle to eliminate the introduction of sediments attached to the bucket back into the water column, as directed by the environmental inspector.**

**7. Hudson River Crossing:**

**A. All Hudson River crossing construction shall be conducted within the 92 day construction window of May 1 until July 31.**

**B. Millennium must perform all trenching operations using a closed environmental bucket such as the Cable Arm bucket as detailed in the DDR. No other type of trenching and backfilling equipment is approved for this crossing. All equipment shall be sized and operated in such a manner to minimize the resuspension and transport of sediments into the water column. Sizing, operation and maintenance of this and all other equipment shall be in accordance with the manufactures specifications. Specifically, this may require Millennium to perform bucket washings during each cycle to eliminate the introduction of sediments attached to the bucket back into the water column, as directed by the environmental inspector.**

**C. The enclosed environmental bucket shall be designed to completely enclose the dredged sediment and water captured. The bucket shall be equipped with escape valves which shut when the bucket is withdrawn from the water column.**

**D. The environmental dredge bucket shall have demonstrated the capability of meeting the following water quality performance standards: (a) Suspended solids not to exceed 25 mg/l over background at 25 m (75 ft) from operation when ambient levels are lower than 100 mg/l, and (b) Turbidity not to exceed ambient levels by more than 30% at 25 m (75 ft) from operation. An equivalent alternative dredging technology may be used if performance data submitted clearly demonstrates to DEC's satisfaction that the technology can meet the water quality performance standards noted above.**

E. Prior to any construction in the Hudson River Millennium shall collect two additional sediment cores as detailed in the DDR and report such results to the Director of Watershed Assessment and Research (DWAR), Division of Water of the DEC, and the CEAU. DEC may, based upon the contaminant concentrations encountered in these sediment cores, if any, require additional sampling and modification to all aspects of the Hudson River Crossing Plan prior to any construction at this crossing.

F. The contractor shall demonstrate to the 3rd party inspector's satisfaction that the silt dredge operator has sufficient control over bucket depth in the water and bucket closure so that sediment resuspension from bucket contact with the bottom, and bucket over-filling, is minimized.

G. Only barges employing the best available technology, and in good operating condition, shall be employed to contain the sediment and water placed in them, so that no discharge of sediment or water occurs until the barge has been transported to the authorized disposal location(s). Deck barges shall not be used to contain dredged sediments unless the barge has been modified to provide for complete containment of the sediments. No barge overflow is allowed.

H. Millennium shall take environmental samples as outlined in the DDR to an analytical laboratory by the end of each sampling day. Millennium shall make every effort to submit sampling results to DEC within 24 hours of collection. Data is required within 36 hours of receipt of the samples by the analytical laboratory and shall be directly e-mailed or faxed to the CEAU and the DWAR. If the 36-hour deadline occurs after 5 PM or during the weekend, the data may be reported by 9 AM the following business day.

I. Millennium must provide, for DEC review and approval, separate two-week monitoring plans for both the shallow water and deep-water construction activities. Under no circumstances will construction activities begin prior to DEC approval of in-stream monitoring plans.

J. DEC may modify the ongoing monitoring plan when appropriate to ensure compliance with this Certificate. Specifically, DEC may add monitoring parameters, including chemical analysis based upon the required initial or additional sediment sampling results. The location and frequency of sampling may also be modified by DEC based upon the initial monitoring plan results.

K. Each day Millennium must submit to DWAR for review summary tables of the composite results of the top, middle and bottom samples, raw total suspended solids (TSS), settleable solids (SS) and turbidity data from the top, middle and bottom sampling depths at all sampling stations. These tables shall be designed to allow easy comparison of all parameters measured at a given sampling transect and at a given time together with the corresponding upstream reference site values for each sampling transect.

L. Upon completion of each initial 2 week monitoring event for both the shallow and deep water dredging operations a monitoring report shall be submitted to CEAU, DWAR, and ESH within 10 business days of the two week sampling period. These reports shall

summarize: daily sample results, dates, times, and tide time of sample collection; dredge cycle times, backfilling times; sample locations shown on a plan of reasonable scale, depth of samples; laboratory reports of analytical results including appropriate QA/QC test results for blanks, duplicates, spikes, and matrix spikes. Millennium shall collect all data necessary to verify model predictions and provide such verification to DWAR. The source of each barge-load of sediment shall also be documented in the monitoring report for any disposal event.

M. Millennium shall use a contract laboratory, approved by the DWAR, for the chemical analyses specified in this Certification. Laboratory detection limits for the analyses specified in this Certification shall be sufficiently low as determined by the DWAR.

N. Millennium shall provide monitoring plans to DWAR and CEAU that include the measurement of directional velocity at one up-current sampling station (U1 or U2) at the start of each sampling run. Such measurements will be conducted at the start of each longitudinal sampling transect at top, middle and bottom depths during the initial monitoring operations. These same measurements will be required at all longitudinal transects during the ongoing monitoring operations. Directional velocity data will be submitted with daily sampling results.

O. Millennium shall ensure that the maximum mixing zone for dredging and disposal of project sediments shall not exceed 460 feet down-current from the centerline of the trench as referenced in the DDR. Monitoring for water quality parameters is detailed below:

1. Exceedences of water quality standards shall be attributed to project activities when the vertically averaged concentration at any sampling location obtained 500 feet down-current from the project activity exceeds the mean up-current sample concentration as set forth below.
2. The maximum increase in concentration for total suspended solids (TSS) and settleable solids (SS) down-current of the 460 feet mixing zone shall be 35 mg/l above the mean, flow-weighted, up-current concentration from the same sampling transect.
3. If the water samples collected at the edge of the mixing zone fails to meet water quality standards and this effect is attributed to project activities, DWAR and CEAU shall be immediately notified.
4. Verification that the samples were obtained within the sample plume, or that there was no plume, shall also be provided to DWAR and CEAU.
5. In the event of an exceedance of water quality standards, Millennium shall resample under similar conditions within 24 hours. The second set of samples shall be immediately analyzed and the results also provided to DWAR and CEAU.
6. If this second set of samples fails to meet water quality standards, Millennium shall immediately employ one or more of the following environmental protection

measures under the direction and approval of the 3rd party inspector:

- a. Operational controls that increase dredge cycle times.
- b. Silt curtains to contain suspended sediments.
- c. Any reasonable strategy that allows backfill material to be placed directly in the excavated pipeline trench without passing through the water column.
- d. Using the environmental closed bucket to backfill.

7. The 3rd party inspector will consult with DWAR and CEAU during normal working hours and take action in consultation with the Department staff. During non-working hours the 3rd party inspector will require Millennium to take any of these actions necessary to protect aquatic resources and inform DWAR and CEAU of any such action taken by the next business day.

8. Millennium shall perform water quality testing to establish the effectiveness of the mitigation strategy employed. If such testing indicates exceedance of water quality standards after implementation of the mitigation measure(s), then Millennium shall cease all construction activities in the affected work area until an alternative strategy is approved by DEC.

P. Backfill of the pipeline excavation must be performed accurately. Use of differential global positioning system (DGPS), accurate to five (5) meters or better, with real time graphic display, or other methods acceptable to the Department, shall be used to align all offloading and dump barges used during backfilling operations. The final riverbed elevation must be within +/- 1 foot of the original elevation as determined by pre- and post-construction bathymetric surveys .

Q. Sediment backfilling using bottom dump barges shall be performed only during periods of low slack tide. Low slack tide shall be defined for this activity as the time from one hour before to one hour after the NOAA predicted low tide time at Haverstraw. The purpose of this condition is to minimize the dispersion and transport of fine grained sediment during disposal operations. If an alternative technology is proposed (and approved by the Department) that allows the material to be placed directly in the excavated pipeline trench without passing through the water column, disposal may occur at any time during the tidal cycle. Applicant shall make an effort to backfill shallow areas as close to slack tidal current times as possible.

R. Millennium shall recover and properly place any backfill material misplaced or spilled outside of the excavated trench. Such determination shall be made by evaluation of pre- and post-construction bathymetric surveys. Post-construction bathymetric surveys shall be performed in accordance with the DRR Condition No. 5-N. Millennium shall immediately notify the 3<sup>rd</sup> party inspector, CEAU, and DWAR if post construction bathymetric surveys show that backfill material is not being accurately placed in the excavated trench. Within 24 hours of aforementioned notification, Millennium shall submit for CEAU and DWAR a corrective action plan for approval. Further surveys may be required by DEC to verify accurate placement.

**S. Millennium shall provide bathymetric transect reports to the Department within one week of completion of backfilling at a given transect (one transect/report per 500 ft. of pipeline trench). Such reports will include an evaluation of accuracy of backfill placement based upon pre- and post-construction bathymetric surveys.**

**T. Millennium shall not conduct bottom dump backfilling during passage of tugboat in escort or tanker vessels while the vessel is within 1000 ft of the disposal site.**

**U. Millennium shall dispose of all dredged material unsuitable for backfilling at an approved location.**

**V. Millennium shall not disturb backfill material in the pipeline trench by means including but not limited to drag bar, bucket smoothing, and barge spudding, unless such disturbance is pre-approved by the Department. Obtaining core samples shall not be considered "mechanical disturbance".**

**W. Millennium shall use additional backfill material, if needed, that is uncontaminated and possesses the same characteristics as the material where it is placed. Millennium shall evaluate the chemical and physical characteristics of all proposed additional backfill material and submit such evaluation to DWAR for Department review and approval. No additional backfill material shall be used prior to obtaining Department approval.**

**X. Millennium shall perform water column sampling for chemical analysis of total PCBs, cadmium, lead and total mercury at sampling stations U2 and D2 once per day during the 2 week initial monitoring periods. Sampling shall be performed during periods of maximum suspended solids concentrations. The Department may modify the sampling times and locations and require additional sampling.**

**Y. Millennium shall obtain reference or up-current samples which represent local background water conditions [total suspended solids (TSS) and settleable solids (SS)] outside of the effect of dredging and sediment disposal events. Acceptable locations for reference samples include locations 500 and 1000 feet up-current of active trenching and backfilling activities. The Department may require additional background sites if construction operations are shown to impact or influence background sampling sites.**

**Z. Millennium shall obtain plume samples at 2, 4, 6, and 8 hours after commencement of daily operations. Location of samples will be at 500 and 1000 feet up-current and 100, 500, 1000, and 5000 feet down-current as specified in the DDR. The Department may modify the sampling times and locations and require additional sampling runs if trenching and backfilling operations are delayed or extended.**

Appendix A

Reg	Contact	Phone	E-Mail	Address
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