APPENDIX 5
Suggested Notice of Intent Format

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY - REGION 1
FIVE POST OFFICE SQUARE SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

Request for General Permit Authorization to Discharge Noncontact cooling Water
Notice of Intent (NOI) to be covered by the General Permit

Noncontact Cooling Water General Permit (NCCWGP)
NPDES General Permits No. MAG250000 and NHG250000

A. Facility Information

1. Indicated applicable General Permit for discharge: MAG250000 ☒
   NHG250000 ☐

2. Facility Information/Location:
   Facility Name Riverdale Mills Corporation
   Street/PO Box 130 Riverdale Street City Northbridge
   State Massachusetts Zip Code 01534
   Latitude 42° 08' 22" Longitude 71° 38' 26"
   Type of Business Manufacturing
   SIC Codes(s) 3496

3. Facility Mailing address (if different from Location Address):
   Facility Name same as above
   Street/PO Box _____ City _____
   State _____ Zip Code _____

4. Facility Owner:
   Name James M. Knott Sr.
   E-mail jmknottsr@riverdale.com
   Street/PO Box 456 Hill Street City Whitinsville
   State Massachusetts Zip Code _____
   Contact Person James M. Knott Sr. Tel 508 234-8715
   Owner is (check one): Federal ____ State ____ Tribal ____ Private X
   Other (describe) _____

5. Facility Operator (if different from above):
   Legal Name same as above
   E-mail _____
   Street/PO Box _____ City _____
   State _____ Zip Code _____
   Contact Person _____ Tel _____

6. Current permit coverage: yes☒ no☐
   a) Has a prior NPDES permit (individual or general permit coverage) been granted for the discharge that is listed on the NOI? yes☒ no☐ If Yes, permit number MAG250279
   b) Is the facility covered by an individual NPDES permit for other discharges? yes☐ no☒

If yes, Permit Number: _____

c) Is there a pending NPDES application on file with EPA for this discharge? yes☐ no☒
If yes, date of submittal: _____ and permit number, if available _____

7. Attach a topographic map indicating the location of the facility and the outfall(s) to the receiving water.
Map attached? ☒

B. Discharge Information (attach additional sheets as needed):

1. Name of receiving water into which discharge will occur: Blackstone River
Freshwater ☒ Marine Water ☐
State Water Quality Classification Class B
Type of Receiving Water Body (e.g., stream, river, lake, reservoir, estuary, etc.) River

2. Attach a line drawing or flow schematic showing water flow through the facility including sources of intake water, operations contributing to flow, treatment units, outfalls, and receiving water(s). **Line drawing or flow diagram attached?** ☒

3. Describe the discharge activities for which the owner/applicant is seeking coverage (e.g., building cooling, process line cooling, etc.) Non-contact cooling water

4. Number of Outfalls 1 Latitude and Longitude to the nearest second for each Outfall. See EPA's siting tool at http:/www.epa.gov/tri/reporting/siting_tool. Attach additional pages if necessary.

Outfall 1	Latitude 42° 08' 22"	Longitude 71° 38' 27"
Outfall #	Latitude _____	Longitude _____
Outfall #	Latitude _____	Longitude _____

5. For each Outfall provide the following discharge information:

Outfall # 1

a) Maximum Daily Flow 0.190 MGD Average Monthly Flow 0.154 MGD
NOTE: EPA will use the flow reported here as the facility's permitted effluent flow limit.
b) Maximum Daily Temperature 81 °F Average Monthly Temperature 67 °F
c) Maximum Monthly pH 6.71 s.u. Minimum Monthly pH 5.75 s.u.
d) Outfall's discharge is: continuous ☐ intermittent ☒ seasonal ☐

Outfall # _____

a) Maximum Daily Flow _____ MGD Average Monthly Flow _____ MGD
NOTE: EPA will use the flow reported here as the facility's permitted effluent flow limit.
b) Maximum Daily Temperature _____ °F Average Monthly Temperature _____ °F
c) Maximum Monthly pH _____ s.u. Minimum Monthly pH _____ s.u.
d) Outfall's discharge is: continuous ☐ intermittent ☐ seasonal ☐

Outfall # _____

a) Maximum Daily Flow _____ MGD Average Monthly Flow _____ MGD
NOTE: EPA will use the flow reported here as the facility's permitted effluent flow limit.
b) Maximum Daily Temperature _____ °F Average Monthly Temperature _____ °F
c) Maximum Monthly pH _____ s.u. Minimum Monthly pH _____ s.u.
d) Outfall's discharge is: continuous ☐ intermittent ☐ seasonal ☐

6. Is the source of the NCCW potable water? yes☐ no☒
If yes, EPA will calculate a Total Residual Chlorine effluent limit for your facility.

7. Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 29.084 MGD
Attach any calculation sheets used to support stream flow and/or dilution calculations.

8. **For facilities that discharge to Massachusetts surface waters:**
a) Submit the completed engineering calculation of the surface water temperature rise as shown in Attachment B of the General Permit. Calculation attached? ☒
b) Does the discharge occur in an Area of Critical Environmental Concern (ACEC)? yes☐ no☒
If yes, provide the name of ACEC _____
Note: See Part 3.4 and Appendix 1 of the General Permit for more information on ACEC.

C. Chemical Additives

1. Are any non-toxic neutralization and/or dechlorination chemicals used in the discharge(s)? yes☐ no☒

2. If yes, attach a listing of each chemical used. Include the chemical name and manufacturer; maximum and average daily quantity used on a monthly basis, as well as the maximum and average daily expected concentrations (mg/l) in the discharge, and the vendor's reported aquatic toxicity (NOAEL and/or LC_{50} in percent for typically acceptable aquatic organism).

3. Was the listing submitted with the facility's 2008 NCCWGP NOI? yes☐ no☐

D. NCCW Source Water Information

1. State the source of the NCCW (e.g., municipal water supply, private well, surface water withdrawal, etc.).
Source Private Well Name of Source Water Overburden Well

2. Is the source water registered/permitted under MA Water Management Act or NHDES User Registration Rule (ENV WQ 2202)? yes☒ no☐ If yes, registration number _____

3. If the source water is groundwater (non-municipal well water), see Appendix 9 of the General Permit and submit effluent (and receiving water hardness) test results, as required in Part 5.4 of the General Permit.
Test results attached? ☒

4. Does the facility use both a primary and backup source of NCCW? yes☐ no☒ If yes, **attach information** that identifies and explains the primary and backup sources of NCCW and how often the backup supply was used in the past three years.

E. Best Technology Available for Cooling Water Intake Structures (CWISs)

If the facility's discharge is covered by this General Permit and the facility **withdraws non-contact cooling water from a surface water**, you are subject to the BTA requirements at Part 4.2 of the General Permit.

1. Are you subject to the BTA requirements of the General Permit? yes☐ no☒
a) If no, explain RMC withdraws non-contract cooling water from groundwater and skip to F.
b) If yes, was the facility-specific BTA description submitted with the facility's 2008 NCCW GP NOI?

yes☐ no☐

c) If yes, does that description accurately describe the facility current operations and practices? yes☐ no☐

2. If the facility is subject to the General Permit's BTA requirements and is requesting coverage under the NCCWGP for the first time, or if you answered "No" to question E.1.c. above, attach the facility-specific BTA description as required in Part 4.2 of the General Permit. For additional information and guidance, see Section IV of the Fact Sheet.

Include in your description:

a) Measures to meet the General Permit Part 4.3.a general BTA requirements, including documentation that describes the facility's monitoring program for impinged fish and/or invertebrate; or the required alternative monitoring plan frequency and/or protocol.
b) A characterization of the source water body's aquatic life habitat in the vicinity of each CWIS during the seasons when the CWIS may be in use.
c) The attributes of the current CWIS.
d) The design measures of the CWIS.
e) The operation measures of the CWIS.
f) The historical occurrence of impinged fish for the past five years.
g) If applicable, a demonstration that the facility's intake rate is commensurate with a closed-cycle recirculation system.
h) Other components to reduce impingement and/or entrainment of aquatic life.

3. Provide the following information for each CWIS to support your attached facility-specific BTA description:

a) The design capacity of the of the CWIS _____MGD
b) Maximum monthly average intake of the CWIS during the previous five years _____MGD
c) The month in which this flow reported in 3.b. occurred _____
d) The maximum through-screen design intake velocity _____feet/second (fps)

4. For facilities where the CWIS is located on a freshwater river or stream, provide the following information:

a) The source water's annual mean flow in MGD as available from USGS or other appropriate source _____ MGD
b) The design intake flow as a % of the source water's annual mean flow _____ % Attach calculations if equal to or less than 5% of annual mean flow.
c) The source water's 7Q10 _____ MGD
d) The design intake flow as a percent of the source water's 7Q10 _____%

5. Provide a map showing the location of each cooling water intake structure; NCCW Outfall(s) and CWIS features referred to in the BTA description. **Map attached?** ☐

F. Endangered Species Act Eligibility Information

Using the instructions in Appendix 2 of the NCCW GP, which of the following criteria apply to your facility? USFWS Criteria: A ☒ B ☐ C ☐

1. If you selected USFWS criteria B, has consultation with the U.S. Fish and Wildlife Service been completed?
yes☐ no☐

2. If consultation with US Fish & Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is "not likely to adversely affect" listed species or critical habitat received?
yes☐ no☐

3. Attach documentation of ESA eligibility for USFWS as required at Part 3.4 and Appendix 2 of the General Permit.
Documentation attached? Yes

4. Please indicate if your facility **directly intakes water for non-contact cooling** from any of the following waterbodies:
   - ☐ Merrimack River
   - ☐ Connecticut River
   - ☐ Piscataqua River
   - ☐ Taunton River

EPA will consult with the National Marine Fisheries Service on cooling water intakes covered under this permit in areas (in the above waterbodies) of the endangered Shortnose Sturgeon and Atlantic Sturgeon.

G. National Historic Properties Act Eligibility

1. Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility site or in proximity to the discharge? yes☐ no☒

2. Have any State or Tribal Historic Preservation Officers been consulted in this determination? yes☐ no☒
   If yes, attach the results of the consultation(s).

3. Which of the three National Historic Preservation Act scenarios listed in Appendix 3, Section C have you met?
   ☒ 1 ☐ 2 ☐ 3

H. Supplemental Information

Please provide any supplemental information, including antidegradation review information applicable to new or increased discharges. Attach any analytical data used to support the application. Attach any certification(s) required by the General Permit.

I. Signature Requirements

The NOI must be signed by the operator in accordance with the signatory requirements of 40 CFR § 122.22 (see below) including the following certification:

> I certify under penalty of law that (1) no biocides or other chemical additives except for those used for pH adjustment and/or dechlorination are used in the noncontact cooling water (NCCW) system; (2) the discharge consists solely of NCCW (to reduce temperature) and authorized pH adjustment and/or dechlorination chemicals; (3) the discharge does not come in contact with any raw materials, intermediate product, water product (other than heat) or finished product; (4) if the discharge of noncontact cooling water subsequently mixes with other wastewater (i.e. stormwater) prior to discharging to the receiving water, any monitoring provided under this permit will be only for noncontact cooling water; (5) where applicable, the facility has complied with the requirements of this permit specific to the Endangered Species Act and National Historic Preservation Act; and (6) this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.
>
> Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature _____ Date 16 MARCH 2015

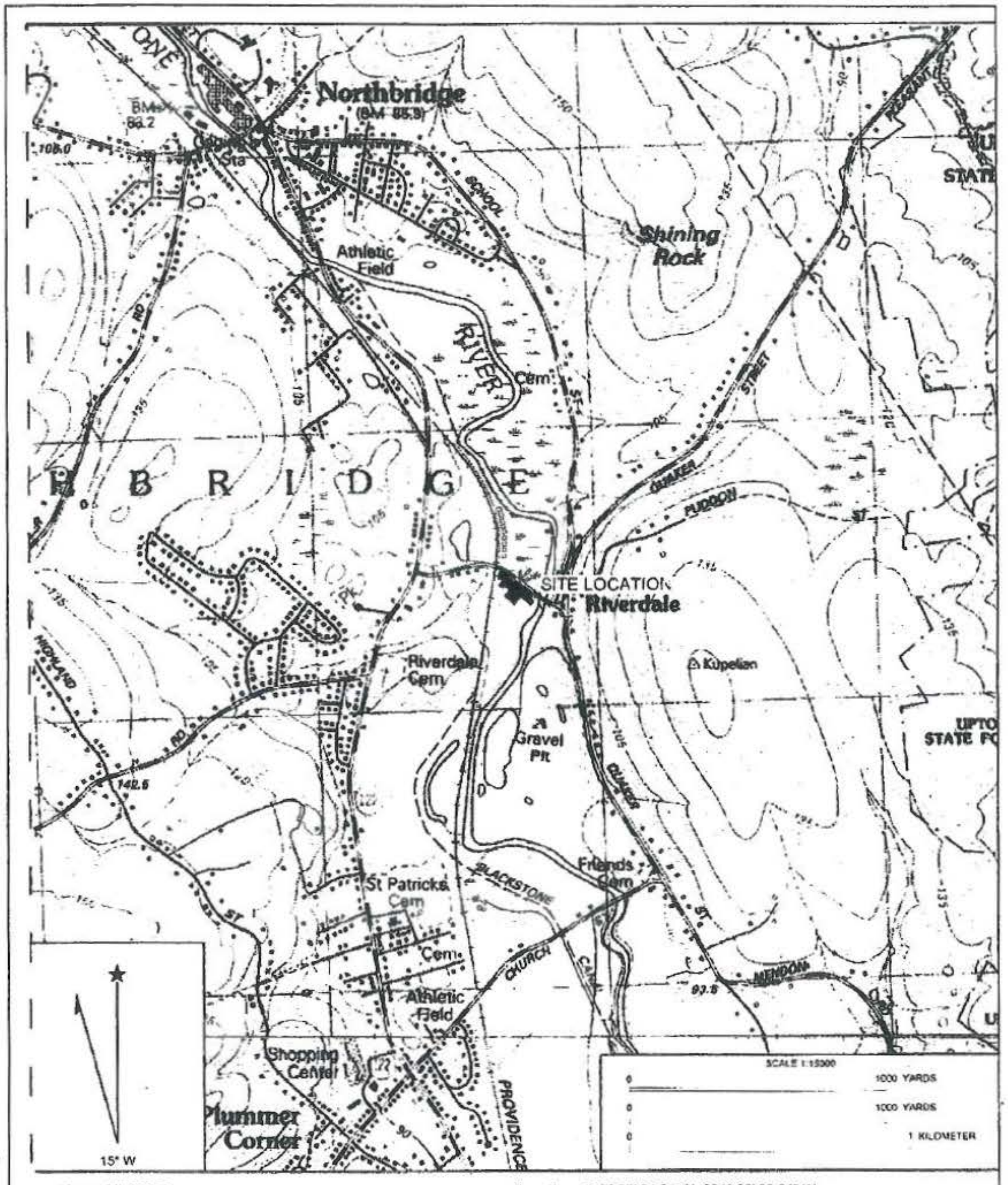
Printed Name and Title James M. Knott Jr. Executive Vice President

Federal regulations require this application to be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively, or,
3. For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

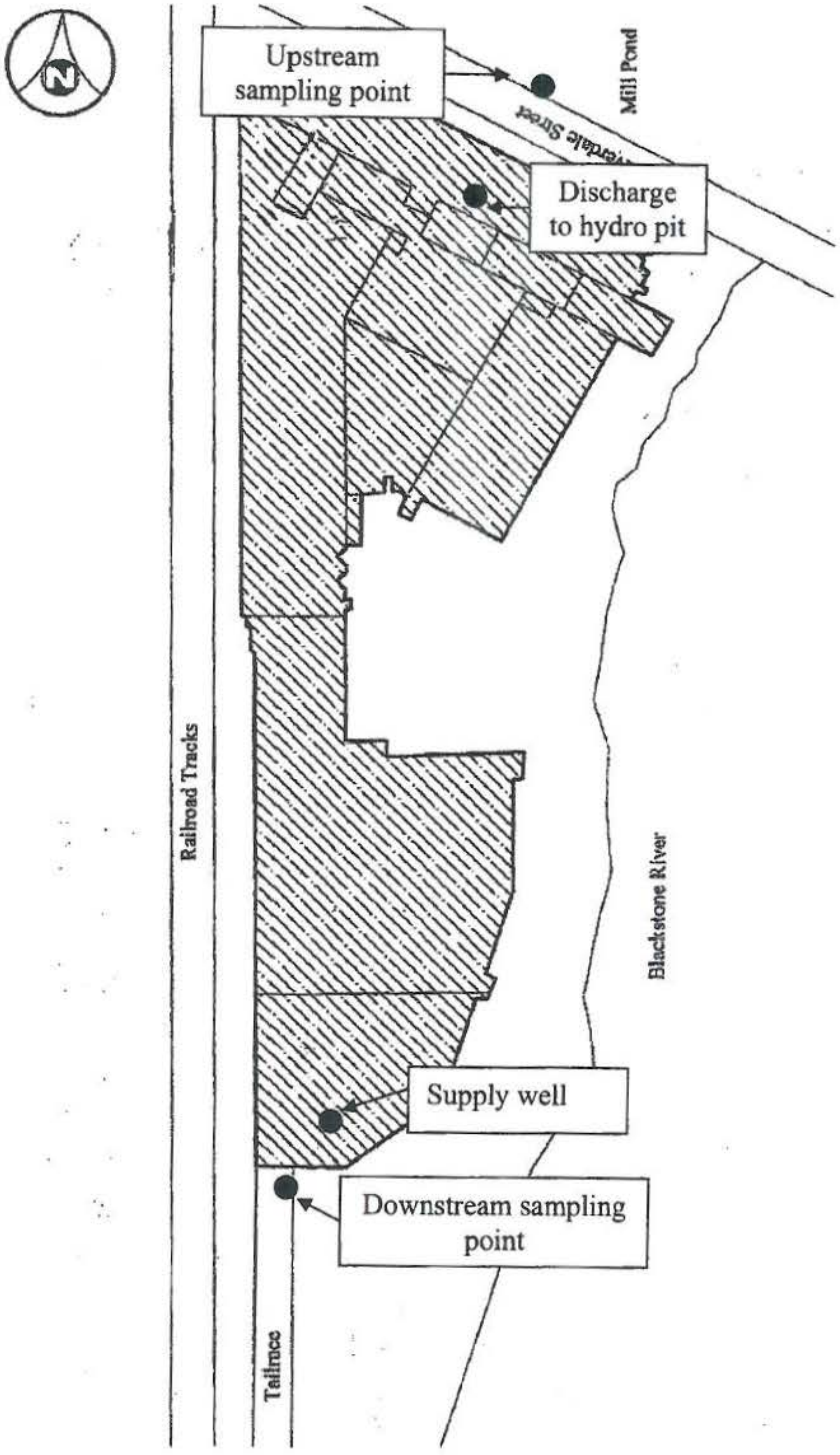
Topographic Map

Map Showing Location of Discharge and Sampling Points



Name: MILFORD
Date: 2/21/2008
Scale: 1 inch equals 1333 feet

Location: 042° 08' 21.27" N 071° 38' 28.64" W
Caption: FIGURE 1 - SITE LOCATION
NORTHBRIDGE, MASSACHUSETTS


Upstream sampling point
Mill Pond
Discharge to hydro pit
Railroad Tracks
Blackstone River
Supply well
Downstream sampling point
Tailrace

Calculations

Calculations

1. **Receiving Water Temperature Calculation:**

$$\Delta T_r = (m_p/m_r) * \Delta T_p$$

Where,

ΔT_r = change in river temperature in °F

m_p = Maximum daily volume of effluent in mgd

m_r = 7Q10 volume of river in mgd

ΔT_p = maximum change in temperature, effluent – influent in °F

At RMC:

ΔT_p = 31 °F

m_p = 0.190 mgd

Blackstone River at Riverdale Mills Corporation:

m_r = 29 mgd (from NPDES NCCW Estimated 7Q10 -7/1/2008)

ΔT_r = (0.190/29) * 31 = 0.20 °F

The estimated maximum temperature change in the receiving waters of the Blackstone River as a result of the non-contact cooling water discharge from Riverdale Mills Corporation is 0.20 degrees F.

2. **Dilution Factor Calculation using the formula for when the water supply is from the drainage basin:**

$$DF = [Q_R/(Q_P*1.55)] *0.9$$

Where,

DF = Dilution Factor

Q_R = Estimated 7Q10 low flow in cfs

Q_P = Plant's maximum design flow in mgd

At RMC:

Q_R = 45 cfs (estimated 7Q10 in Blackstone River at Riverdale)

Q_P = 0.19 mgd (maximum daily discharge of non-contact cooling water over recent period of record)

$$DF = [45/(0.19*1.55)]*0.9$$

DF = 137.5

The dilution factor calculated using the 7Q10 flow in the Blackstone River at Riverdale Mills Corporation and the maximum recorded discharge of non-contact cooling water is 137.5.

3. Conversion from cubic feet per second to million gallons per day

$$Q_R = 45cfs\ (estimated\ 7Q10\ in\ Blackstone\ River\ at\ Riverdale)$$

$$Q_R = 45\frac{ft^3}{s} * \frac{86400\ s}{1\ day} * \frac{7.4805\ gallons}{1\ ft^3} = 29{,}084{,}184\frac{gallons}{day} = 29.084\ MGD$$

Endangered Species Act Eligibility

Determination of Endangered Species Act Eligibility

The steps in Appendix 2 and the Endangered Species Consultation Page at http://www.fws.gov/northeast/newenglandfieldoffice/EndangeredSpec-Consultation_Project_Review.htm were followed. The Small Whorled Pagonia was the only Threatened Species found to occur in Worcester County. Its habitat consists of forests with somewhat poorly drained soils and/or seasonally high water table. The listed town for the Small Whorled Pagonia is Leominster which is far from where the non-contact cooling water (NCCW) discharge located in Northbridge, Massachusetts. In addition, the NCCW is discharged to a hydropower tailrace in which priority habitat does not occur.

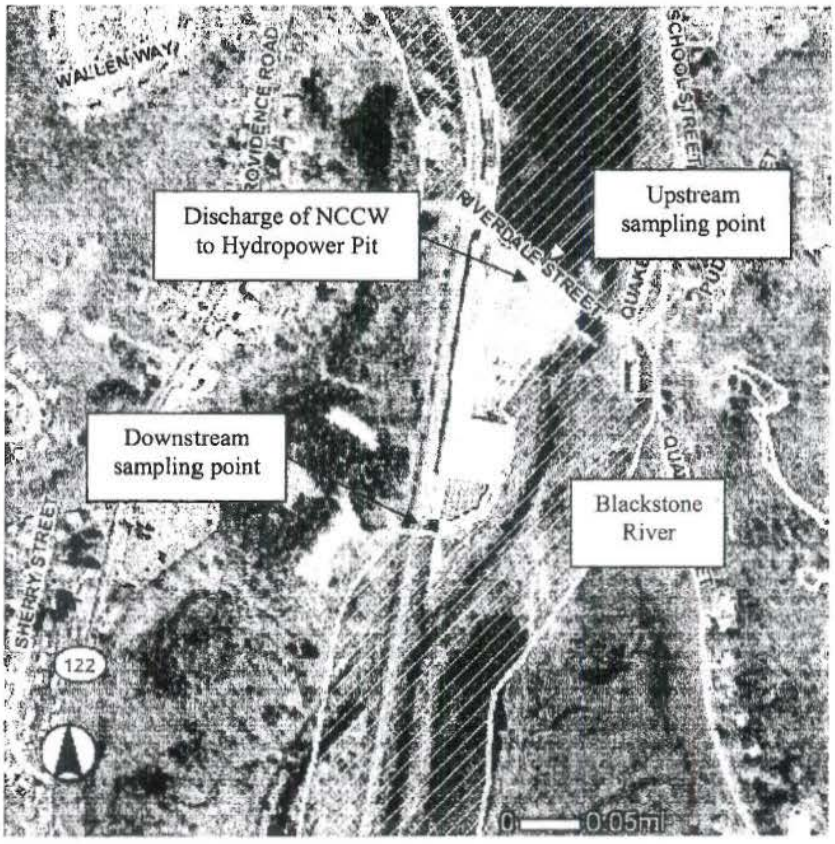
The Natural Heritage and Endangered Species Program in Massachusetts was consulted to determine the location of priority habitat of rare species and estimated habitat of rare wildlife in the proximity of the NCCW discharge. A map showing this habitat is provided. The discharge of NCCW is more than 1000 feet away from any priority or estimated habitat. Monitoring of temperature and pH has been performed under the terms of the General Permit and the temperature and pH of the receiving water when it reaches the priority habitat is at background levels. Consequently, it has been determined that there is no listed species and no potential habitat for any listed species within the action area of the NCCW discharge. A letter from the Fish and Wildlife Service stating that "no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are know to occur in the project area" is included.

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Barnstable	Piping Plover	Threatened	Coastal Beaches	All Towns
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Chatham
	Sandplain gerardia	Endangered	Open areas with sandy soils.	Sandwich and Falmouth.
	Northern Red-bellied cooter	Endangered	Inland Ponds and Rivers	Bourne (north of the Cape Cod Canal)
Berkshire	Bog Turtle	Threatened	Wetlands	Egremont and Sheffield
Bristol	Piping Plover	Threatened	Coastal Beaches	Fairhaven, Dartmouth, Westport
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Fairhaven, New Bedford, Dartmouth, Westport
	Northern Red-bellied cooter	Endangered	Inland Ponds and Rivers	Raynham and Taunton
Dukes	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Piping Plover	Threatened	Coastal Beaches	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Aquinnah and Chilmark
	Sandplain gerardia	Endangered	Open areas with sandy soils.	West Tisbury
Essex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Gloucester, Essex and Manchester
	Piping Plover	Threatened	Coastal Beaches	Glocester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury
Franklin	Northeastern bulrush	Endangered	Wetlands	Montague
	Dwarf wedgemussel	Endangered	Mill River	Whately
Hampshire	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Hadley
	Puritan tiger beetle	Threatened	Sandy beaches along the Connecticut River	Northampton and Hadley
	Dwarf wedgemussel	Endangered	Rivers and Streams.	Hadley, Hatfield, Amherst and Northampton
Hampden	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Southwick
Middlesex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Groton
Nantucket	Piping Plover	Threatened	Coastal Beaches	Nantucket
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Nantucket
	American burying beetle	Endangered	Upland grassy meadows	Nantucket
Plymouth	Piping Plover	Threatened	Coastal Beaches	Scituate, Marshfield, Duxbury, Plymouth, Wareham and Mattapoisett
	Northern Red-bellied cooter	Endangered	Inland Ponds and Rivers	Kingston, Middleborough, Carver, Plymouth, Bourne, and Wareham
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Plymouth, Marion, Wareham, and Mattapoisett.
Suffolk	Piping Plover	Threatened	Coastal Beaches	Winthrop
Worcester	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Leominster

-Eastern cougar and gray wolf are considered extirpated in Massachusetts.
-Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.
-Critical habitat for the Northern Red-bellied cooter is present in Plymouth County.

7/31/2008



Map showing priority habitat of rare species and estimated habitat of rare wildlife

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087
http://www.fws.gov/northeast/newenglandfieldoffice

January 2, 2009

To Whom It May Concern:

This project was reviewed for the presence of federally-listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

(http://www.fws.gov/northeast/newenglandfieldoffice/EndangeredSpec-Consultation.htm)

Based on the information currently available, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service (Service) are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under Section 7 of the Endangered Species Act is not required.

This concludes the review of listed species and critical habitat in the project location(s) and environs referenced above. No further Endangered Species Act coordination of this type is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Mr. Anthony Tur at 603-223-2541 if we can be of further assistance.

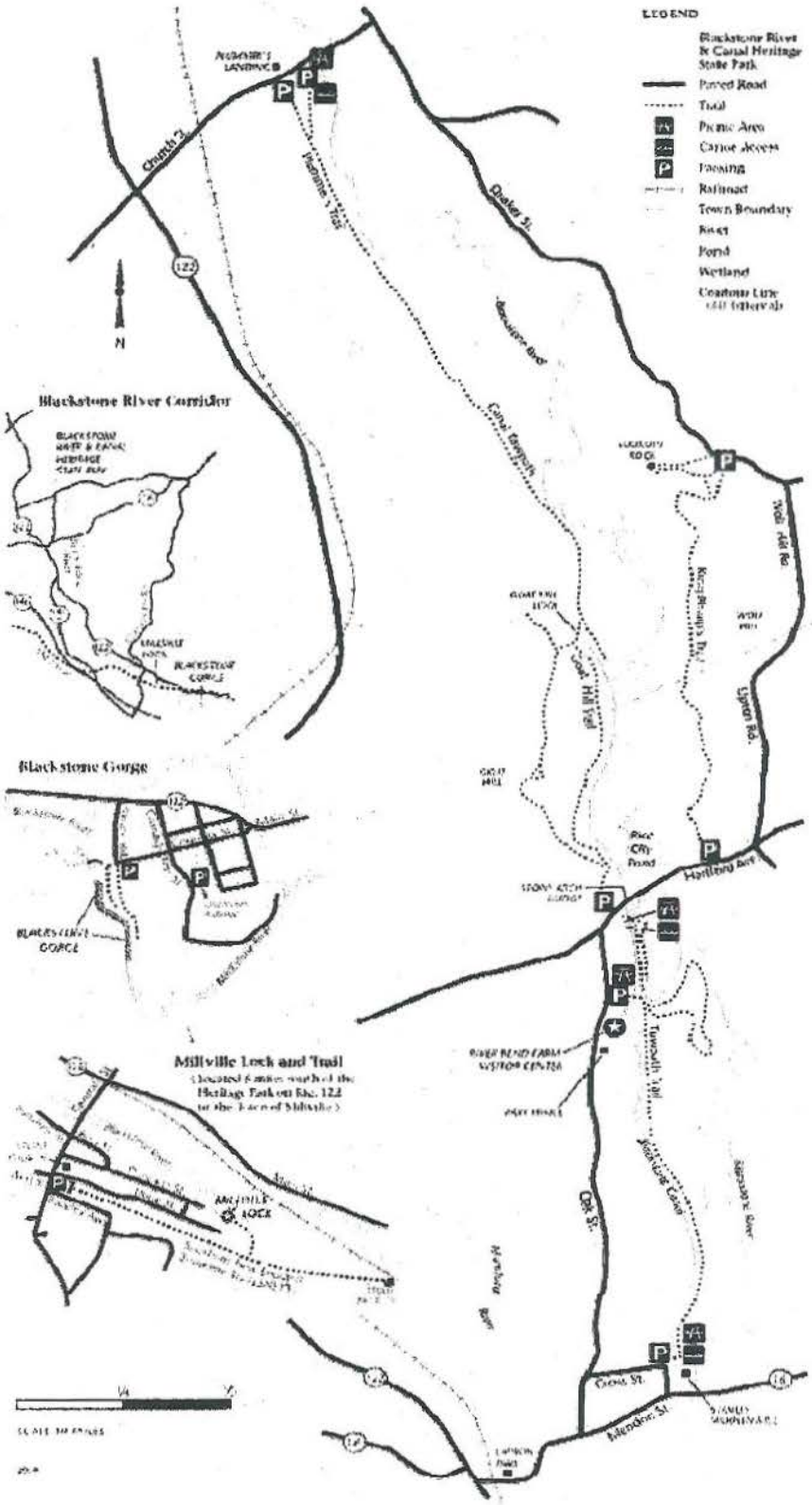
Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

National Historic Preservation Act Requirements

National Historic Preservation Act Requirements

A Review of the National Register of Historic Places listed on the National Park Service's web site resulted in the Blackstone Canal Historic District in Northbridge. A map of the Blackstone River & Canal Heritage State Park is shown on the following figure. This State Park is approximately 1 mile away from the NCCW discharge at Riverdale Mills Corporation and is outside of the action area. The NCCW discharge will not affect the Blackstone Canal Historic District in any way.



Map of Blackstone River and Canal Heritage State Park

Water Quality Results for a Groundwater Source

Water Chemistry of Non-Contact Cooling
Water Immediately Before Discharge to Tailrace

Metals	Effluent	SW-1	Units	RDL	Dilution Factor
Antimony ,Total	ND	-	mg/l	0.002	1
Arsenic, Total	ND	-	mg/l	0.001	1
Cadmium, Total	ND	-	mg/l	0.001	1
Chromium, Total	ND	-	mg/l	0.001	1
Chromium VI	ND	-	mg/l	0.01	1
Copper, Total	0.02684	-	mg/l	0.001	1
Iron, Total	ND	-	mg/l	0.05	1
Lead, Total	ND	-	mg/l	0.001	1
Mercury, Total	ND	-	mg/l	0.0002	1
Nickel, Total	0.00282	-	mg/l	0.001	1
Silver, Total	ND	-	mg/l	0.001	1
Zinc, Total	0.01382	-	mg/l	0.005	1
Chloride	82	-	mg/l	1	1
pH	6.5	-	SU	N/A	1
Gross Alpha	1.7	-	pCi/l	1.5	1
Radium 226	0.2	-	pCi/l	0.1	1
Radium 228	ND	-	pCi/l	0.6	1
Uranium	ND	-	pCi/l	0.5	1
Uranium	ND		ug/l	0.7	1
Hardness	-	79	mg/l	0.66	1

Effluent discharges to tailtrace from receiving tank
SW-1 is upstream of discharge point
The source of discharge is groundwaer (per AEN)

Laboratory Reports – Alpha Analytical

Chain of Custody

ALPHA ANALYTICAL

ANALYTICAL REPORT

Lab Number:	L1501808
Client:	Mabbett & Associates 5 Alfred Circle Bedford, MA 01730
ATTN:	Mike Larimore
Phone:	(781) 275-6050
Project Name:	RIVERDALE MILLS NCCW
Project Number:	01520015
Report Date:	02/04/15

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: RIVERDALE MILLS NCCW
Project Number: 01520015

Lab Number: L1501808
Report Date: 02/04/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1501808-01	EFFLUENT	WATER	130 RIVERDALE ST, NORTHBRIDGE, MA	01/28/15 13:15	01/28/15
L1501808-02	SW-1	WATER	130 RIVERDALE ST, NORTHBRIDGE, MA	01/28/15 13:30	01/28/15

Project Name:	RIVERDALE MILLS NCCW	**Lab Number:**	L1501808
Project Number:	01520015	**Report Date:**	02/04/15

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	RIVERDALE MILLS NCCW	**Lab Number:**	L1501808
Project Number:	01520015	**Report Date:**	02/04/15

Case Narrative (continued)

Report Submission

The analyses of Uranium, Radium 226, Radium 228, and Gross Alpha were subcontracted, and the results will be issued under separate cover.

Sample Receipt

At the client's request, the analysis of TRC was cancelled.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 02/04/15

METALS

Project Name: RIVERDALE MILLS NCCW
Project Number: 01520015
Lab Number: L1501808
Report Date: 02/04/15

SAMPLE RESULTS

Lab ID: L1501808-01
Client ID: EFFLUENT
Sample Location: 130 RIVERDALE ST, NORTHBRIDGE,
Matrix: Water

Date Collected: 01/28/15 13:15
Date Received: 01/28/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Antimony, Total	ND		mg/l	0.00200	--	1	02/03/15 14:07	02/03/15 17:48	EPA 3005A	3,200.8	KL
Arsenic, Total	ND		mg/l	0.00100	--	1	02/03/15 14:07	02/03/15 17:48	EPA 3005A	3,200.8	KL
Cadmium, Total	ND		mg/l	0.00100	--	1	02/03/15 14:07	02/03/15 17:48	EPA 3005A	3,200.8	KL
Chromium, Total	ND		mg/l	0.00100	--	1	02/03/15 14:07	02/03/15 17:48	EPA 3005A	3,200.8	KL
Copper, Total	0.02684		mg/l	0.00100	--	1	02/03/15 14:07	02/03/15 17:48	EPA 3005A	3,200.8	KL
Iron, Total	ND		mg/l	0.0500	--	1	02/03/15 12:37	02/03/15 16:51	EPA 3005A	19,200.7	JH
Lead, Total	ND		mg/l	0.00100	--	1	02/03/15 14:07	02/03/15 17:48	EPA 3005A	3,200.8	KL
Mercury, Total	ND		mg/l	0.00020	--	1	02/03/15 16:04	02/04/15 10:19	EPA 245.1	3,245.1	AB
Nickel, Total	0.00282		mg/l	0.00100	--	1	02/03/15 14:07	02/03/15 17:48	EPA 3005A	3,200.8	KL
Silver, Total	ND		mg/l	0.00100	--	1	02/03/15 14:07	02/03/15 17:48	EPA 3005A	3,200.8	KL
Zinc, Total	0.01382		mg/l	0.00500	--	1	02/03/15 14:07	02/03/15 17:48	EPA 3005A	3,200.8	KL

Project Name:	RIVERDALE MILLS NCCW	**Lab Number:**	L1501808
Project Number:	01520015	**Report Date:**	02/04/15

SAMPLE RESULTS

Lab ID:	L1501808-02	Date Collected:	01/28/15 13:30
Client ID:	SW-1	Date Received:	01/28/15
Sample Location:	130 RIVERDALE ST, NORTHBRIDGE,	Field Prep:	Not Specified
Matrix:	Water		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Westborough Lab											
Hardness	79		mg/l	0.66	NA	1	02/03/15 12:37	02/03/15 17:34	EPA 3005A	19,200.7	JH

Project Name: RIVERDALE MILLS NCCW
Project Number: 01520015
Lab Number: L1501808
Report Date: 02/04/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-02 Batch: WG760197-1										
Iron, Total	ND		mg/l	0.05	--	1	02/03/15 12:37	02/03/15 16:44	19,200.7	JH

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Westborough Lab for sample(s): 01-02 Batch: WG760197-1										
Hardness	ND		mg/l	0.66	NA	1	02/03/15 12:37	02/03/15 16:44	19,200.7	JH

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG760239-1										
Antimony, Total	ND		mg/l	0.00200	--	1	02/03/15 14:07	02/03/15 17:36	3,200.8	KL
Arsenic, Total	ND		mg/l	0.00100	--	1	02/03/15 14:07	02/03/15 17:36	3,200.8	KL
Cadmium, Total	ND		mg/l	0.00100	--	1	02/03/15 14:07	02/03/15 17:36	3,200.8	KL
Chromium, Total	ND		mg/l	0.00100	--	1	02/03/15 14:07	02/03/15 17:36	3,200.8	KL
Copper, Total	ND		mg/l	0.00100	--	1	02/03/15 14:07	02/03/15 17:36	3,200.8	KL
Lead, Total	ND		mg/l	0.00100	--	1	02/03/15 14:07	02/03/15 17:36	3,200.8	KL
Nickel, Total	ND		mg/l	0.00100	--	1	02/03/15 14:07	02/03/15 17:36	3,200.8	KL
Silver, Total	ND		mg/l	0.00100	--	1	02/03/15 14:07	02/03/15 17:36	3,200.8	KL
Zinc, Total	ND		mg/l	0.00500	--	1	02/03/15 14:07	02/03/15 17:36	3,200.8	KL

Prep Information

Digestion Method: EPA 3005A

Project Name: RIVERDALE MILLS NCCW
Project Number: 01520015
Lab Number: L1501808
Report Date: 02/04/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01 Batch: WG760262-1										
Mercury, Total	ND		mg/l	0.00020	--	1	02/03/15 16:04	02/04/15 10:15	3,245.1	AB

Prep Information

Digestion Method: EPA 245.1

Matrix Spike Analysis
Batch Quality Control

Project Name: RIVERDALE MILLS NCCW
Project Number: 01520015

Lab Number: L1501808
Report Date: 02/04/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG760197-4 QC Sample: L1501808-01 Client ID: EFFLUENT												
Iron, Total	0.0500J	1	1.0	95		-	-		75-125	-		20
Total Hardness by SM 2340B - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG760197-4 QC Sample: L1501808-01 Client ID: EFFLUENT												
Hardness	50	66.2	110	91		-	-		75-125	-		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG760239-4 QC Sample: L1501808-01 Client ID: EFFLUENT												
Antimony, Total	ND	0.5	0.516	103		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.134	112		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.0586	115		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.205	102		-	-		70-130	-		20
Copper, Total	0.02684	0.25	0.306	112		-	-		70-130	-		20
Lead, Total	ND	0.51	0.559	110		-	-		70-130	-		20
Nickel, Total	0.00282	0.5	0.544	108		-	-		70-130	-		20
Silver, Total	ND	0.05	0.0522	104		-	-		70-130	-		20
Zinc, Total	0.01382	0.5	0.584	114		-	-		70-130	-		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG760262-4 QC Sample: L1501808-01 Client ID: EFFLUENT												
Mercury, Total	ND	0.005	0.00504	101		-	-		70-130	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: RIVERDALE MILLS NCCW
Project Number: 01520015

Lab Number: L1501808
Report Date: 02/04/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG760197-3 QC Sample: L1501808-01 Client ID: EFFLUENT						
Iron, Total	ND	ND	mg/l	NC		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG760239-3 QC Sample: L1501808-01 Client ID: EFFLUENT						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	ND	ND	mg/l	NC		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	0.02684	0.02614	mg/l	3		20
Lead, Total	ND	ND	mg/l	NC		20
Nickel, Total	0.00282	0.00290	mg/l	3		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.01382	0.01447	mg/l	5		20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG760262-3 QC Sample: L1501808-01 Client ID: EFFLUENT						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: RIVERDALE MILLS NCCW
Project Number: 01520015

Lab Number: L1501808
Report Date: 02/04/15

SAMPLE RESULTS

Lab ID: L1501808-01
Client ID: EFFLUENT
Sample Location: 130 RIVERDALE ST, NORTHBRIDGE,
Matrix: Water

Date Collected: 01/28/15 13:15
Date Received: 01/28/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chloride	82.		mg/l	1.0	--	1	-	02/03/15 10:53	30,4500CL-E	LA
pH (H)	6.5		SU	-	NA	1	-	01/28/15 19:08	30,4500H+-B	AS
Chromium, Hexavalent	ND		mg/l	0.010	--	1	01/28/15 22:45	01/28/15 23:04	30,3500CR-B	MR

Project Name: RIVERDALE MILLS NCCW
Project Number: 01520015
Lab Number: L1501808
Report Date: 02/04/15

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG758984-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	01/28/15 22:45	01/28/15 23:03	30,3500CR-B	MR
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG760108-1										
Chloride	ND		mg/l	1.0	--	1	-	02/03/15 10:03	30,4500CL-E	LA

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVERDALE MILLS NCCW
Project Number: 01520015

Lab Number: L1501808
Report Date: 02/04/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s): 01		Batch: WG758984-2					
Chromium, Hexavalent	97		-		85-115	-		20
General Chemistry - Westborough Lab	Associated sample(s): 01		Batch: WG758990-1					
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab	Associated sample(s): 01		Batch: WG760108-2					
Chloride	93		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: RIVERDALE MILLS NCCW
Project Number: 01520015

Lab Number: L1501808
Report Date: 02/04/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG758984-4 QC Sample: L1501808-01 Client ID: EFFLUENT												
Chromium, Hexavalent	ND	0.1	0.098	98		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG760108-4 QC Sample: L1501992-02 Client ID: MS Sample												
Chloride	62	20	78	80		-	-		58-140	-		7

Lab Duplicate Analysis
Batch Quality Control

Project Name: RIVERDALE MILLS NCCW
Project Number: 01520015

Lab Number: L1501808
Report Date: 02/04/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG758984-3 QC Sample: L1501808-01 Client ID: EFFLUENT						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG758990-2 QC Sample: L1501808-01 Client ID: EFFLUENT						
pH (H)	6.5	6.6	SU	2		5
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG760108-3 QC Sample: L1501992-02 Client ID: DUP Sample						
Chloride	62	61	mg/l	2		7

Project Name: RIVERDALE MILLS NCCW
Project Number: 01520015

Lab Number: L1501808
Report Date: 02/04/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1501808-01A	Plastic 500ml HNO3 preserved	A	<2	3.0	Y	Absent	CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),AG-2008T(180),AS-2008T(180),HG-U(28),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1501808-01B	Plastic 950ml unpreserved	A	7	3.0	Y	Absent	CL-4500(28),HEXCR-3500(1),PH-4500(.01)
L1501808-02A	Plastic 250ml HNO3 preserved	A	<2	3.0	Y	Absent	HARDU(180)

*Values in parentheses indicate holding time in days

Project Name:	RIVERDALE MILLS NCCW	**Lab Number:**	L1501808
Project Number:	01520015	**Report Date:**	02/04/15

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

Report Format: Data Usability Report

Project Name:	RIVERDALE MILLS NCCW	**Lab Number:**	L1501808
Project Number:	01520015	**Report Date:**	02/04/15

Data Qualifiers

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name:	RIVERDALE MILLS NCCW	**Lab Number:**	L1501808
Project Number:	01520015	**Report Date:**	02/04/15

REFERENCES

3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 1/28/15

ALPHA Job #: L1501808

ALPHA Analytical
WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: Mabbett & Associates
Address: 5 Alfred Circle

Phone: 781 275-6050
Fax:
Email: lorch@mabbett.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Contract Cooling Water
Project Location: 130 Riverdale St, Northbridge, MA
Project #: 015 20015
Project Manager: Mike Larimore
ALPHA Quote #: 201506 9

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: 02-04-15 Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program NPDES Criteria Non-Contact Cooling Water

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☐ Yes ☒ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All *CAM* methods for inorganic analyses require MS every 20 soil samples)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Hardness	Total Sb, As, Cd, Cr, Cu, Ni, Ag, Zn, Pb	Hex Chrome	pH	Uranium	Rad 228	Rad 226	6255 Alpha TAC	SAMPLE HANDLING	Sample Specific Comments	TOTAL # BOTTLES
01808 - 01	Effluent	1/28/15	13:15	ZQ LAB	E		X	X	X	X	X	X	X			8
02	SW-1	1/28/15	13:30	ZQ LAB	SW	X										1
Container Type						P	P		P	P	P	P	P	P	P	31
Preservative						C	C		A	A	C	C	C	C	A	

SAMPLE HANDLING
Filtration
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
Zach Lorch	1/28/15 15:00		1/28/15 1500

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 18-Jan-2010)

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

DATE	February 24, 2015
HRI PROJECT	009-458
HRI SERIES NO	A361/15
DATE REC'D.	1/30/2015
CUST. P.O.#	L1501814

Alpha Analytical, Inc.
Karyn Raymond
Eight Walkup Drive
Westborough, MA 01581-1019

REPORT OF ANALYSIS

SAMPLE NO. A361/15-1

SAMPLE IDENTIFICATION: L1501814 - Effluent
Sampled 01/28/2015 @ 1315

PARAMETER	RESULT	DETECTION LIMIT	METHOD	ANALYSIS DATE	ANALYST
Gross Alpha (+-Precision*), pCi/l (T)	1.7(+-1.9)	1.5	SM 7110 B	2/12/2015 @ 0915	LD
Gross Alpha (+-Precision*), pCi/l (T)***	1.7(+-1.9)	1.5	SM 7110 B	2/12/2015 @ 0915	LD
Radium-226 (+-Precision*), pCi/l (T)	0.2(+-0.2)	0.1	SM 7500-Ra B	2/13/2015 @ 1405	LD/AN
Radium-228 (+-Precision*), pCi/l (T)	0.0(+-0.6)	0.6	EPA Ra-05	2/10/2015 @ 1357	BS
Uranium, pCi/l (T)**	<0.5	0.5	ASTM D2907-97	2/17/2015 @ 0045	BCD
Uranium, ug/l (T)	<0.7	0.7	ASTM D2907-97	2/17/2015 @ 0045	BCD

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Certification ID's: CO/EPA CO00008; CT PH-0152; KS E-10265; NYSELAP (NELAC Certified) 11417; RI LAO00284; TX T104704256-11-2; WI 998376610

**Uranium results reported assuming the activity of natural U = 6.77 x 10-7 Ci/g.
***Less Radon and Uranium.

By: J. Hogan
Jerry D. Hogan, Ph.D.
Director of Analytical Laboratories

CODES: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Recoverable
(PD) = Potentially Dissolved < = Less Than