1/28/09
received

JFK Environmental Services, LLC
115 Glen Avenue
Upton, MA 01568
508-529-6085
JayneKnott@charter.net

January 23, 2009

US EPA, Region 1
NCCW GP Processing
Municipal Assistance Unit (CMU)
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Re: **Noncontact Cooling Water General Permit Notice of Intent**
Permit No. MAG250279

To Whom It May Concern:

On behalf of my client, Riverdale Mills Corporation located at 130 Riverdale Street, Northbridge, Massachusetts, I am submitting this renewal application for General Permit No. MAG250279 for the discharge of non-contact cooling water to the Blackstone River.

Enclosed, please find the Notice of Intent (NOI) for the Noncontact Cooling Water General Permit with the required attachments. Please contact me at JayneKnott@charter.net, 508-529-6085 (work), or 508-344-2831 (cell) if you have any questions regarding this application or if you need additional information. Thank you.

Very truly yours,
JFK Environmental Services, LLC

Jayne F. Knott

Jayne F. Knott, MS
Environmental Engineer

Enclosures
cc. Massachusetts Department of Environmental Protection
James M. Knott Sr., Riverdale Mills Corporation

Notice of Intent (NOI)
Noncontact Cooling Water General Permit

APPENDIX 5

Suggested Form for Notice of Intent (NOI) for the Noncontact Cooling Water General Perm

1. General facility information. Please provide the following information about the facility.

a) Name of facility: Riverdale Mills Corporation		**Type of Business:** Manufacturing
Facility Location Address : 130 Riverdale Street Northbridge, MA 01534 **longitude:** 42 08' 22" **latitude:** 71 38' 26"	**Facility SIC codes:** 3496	**Facility Mailing Address (if not location address)**
b) Name of facility owner: James M. Knott Sr.		**Email address of owner:** jmknottsr@riverdale.com
Owner's Tel #: (508) 234-8715 **Owner's Fax #** (508) 234-9595		**Owner is (check one): 1. Federal____ 2. State _____ 3.Tribal___** **4. Private ✓ 5. Other _____(Describe)**
Address of owner (if different from facility address) 456 Hill Street Whitinsville, MA 01588		

Legal name of Operator, if not owner: Owner

Operator Contact Name: _____

Operator Tel Number: _____ **Fax Number:** _____

Operator's email: _____

Operator Address (if different from owner)

d) Attach topographic map indicating the locations of the facility and the receiving water; all NCCW discharge points; upstream an downstream monitoring points. Map attached? ✓

e) Check Yes or No for the following:

1. **Has a prior NPDES permit been granted for the discharge? Yes ✓ No____ If Yes, Permit Number:** MAG250279
2. **Is the discharge a "new discharge" as defined by 40 CFR Section 122.22? Yes_____ No ✓**
3. **Is the facility covered by an individual NPDES permit? Yes_____ No ✓ If Yes, Permit Number ____**
4. **Is there a pending application on file with EPA for this discharge? Yes _____ No ✓ If Yes, date of submittal:**

2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed)

a) **Name of receiving water into which discharge will occur:** Blackstone River
State Water Quality Classification: B **Freshwater:** X **Marine Water:** _____

b) **Describe the discharge activities for which the owner/applicant is seeking coverage:** Non-contact cooling water

c) **FOR MASSACHUSETTS FACILITIES ONLY: Engineering Calculations: Submit the completed engineering calculation of the surface water temperature rise as shown in Attachment A of the General Permit. Check if attached:** ✓

d) **Number of outfalls** 1

For each outfall: Discharge to hydropower pit

e) **What is the maximum daily and average monthly flow of the discharge? Note that EPA will use the flow reported here as the facility's permitted effluent flow limit. Max Daily Flow** 190,000 **GPD Average Flow** 154,000 **GPD**

f) **What is the maximum daily and average monthly temperature of the discharge (in degrees F)? Max Temp.** 81 **Average Temp.** 67

g) **What is the maximum and minimum monthly pH of the discharge (in s.u.)? Max pH** 6.71 **Min pH** 5.75

h) **FOR MASSACHUSETTS FACILITIES ONLY: Is the source water of the NCCW potable water? Yes** _____ **No** ✓ **If Yes, EPA will calculate the Total Residual Chlorine limit for facilities located in Massachusetts.**

i) **Is the discharge continuous? Yes** ✓ **No** _____ **If no, is the discharge periodic (P) (occurs regularly, i.e., monthly or seasonally, but is not continuous all year) or intermittent (I) (occurs sometimes but not regularly) or both (B)** _____
If (P), number of days or months per year of the discharge _____ **and the specific months of discharge** _____;
If (I), number of days/year there is a discharge _____

j) **Latitude and longitude of each discharge within 100 feet: outfall 1: long.** 71 38' 27" **lat.** 42 08' 22" **; outfall 2: long.** _____ **lat.** _____;
outfall .3: long. _____ **lat.** _____ **(See** http://www.epa.gov/tri/report/siting_tool**)**

k) **Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water** 45 **cfs**
Please attach any calculation sheets used to support stream flow and dilution calculations. See General Permit Attachment B for equations and additional information.

MASSACHUSETTS FACILITIES: See Part 3.4 and Appendix 1 of the General Permit for more information on ACEC.
Areas of Critical Environmental Concern (ACEC): Does the discharge occur in an ACEC? Yes _____ **No** ✓
If yes, provide the name of the ACEC: _____

3. NCCW Source Water Information. Please provide information about the NCCW source water, using separate sheets as necessary:

a) Indicate source of the NCCW (i.e., municipal water supply, private well, surface water withdrawal, groundwater):

Source: Private Well

Name of Source Water: Overburden well

Is the source registered/permitted under MA Water Management Act or NHDES Water User Registration Rule (Env Wq 2202)?

Yes ✓ **No**_____

If yes, registration number: SP-2-12-216.02

b) If source water is surface water:

i) Is it a freshwater river or stream Yes_____ **No**_____

ii) Is it a lake? _____ **reservoir?**_____

iii) Is it tidal river? _____ **estuary?** _____ **ocean?**_____

c) Is the source water groundwater? Yes X **No** _____ **If yes, see Appendix 8 and submit effluent and surface water test results, as required in Part 5.4 of the General Permit.**

d) Does the facility use both a primary and backup source of noncontact cooling water?

Yes _____ **No** ✓

If yes, attach information that identifies and explains the primary and backup sources of noncontact cooling water for and how often the backup supply was used in last three years.

4. Best Technology Available for CWIS

Are you subject to BTA requirements at Part 4.2 of the General Permit? (Facility's discharge is covered by this General Permit and the facility withdraws noncontact cooling water from surface source water). Yes_____ **No** ✓ **If No, explain:** RMC withdraws non-contact cooling water from groundwater.

If YES, attach the facility-specific BTA description as required in Part 4.3 of the General Permit. For additional information and guidance, see Questions 13-23 of the NCCW Fact Sheet, posted at http://www.epa.gov/region1/npdes/nccwgp.html. **Provide a map showing the location of each CWIS intake structure; NCCW outfall(s) and any CWIS feature referred to in the BTA description.**

Include in your description:

_____ **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**

_____ **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**

_____ **The attributes of the current CWIS**

_____ **Design measures of the CWIS**

_____ **Operation measures of the CWIS**

_____ **Historical occurrence of impinged fish for the past five years**

_____ **If applicable, a demonstration that the facility's intake rate is commensurate with a closed-cycle recirculation system**

_____ **Other components to reduce impingement and/or entrainment of aquatic life**

4. BTA FOR CWIS CONTINUED:

Provide the following information for each CWIS to support your attached facility-specific BTA description.
Design capacity of the of the CWIS _____MGD
Maximum monthly average intake of the CWIS during the previous five years _____MGD Month in which this flow occurred _____
Maximum through-screen design intake velocity _____feet/second (fps)

For facilities where the CWIS is located on a freshwater river or stream, provide the following information:
The source water's annual mean flow _____cubic feet/second (cfs) as available from USGS or other appropriate source
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.
The source water's 7Q10 _____cfs. See Attachment B of the General Permit for more information on 7Q10 determinations.
The design intake flow as a percent of the source water's 7Q10 _____

5. Contaminant Information

If applicable, attach a listing of all non-toxic pH neutralization and/or dechlorination chemicals used, including chemical name and manufacturer; maximum and average daily quantity used as well as the maximum and average daily expected concentrations (mg/l) in the NCCW discharge, and the vendor's reported aquatic toxicity (NOAEL and/or LC_{50} in percent for aquatic organism(s)).

6. Determination of Endangered Species Act Eligibility: Provide documentation of ESA eligibility as required at Part 3.4 and Appendix 2, Part C, Step 4, of the General Permit. In addition, respond to the following questions.

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes____No_✓_
b) Has any consultation with the federal services been completed? Yes_✓_ No___
c) Is consultation underway? Yes____ No_✓_
d) What were the results of the consultation with the U.S. Fish and Wildlife Service and/or NOAA Fisheries Service (check one):
a "no jeopardy" opinion _✓_or written concurrence____ on a finding that the discharges are not likely to adversely affect any endangered species or
e) Which of the five eligibility criteria listed in Appendix 2, Section B (A,B,C,D or E) have you met? _A_
f) Attach a copy of the most current federal listing of endangered and threatened species from the USF&W web site listed in Appendices 2, 2.1 and 4

7. Documentation of National Historic Preservation Act requirements: Please respond to the following questions:

a) 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 _✓_
b) Have any State or Tribal historic preservation officers been consulted in this determination? Yes _____ or No _✓_ If yes, attach the results of the consultation(s).
c) Which of the three National Historic Preservation Act requirements listed in Appendix 3, Section C (1,2 o3) have you met? _1_

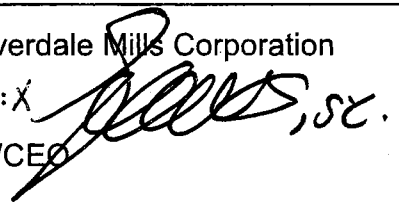
8. Supplemental Information: Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit

9. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 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.

Facility Name: Riverdale Mills Corporation

Operator signature: X 

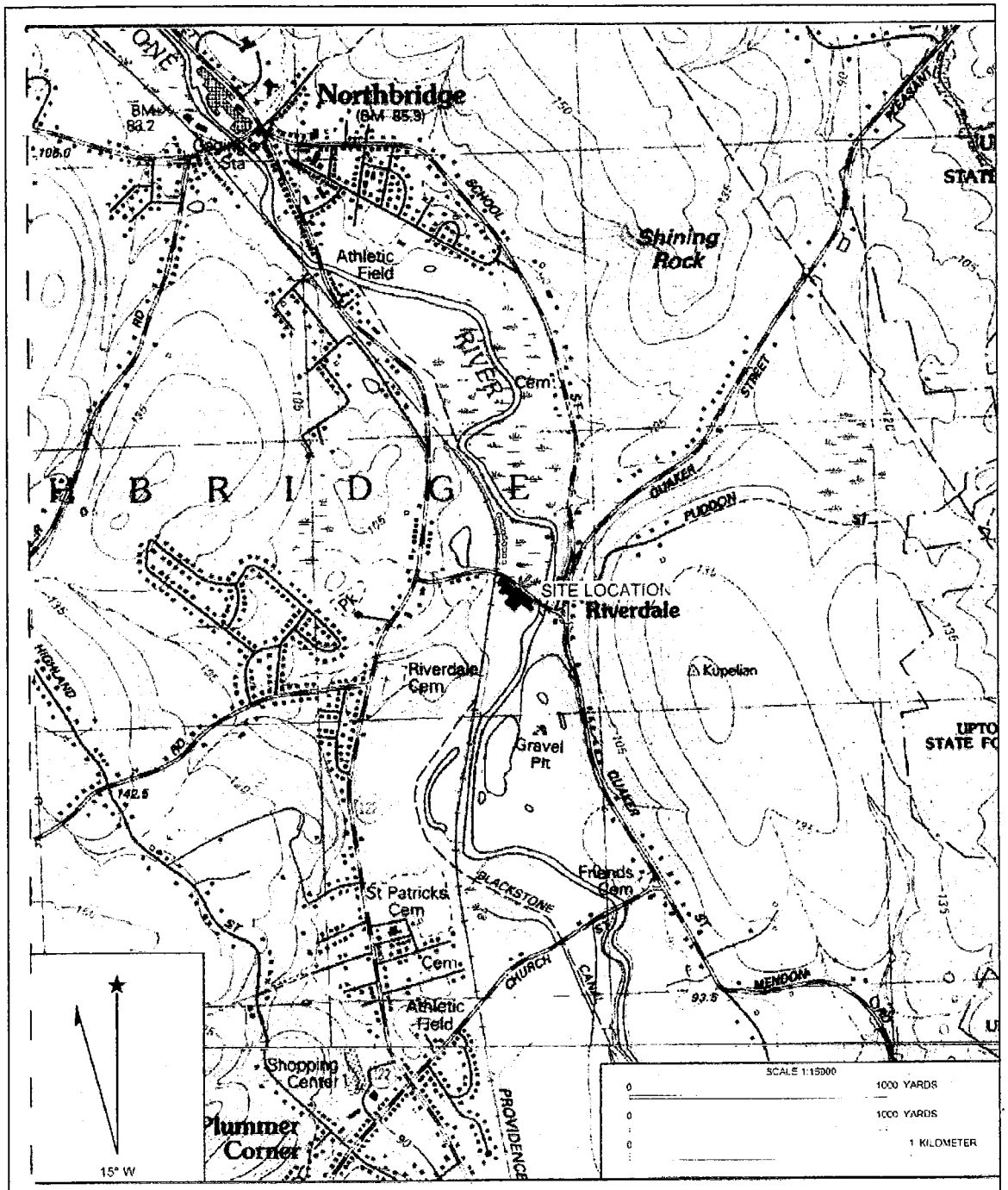
Title: President/CEO

Date: 1/14/09

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.

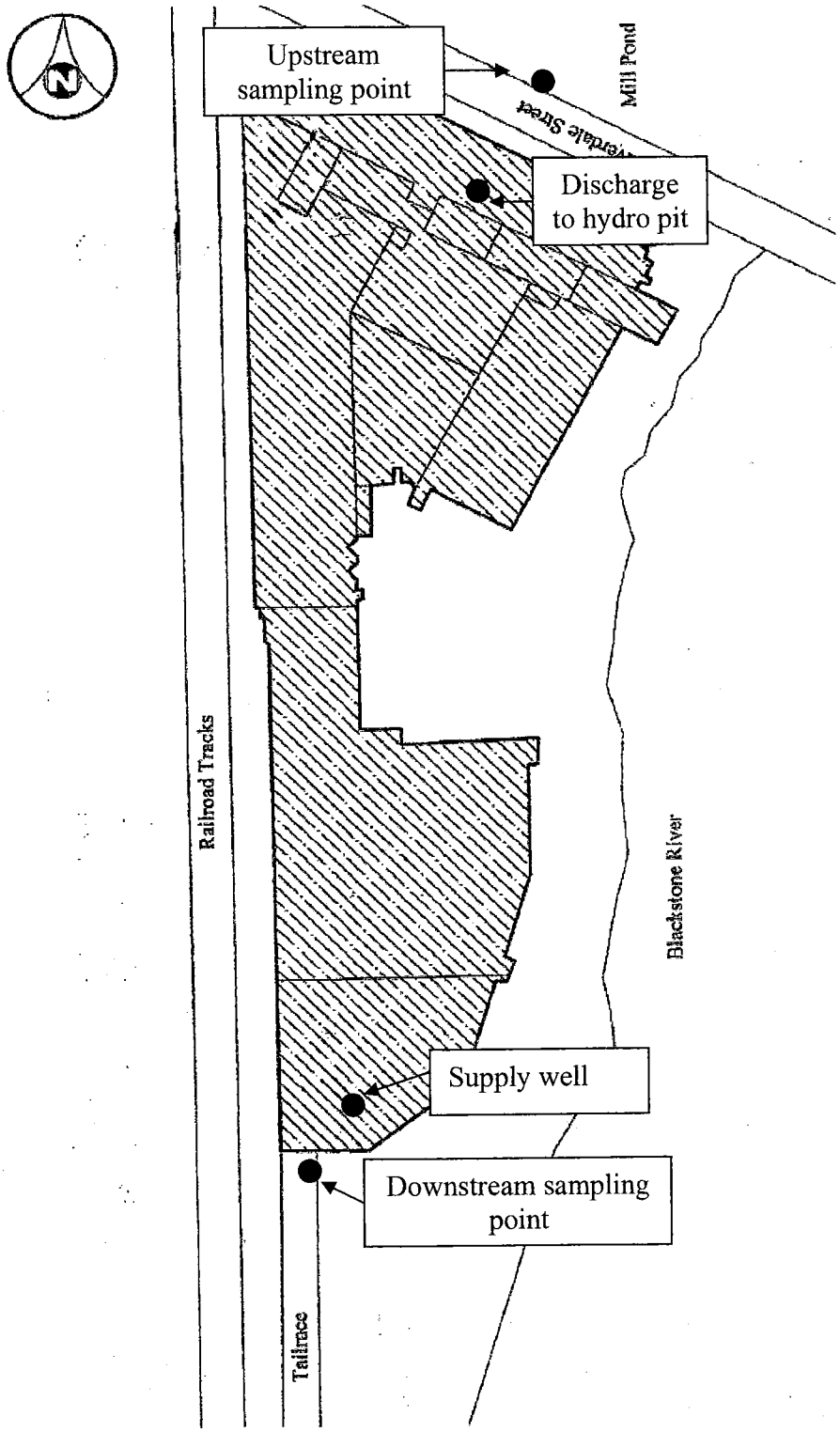
Topographic Map

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.

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.

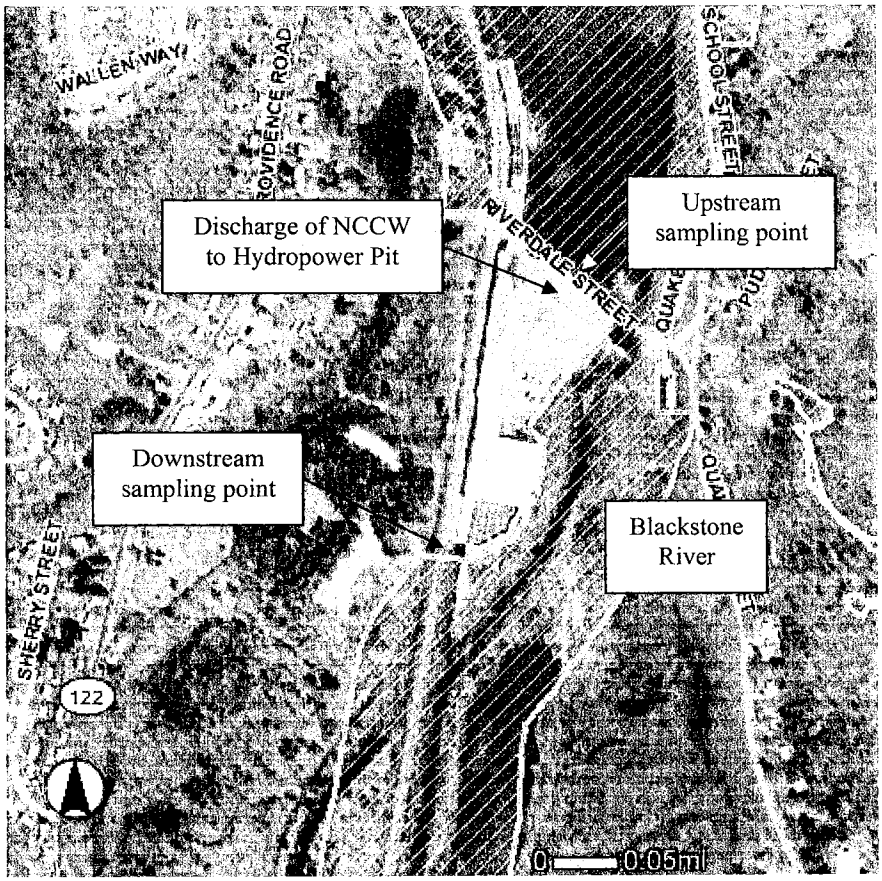
The Natural Heritage and Endangered Species Program in Massachusetts was consulted to determine the location of priority habitat of rare species and estimated habitat of rare wildlife in the proximity of the NCCW discharge. A map showing this habitat is provided. The discharge of NCCW is more than 1000 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.

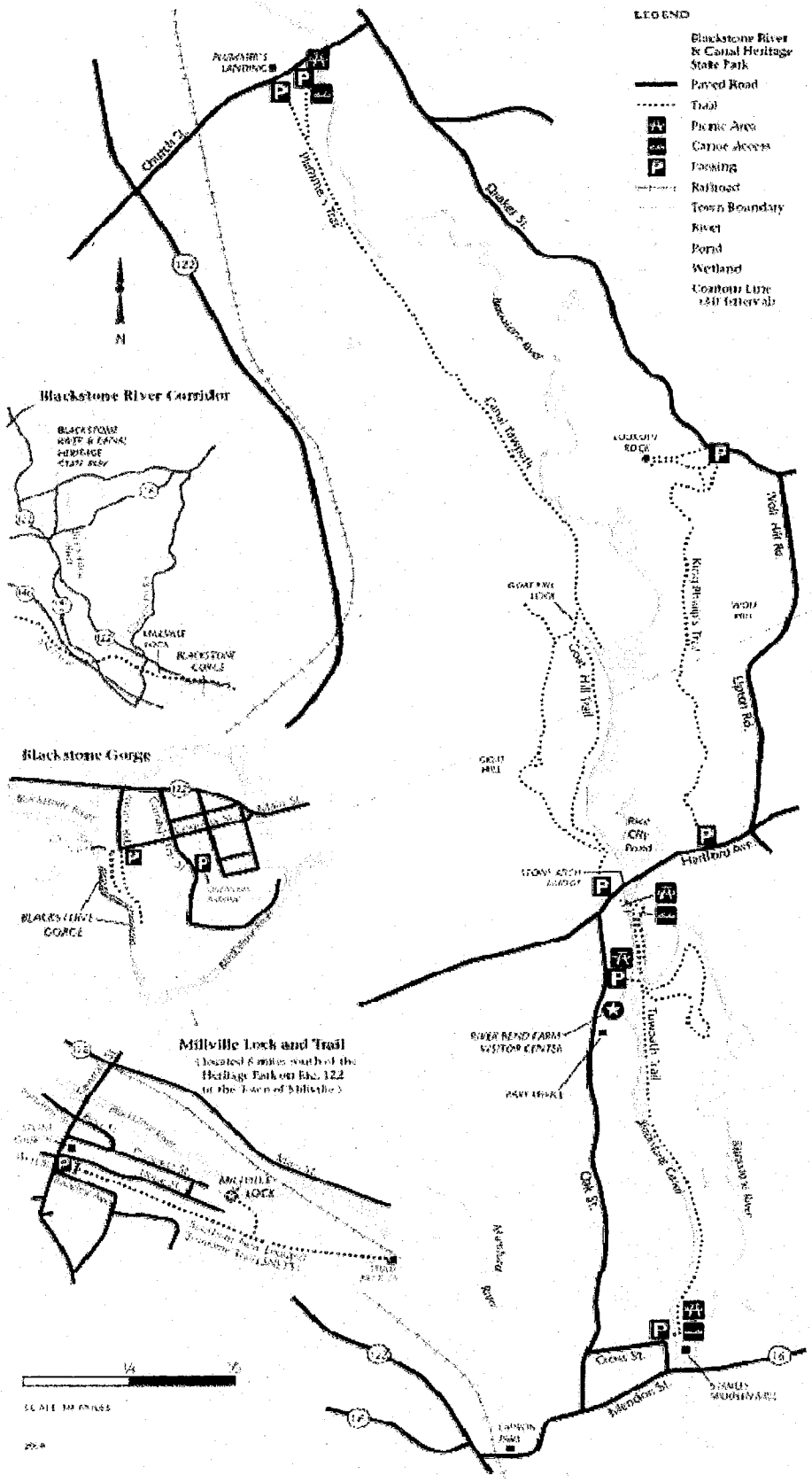
Sincerely yours,

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	TR-1	Pond	Units	RDL	Dilution Factor
Antimony, Total	ND	-	mg/l	0.0005	1
Arsenic, Total	ND	-	mg/l	0.0005	1
Cadmium, Total	ND	-	mg/l	0.0005	1
Chromium, Total	**0.0007**	-	mg/l	0.0005	1
Chromium Hex	ND	-	mg/l	0.01	1
Copper, Total	**0.0198**	-	mg/l	0.0005	1
Iron, Total	**0.129**	-	mg/l	0.05	1
Lead, Total	ND	-	mg/l	0.0005	1
Mercury, Total	ND	-	mg/l	0.0002	1
Nickel, Total	**0.0017**	-	mg/l	0.0005	1
Selenium, Total	ND	-	mg/l	0.001	1
Silver, Total	ND	-	mg/l	0.0005	1
Zinc, Total	**0.0078**	-	mg/l	0.005	1
Chloride	**67**	-	mg/l	1	1
pH	**6.0**	-	SU	-	1
Average Flow	**154,000**	-	gals/day		
Hardness		60	mg/l	0.66	1

TR-1: Discharge to tailrace from receiving tank
Pond is upstream of discharge point
The source of discharge is groundwater (per AEN)

Laboratory Reports – Alpha Analytical

Chain of Custody

ALPHA ANALYTICAL

ANALYTICAL REPORT

Lab Number:	L0900645
Client:	Riverdale Mills Corportation 130 Riverdale Street Northbridge, MA 01534
ATTN:	Jayne Knott
Project Name:	RIVERDALE MILL CORPS
Project Number:	JFK-011
Report Date:	01/20/09

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LA000065), ME (MA0086)
PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

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

Project Name:	RIVERDALE MILL CORPS	**Lab Number:**	L0900645
Project Number:	JFK-011	**Report Date:**	01/20/09

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A, B, C & D is required for "Presumptive Certainty" status		
A	Were all samples received by the laboratory in a condition consistent with those described on their Chain-of-Custody documentation for the data set?	YES
B	Were all QA/QC procedures required for the specified analytical methods(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	YES
C	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty", as described in section 2.0 of the MADEP document CAM VII A "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	YES
D	VPH and EPH methods only: Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?	N/A
A response to questions E and F is required for "Presumptive Certainty" status		
E	Were all QC performance standards and recommendations for the specified method(s) achieved?	YES
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	NO

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	RIVERDALE MILL CORPS	**Lab Number:**	L0900645
Project Number:	JFK-011	**Report Date:**	01/20/09

SAMPLE RESULTS

Lab ID:	L0900645-01	Date Collected:	01/16/09 13:30
Client ID:	POND	Date Received:	01/16/09
Sample Location:	NORTHBRIDGE, MA	Field Prep:	Not Specified
Matrix:	Water		

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B										
Hardness	60		mg/l	0.66	1	01/19/09 11:30	01/20/09 09:47	EPA 3005A	1,6010B	MG

Project Name:	RIVERDALE MILL CORPS	**Lab Number:**	L0900645
Project Number:	JFK-011	**Report Date:**	01/20/09

SAMPLE RESULTS

Lab ID:	L0900645-03	Date Collected:	01/16/09 13:55
Client ID:	TR-1	Date Received:	01/16/09
Sample Location:	NORTHBRIDGE, MA	Field Prep:	Not Specified
Matrix:	Water		

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Antimony, Total	ND		mg/l	0.0005	1	01/19/09 12:45	01/19/09 20:32	EPA 3005A	64,6020A	BM
Arsenic, Total	ND		mg/l	0.0005	1	01/19/09 12:45	01/19/09 20:32	EPA 3005A	64,6020A	BM
Cadmium, Total	ND		mg/l	0.0005	1	01/19/09 12:45	01/19/09 20:32	EPA 3005A	64,6020A	BM
Chromium, Total	0.0007		mg/l	0.0005	1	01/19/09 12:45	01/19/09 20:32	EPA 3005A	64,6020A	BM
Copper, Total	0.0198		mg/l	0.0005	1	01/19/09 12:45	01/19/09 20:32	EPA 3005A	64,6020A	BM
Iron, Total	0.129		mg/l	0.050	1	01/19/09 12:45	01/19/09 20:32	EPA 3005A	64,6020A	BM
Lead, Total	ND		mg/l	0.0005	1	01/19/09 12:45	01/19/09 20:32	EPA 3005A	64,6020A	BM
Mercury, Total	ND		mg/l	0.0002	1	01/16/09 20:30	01/19/09 16:54	EPA 7470A	64,7470A	DM
Nickel, Total	0.0017		mg/l	0.0005	1	01/19/09 12:45	01/19/09 20:32	EPA 3005A	64,6020A	BM
Selenium, Total	ND		mg/l	0.001	1	01/19/09 12:45	01/19/09 20:32	EPA 3005A	64,6020A	BM
Silver, Total	ND		mg/l	0.0005	1	01/19/09 12:45	01/19/09 20:32	EPA 3005A	64,6020A	BM
Zinc, Total	0.0078		mg/l	0.0050	1	01/19/09 12:45	01/19/09 20:32	EPA 3005A	64,6020A	BM

Project Name: RIVERDALE MILL CORPS
Project Number: JFK-011
Lab Number: L0900645
Report Date: 01/20/09

SAMPLE RESULTS

Lab ID: L0900645-03
Client ID: TR-1
Sample Location: NORTHBRIDGE, MA
Matrix: Water
Date Collected: 01/16/09 13:
Date Received: 01/16/09
Field Prep: Not Specifiec

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method
Hexavalent Chromium by MCP 7196A								
Chromium, Hexavalent	ND		mg/l	0.01	1	01/16/09 20:45	01/16/09 20:45	64,7196A
General Chemistry								
Chloride	67		mg/l	1.0	1	-	01/19/09 18:57	1,9251
pH	6.0		SU	-	1	-	01/16/09 19:31	1,9040B

Project Name: RIVERDALE MILL CORPS
Project Number: JFK-011
Lab Number: L0900645
Report Date: 01/20/09

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series for sample(s): 02-03 Batch: WG350131-1									
Mercury, Total	ND		mg/l	0.0002	1	01/16/09 20:30	01/19/09 16:45	64,7470A	DM

Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B for sample(s): 01 Batch: WG350234-1									
Hardness	ND		mg/l	0.66	1	01/19/09 11:30	01/20/09 09:41	1,6010B	MG

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series for sample(s): 02-03 Batch: WG350244-1									
Antimony, Total	ND		mg/l	0.0005	1	01/19/09 12:45	01/19/09 19:58	64,6020A	BM
Arsenic, Total	ND		mg/l	0.0005	1	01/19/09 12:45	01/19/09 19:58	64,6020A	BM
Cadmium, Total	ND		mg/l	0.0005	1	01/19/09 12:45	01/19/09 19:58	64,6020A	BM
Chromium, Total	ND		mg/l	0.0005	1	01/19/09 12:45	01/19/09 19:58	64,6020A	BM
Copper, Total	ND		mg/l	0.0005	1	01/19/09 12:45	01/19/09 19:58	64,6020A	BM
Iron, Total	ND		mg/l	0.050	1	01/19/09 12:45	01/19/09 19:58	64,6020A	BM
Lead, Total	ND		mg/l	0.0005	1	01/19/09 12:45	01/19/09 19:58	64,6020A	BM
Nickel, Total	ND		mg/l	0.0005	1	01/19/09 12:45	01/19/09 19:58	64,6020A	BM
Selenium, Total	ND		mg/l	0.001	1	01/19/09 12:45	01/19/09 19:58	64,6020A	BM
Silver, Total	ND		mg/l	0.0005	1	01/19/09 12:45	01/19/09 19:58	64,6020A	BM
Zinc, Total	ND		mg/l	0.0050	1	01/19/09 12:45	01/19/09 19:58	64,6020A	BM

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: RIVERDALE MILL CORPS
Project Number: JFK-011

Lab Number: L0900645
Report Date: 01/20/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals by MCP 6000/7000 series Associated sample(s): 02-03 Batch: WG350131-2 WG350131-3					
Mercury, Total	100	103	80-120	3	20
Total Hardness by SM 2340B Associated sample(s): 01 Batch: WG350234-2					
Hardness	95		80-120		
Total Metals by MCP 6000/7000 series Associated sample(s): 02-03 Batch: WG350244-2 WG350244-3					
Antimony, Total	100	109	80-120	9	20
Arsenic, Total	96	102	80-120	6	20
Cadmium, Total	107	116	80-120	8	20
Chromium, Total	100	110	80-120	10	20
Copper, Total	101	110	80-120	9	20
Iron, Total	106	107	80-120	1	20
Lead, Total	104	112	80-120	7	20
Nickel, Total	103	112	80-120	8	20
Selenium, Total	100	105	80-120	5	20
Silver, Total	105	111	80-120	6	20
Zinc, Total	103	110	80-120	7	20

Matrix Spike Analysis
Batch Quality Control

Project Name: RIVERDALE MILL CORPS
Project Number: JFK-011

Lab Number: L0900645
Report Date: 01/20/09

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Hardness by SM 2340B Associated sample(s): 01	QC Batch ID: WG350234-4				QC Sample: L0900645-01		Client ID: POND		
Hardness	60	66.2	120	91	-	-	75-125	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: RIVERDALE MILL CORPS
Project Number: JFK-011

Lab Number: L0900645
Report Date: 01/20/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Hardness by SM 2340B Associated sample(s): 01 QC Batch ID: WG350234-3 QC Sample: L0900645-01 Client ID: POND					
Hardness	68	68	mg/l	0	20

Project Name: RIVERDALE MILL CORPS
Project Number: JFK-011

Lab Number: L0900645
Report Date: 01/20/09

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Hexavalent Chromium by MCP 7196A for sample(s): 02-03 Batch: WG350138-1									
Chromium, Hexavalent	ND		mg/l	0.01	1	01/16/09 20:45	01/16/09 20:45	64,7196A	JT
General Chemistry for sample(s): 02-03 Batch: WG350257-2									
Chloride	ND		mg/l	1.0	1	-	01/19/09 18:32	1,9251	DD

Lab Control Sample Analysis
Batch Quality Control

Project Name: RIVERDALE MILL CORPS
Project Number: JFK-011

Lab Number: L0900645
Report Date: 01/20/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Associated sample(s): 02-03 Batch: WG350121-1					
pH	101		99-101		5
Hexavalent Chromium by MCP 7196A Associated sample(s): 02-03 Batch: WG350138-2 WG350138-3					
Chromium, Hexavalent	101	102	98-120	1	20
Associated sample(s): 02-03 Batch: WG350257-1					
Chloride	100		90-110		

Matrix Spike Analysis
Batch Quality Control

Project Name:	RIVERDALE MILL CORPS	**Lab Number:**	L0900645
Project Number:	JFK-011	**Report Date:**	01/20/09

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Hexavalent Chromium by MCP 7196A Associated sample(s): 02-03 QC Batch ID: WG350138-4 QC Sample: L0900645-03 Client ID: TR-1									
Chromium, Hexavalent	ND	0.1	0.10	90			75-125		20
Associated sample(s): 02-03 QC Batch ID: WG350257-3 QC Sample: L0900502-02 Client ID: MS Sample									
Chloride	19	20	41	110			68-140		7

Lab Duplicate Analysis
Batch Quality Control

Project Name: RIVERDALE MILL CORPS
Project Number: JFK-011

Lab Number: L0900645
Report Date: 01/20/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Associated sample(s): 02-03 QC Batch ID: WG350121-2 QC Sample: L0900644-01 Client ID: DUP Sample					
pH	9.6	9.7	SU	1	5
Hexavalent Chromium by MCP 7196A Associated sample(s): 02-03 QC Batch ID: WG350138-5 QC Sample: L0900645-03 Client ID: TR-1					
Chromium, Hexavalent	ND	ND	mg/l	NC	20
Associated sample(s): 02-03 QC Batch ID: WG350257-4 QC Sample: L0900645-02 Client ID: HP-1					
Chloride	68	68	mg/l	0	7

Project Name: RIVERDALE MILL CORPS
Project Number: JFK-011

Lab Number: L0900645
Report Date: 01/20/09

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0900645-01A	Plastic 250ml HNO3 preserved	A	<2	6 c	Y	Absent	HARDT(180)
L0900645-02A	Plastic 1000ml unpreserved	A	=7	6 c	Y	Absent	CL-9251(28),MCP-HEXCR7196-04(1),PH-9040(.025)
L0900645-02B	Plastic 1000ml HNO3 preserved	A	<2	6 c	Y	Absent	MCP-FE-6020T(180),MCP-ZN-6020T(180),MCP-7470T(28),MCP-AG-6020T(180),MCP-CD-6020T(180),MCP-NI-6020T(180),MCP-PB-6020T(180),MCP-SB-6020T(180),MCP-AS-6020T(180),MCP-CR-6020T(180),MCP-CU-6020T(180),MCP-SE-6020T(180)
L0900645-03A	Plastic 1000ml unpreserved	A	=7	6 c	Y	Absent	CL-9251(28),MCP-HEXCR7196-04(1),PH-9040(.025)
L0900645-03B	Plastic 1000ml HNO3 preserved	A	<2	6 c	Y	Absent	MCP-FE-6020T(180),MCP-ZN-6020T(180),MCP-7470T(28),MCP-AG-6020T(180),MCP-CD-6020T(180),MCP-NI-6020T(180),MCP-PB-6020T(180),MCP-SB-6020T(180),MCP-AS-6020T(180),MCP-CR-6020T(180),MCP-CU-6020T(180),MCP-SE-6020T(180)

Container Comments

L0900645-01A	IR Gun
L0900645-02A	IR Gun
L0900645-02B	IR Gun
L0900645-03A	IR Gun
L0900645-03B	IR Gun

*Hold days indicated by values in parentheses

Project Name:	RIVERDALE MILL CORPS	**Lab Number:**	L0900645
Project Number:	JFK-011	**Report Date:**	01/20/09

GLOSSARY

Acronyms

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.

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.

NI - Not Ignitable.

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.

ND - Not detected at the reported detection limit for the sample.

RDL - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL 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.

Terms

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

The following data qualifiers have been identified for use under the CT DEP Reasonable Confidence Protocols.

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.

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

J - Estimated value. The analyte was tentatively identified; the quantitation is an estimation. (Tentatively identified compounds only.)

Standard Qualifiers

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

Report Format: Not Specified

Project Name:	RIVERDALE MILL CORPS	**Lab Number:**	L0900645
Project Number:	JFK-011	**Report Date:**	01/20/09

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

64 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). August 2004.

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 Woods Hole Labs 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 Woods Hole Labs.

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.

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.
Drinking Water
Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)
(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Nitrite-N, Fluoride, Sulfate)
353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, EPA 150.1, SM4500H-B.
Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)
(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), SM6251B, 314.0.

Non-Potable Water
Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)
(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Tl,Ti,V,Zn,Ca,Mg,Na,K)
245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Nitrate-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CN-CE, 2540D, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1
Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)
(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCB-Water)
600/4-81-045-PCB-Oil

01200915:37

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.
Drinking Water
Microbiology Parameters: SM9215B; MF-SM9222B; ENZ. SUB. SM9223; EC-SM9221E; MF-SM9222D; ENZ. SUB. SM9223;

ALPHA

WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 1/16

ALPHA Job #: L090

Project Information

Project Name: Riverdale Mills Corp.

Project Location: Northbridge, MA

Project #: JFK-011

Project Manager: Jayne Knott

ALPHA Quote #:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Client Information

Client: Riverdale Mills Corp.

Address: 130 Riverdale St.
Northbridge, MA 01534

Phone: 508-529-6085

Fax: 508-529-6085

Email: JayneKnott@Charter.net

☐ These samples have been previously analyzed by Alpha

Regulatory Requirements/Report Limits

State/Fed Program: (Fed Program circled)

Criteria: EPA 40CFR Part 13[...]
EPA Surface Water Qua[...]

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDEN[...]

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Turn-Around Time

☐ Standard ☒ RUSH (only confirmed if pre-approved!)

Date Due: 1/20 Time:

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS: Hardness; pH, Cl, HexCr; Total Ag As Cd Cr Cu Pb Ni; Total Hg Sb Se Zn Ag

SAMPLE HA[...]
Filtration
☐ Done
☐ Not neede[...]
☐ Lab to do
Preservation
☐ Lab to do
(Please specify be[...])

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Hardness	pH, Cl, HexCr	Total metals	Total Hg Sb Se Zn Ag	Sample Specific Co[...]
0645 1	POND	1/16/09	1:30	Water	AEN	X				Please se[...]
2	HP-1	1/16/09	1:45	Water	AEN		X	X	X	Appendix [...]
3	TR-1	1/16/09	1:55	Water	AEN		X	X	X	attached [...]
										acceptable
										methods +
										minimum

Container Type	PL	PL	PL	PL
Preservative	✓	NO	✓	✓

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP? No

Relinquished By:	Date/Time	Received By:	Date/Time
Jayne F. Knott	1/16/09 3:15PM	[signature]	1/16 15:15

Please print clearly, [...]pletely. Samples ca[...] in and turnaround t[...] start until any ambig[...] All samples submitt[...] Alpha's Terms and [...] See reverse side.

FORM NO: 01-01 (rev. 14-OCT-07)

APPENDIX 8
MINIMUM LEVELS AND TEST METHODS FOR GROUNDWATER SOURCES OF NONCONTACT COOLING WATER

Inorganic Parameters	Minimum Levels (ug/l) and Test Methods				
	Flame Atomic Absorption	Inductively Coupled Plasma	Inductively Coupled Plasma Mass Spectromety	Furnace Atomic Absorption	Other
1. Antimony	200 ug/l	50 ug/l	2 ug/l	5 ug/l	
2. Arsenic		5 ug/l	2 ug/l	2 ug/l	
3. Cadmium	10ug/l	5 ug/l	0.5 ug/l	0.5 ug/l	
4. Chromium Total	50 ug/l	10ug/l	0.5 ug/l	5 ug/l	
5. Chromium VI					10 ug/l Method 218.4
6. Copper	20 ug/l	5 ug/l	0.5 ug/l	3 ug/l	
7. Lead	100 ug/l	40 ug/l	0.5 ug/l	3 ug/l	
8. Mercury					0.2 ug/l Method 245.1
9. Nickel	30 ug/l	10 ug/l	0.5 ug/l	5 ug/l	
10. Selenium		50 ug/l	2.5 ug/l.	5 ug/l	
11. Silver	50 ug/l	10 ug/l	1 ug/l	2 ug/l	
12. Zinc	30 ug/l	10 ug/l	5 ug/l		
13. Iron		Method 6010b and Method 200.7[1]			
14. Hardness					Approved Part 136 Methods[2]
15.Chloride					Approved Part 136 Methods[2]
16. pH					Approved Part 136 Methods[2]

1. Methods 6010b and 200.7 for metals may only be used when sample prepared with SW-846 digestion method, Method 3010
2. Approved 40 CFR Part 136 test methods that will achieve the lowest available ML