NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

In the Matter of the Development and Implementation of a Remedial Program for an Inactive Hazardous Waste Disposal Site under Article 27, Titles 7 and 13, and, Article 71 of the Environmental Conservation Law by Georgia-Pacific LLC Respondent.	**ORDER ON CONSENT and ADMINISTRATIVE SETTLEMENT** Index # A5-0771-07-11 Site # 516009

WHEREAS,

1. A. The New York State Department of Environmental Conservation ("Department") is responsible for inactive hazardous waste disposal site remedial programs pursuant to Article 27, Title 13 of the Environmental Conservation Law ("ECL") and Part 375 of Title 6 of the Official Compilation of Codes, Rules and Regulations ("6 NYCRR") and may issue orders consistent with the authority granted to the Commissioner by such statute.

B. The Department is responsible for carrying out the policy of the State of New York to conserve, improve and protect its natural resources and environment and control water, land, and air pollution consistent with the authority granted to the Department and the Commissioner by Article 1, Title 3 of the ECL. The Commissioner is also the trustee for New York State's natural resources pursuant to state and federal law.

C. This Order is issued pursuant to the Department's authority under, *inter alia,* ECL Article 27, Titles 7 and 13, ECL Article 71-2727 and ECL 3-0301.

2. A. Georgia-Pacific LLC ("Respondent" or "GP") is a Delaware limited liability company, authorized to do business in New York, that previously owned and operated a wood pulp facility in the Town Of Willsboro, County of Essex in the State of New York. The facility and its former waste and black ash lagoons are located on the banks of the Boquet River, approximately two miles west of the river's mouth at Lake Champlain. The black ash lagoon area was given site number 516009 by the Department and is hereafter referred to as the "Site." Exhibit "A" is a map of the Site showing its location.

B. Previously, the Site was part of the New York State Environmental Restoration Program ("ERP"). The Town of Willsboro, through a State Assistance Contract with the Department, completed a remedial investigation for the ERP site and the Department selected a remedial alternative for the ERP site, which is detailed in a March 2007 Record of Decision ("ROD"), attached hereto as Exhibit "B." The Town of Willsboro is the current owner of the Site.

3. The Site is not currently listed in the *Registry of Inactive Hazardous Waste Disposal Sites in New York State*.

4. Respondent consents to the issuance of this Order without (i) an admission or finding of liability, fault, wrongdoing, or violation of any law, regulation, permit, order, requirement, or standard of care of any kind whatsoever; (ii) an acknowledgment that there has been a release or threatened release of hazardous waste at or from the Site; and/or (iii) an acknowledgment that a release or threatened release of hazardous waste at or from the Site constitutes a significant threat to the public health or environment.

5. Solely with regard to the matters set forth below, Respondent hereby waives any right to a hearing as may be provided by law, consents to the issuance and entry of this Order, and agrees to be bound by its terms. Respondent consents to and agrees not to contest the authority or jurisdiction of the Department to issue or enforce this Order, and agrees not to contest the validity of this Order or its terms or the validity of data submitted to the Department by Respondent pursuant to this Order.

NOW, having considered this matter and being duly advised, **IT IS ORDERED THAT**:

I. Development, Performance, and Reporting of Work Plans

A. Work Plans

All activities at the Site that comprise any element of an Inactive Hazardous Waste Disposal Site Remedial Program shall be conducted pursuant to one or more Department-approved work plans ("Work Plan" or "Work Plans") and this Order and all activities shall be consistent with the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 C.F.R. Part 300, as required under CERCLA, 42 U.S.C. § 9600 *et seq*. The Work Plan(s) under this Order shall be developed and implemented in accordance with 6 NYCRR § 375-1.6(a). All Department-approved Work Plans shall be incorporated into and become enforceable parts of this Order. Upon approval of a Work Plan by the Department, Respondent shall implement such Work Plan in accordance with the schedule contained therein. Nothing in this Subparagraph shall mandate that any particular Work Plan be submitted.

Each Work Plan submitted shall use one of the following captions on the cover page:

1. Pre-Design Investigation and Remedial Action ("RA") Work Plan: the Work Plan whose objective is to provide for the development and implementation of final plans and specifications for implementing the remedial alternative selected by the Department in the "Explanation of Significant Differences" or ROD Amendment, as set forth in Subparagraph I.B.1(a) hereof ("the Remedy"); or

2. Site Management Plan: a Work Plan whose objective is to identify and implement the institutional and engineering controls required for the Site, as well as any necessary monitoring and/or operation and maintenance of the Remedy.

B. Submission/Implementation of Work Plans

1. (a) The RA Work Plan shall be submitted to the Department within forty-five (45) Days after the Department issues an "Explanation of Significant Differences" or ROD Amendment of the March 2007 ROD. The "Explanation of Significant Differences" or ROD Amendment shall be based on the Department-approved Scope of Work, attached hereto as Exhibit C.

(b) Within thirty (30) Days after the Department issues the Remedy, Respondent may notify the Department in writing that it believes the Remedy contains a significant change or changes from the Department-approved Scope of Work attached hereto as Exhibit C. If Department staff disputes that there has been a significant change from the Department-approved Scope of Work, that dispute will be subject to dispute resolution in Paragraph XI of this Order. While the dispute resolution process is pending, the submittal required by Paragraph I.B.1(a) and the payment required by Paragraph V.B will be suspended until completion of the dispute resolution process. If the Department agrees that there has been a significant change from the Department-approved Scope of Work or if the Respondent's position prevails in a dispute resolution proceeding, Respondent has the right to terminate this agreement pursuant to Paragraph XII of this Order.

(c) The Department may request that Respondent submit additional or supplemental Work Plans for the Site. Within thirty (30) Days after the Department's written request, Respondent shall advise the Department in writing whether it will submit and implement the requested additional or supplemental Work Plan or whether it elects to terminate this Order pursuant to Paragraph XII. If Respondent elects to submit and implement such Work Plan, Respondent shall submit the requested Work Plan within sixty (60) Days after such election. If Respondent elects to terminate this Order or fails to make a timely election, this Order shall terminate pursuant to Paragraph XII.

(d) Respondent may opt to propose one or more additional or supplemental Work Plans at any time, which the Department shall review for appropriateness and technical sufficiency.

(e) Any request made by the Department under Subparagraph I.B.1(c) shall be subject to dispute resolution pursuant to Paragraph XI.

2. A Professional Engineer must stamp and sign all Work Plans.

3. During all field activities conducted under this Order, Respondent shall have on-Site a representative who is qualified to supervise the activities undertaken. Such representative may be an employee or a consultant retained by Respondent to perform such supervision as set forth in 6 NYCRR Part 375-1.6(a)(3).

C. Modifications to Work Plans

The Department shall notify Respondent in writing if the Department determines that any element of a Department-approved Work Plan needs to be modified in order to achieve the objectives of the Work Plan as set forth in Subparagraph I.A or to ensure that the Remedy otherwise protects human health and the environment. Upon receipt of such notification, Respondent shall, subject to Respondent's right to terminate pursuant to Paragraph XII, provide written notification as provided at 6 NYCRR 375-1.6(d)(3) as to whether it will modify the Work Plan, or invoke dispute resolution.

D. Submission of Final Reports and Annual Reports

1. In accordance with the schedule contained in a Work Plan, Respondent shall submit a final report as provided at 6 NYCRR 375-1.6(b) and a final engineering report as provided at 6 NYCRR 375-1.6(c).

2. Any final report or final engineering report that includes construction activities shall include "as built" drawings showing any changes made to the remedial design or the IRM.

3. In the event that the final engineering report for the Site requires Site Management, Respondent shall submit an annual report by the 1st Day of the month following the anniversary of the start of the Site Management. Such annual report shall be signed by a Professional Engineer or by such other qualified environmental professional as the Department may find acceptable and shall contain a certification as provided at 6 NYCRR 375-1.8(h)(3). Respondent may petition the Department for a determination that the institutional and/or engineering controls may be terminated. Such petition must be supported by a statement by a Professional Engineer that such controls are no longer necessary for the protection of public health and the environment. The Department shall not unreasonably withhold its approval of such petition.

E. Review of Submittals other than Progress Reports and Health and Safety Plans

1. The Department shall make a good faith effort to review and respond in writing to each submittal Respondent makes pursuant to this Order within sixty (60) Days. The Department's response shall include an approval or disapproval of the submittal, in whole or in part. All Department-approved submittals shall be incorporated into and become an enforceable part of this Order.

2. If the Department disapproves a submittal, it shall specify the reasons for its disapproval. Within fifteen (15) Days after the date of the Department's written notice that Respondent's submittal has been disapproved, Respondent shall, subject to Respondent's right to terminate pursuant to Paragraph XII, elect as provided at 6 NYCRR 375-1.6(d)(4). If Respondent elects to modify the submittal, Respondent shall, within thirty (30) Days after such election, make a revised submittal that addresses all of the Department's stated reasons for disapproving the first submittal. In the event that Respondent's revised submittal is disapproved, the Department shall set forth its reasons for such disapproval in writing and Respondent shall be in violation of this Order unless it invokes dispute resolution pursuant to Paragraph XI and its position prevails or it elects to terminate this Order pursuant to Paragraph XII. Failure to make an election or failure to comply with the election is a violation of this Order.

3. Within thirty (30) Days after the Department's approval of a final report, Respondent shall submit such final report, as well as all data gathered and drawings and submittals made pursuant to such Work Plan, in an electronic format acceptable to the Department. If any document cannot be converted into electronic format, Respondent shall submit such document in an alternative format acceptable to the Department.

G. Release and Covenant Not to Sue

Upon the Department's issuance of a Certificate of Completion as provided at 6 NYCRR 375-1.9 and 375-2.9, Respondent shall obtain the benefits conferred by such provisions, subject to the terms and conditions described therein; provided, however, that notwithstanding anything to the contrary, upon the Department's issuance of such Certificate, Respondent shall be released and shall have no liability, responsibility or obligation whatsoever concerning or in any way connected to the Site, except for maintaining such institutional and/or engineering controls as may be contained in a Department-approved Site Management Plan. Notwithstanding the foregoing, and in consideration of the payment that will be made by Respondent to the Department pursuant to Subparagraph V.B and Respondent's performance of the Remedy, the Commissioner, as the designated Trustee for New York State's natural resources, releases Respondent and its successors and assigns from all claims or causes of action under any federal or state law for natural resource damages. Such release for natural resource

damages claims shall not extend to unknown conditions or natural resource injuries that were undiscoverable with the exercise of due diligence by the Department. An increase solely in the Department's assessment of the magnitude of an injury to a natural resource or in the estimated or actual natural resource damages arising from the current understanding of conditions at the Site shall not be considered to be unknown conditions or injuries that were undiscoverable with the exercise of due care.

H. Permit Exemption

Pursuant to the authority conferred in ECL § 27-1313.10, the Department exempts Respondent from the requirement to obtain any State or local permits or any other authorizations for any activity needed to implement an Inactive Hazardous Waste Disposal Site Remedial Program. For such exemptions, Respondent will satisfy all substantive technical requirements applicable to activities typically conducted pursuant to a permit.

II. Progress Reports

Respondent shall submit written progress reports to the parties identified in Subparagraph X.A.1 by the 10th Day of each month commencing with the month subsequent to the approval of the first Work Plan and ending with the Termination Date, unless a different frequency is set forth in an approved Work Plan. Such reports shall, at a minimum, include: all actions taken pursuant to this Order during the reporting period and those anticipated for the upcoming reporting period; all approved modifications to work plans and/or schedules; all results of sampling and tests and all other data received or generated by or on behalf of Respondent in connection with the Site during the reporting period, including quality assurance/quality control information; information regarding percentage of completion, unresolved delays encountered or anticipated that may affect the future schedule, and efforts made to mitigate such delays; and information regarding activities undertaken in support of the Citizen Participation Plan during the reporting period and those anticipated for the upcoming reporting period.

III. Penalties

A. 1. Respondent's failure to comply with any term of this Order constitutes a violation of this Order and the ECL. Nothing herein abridges Respondent's right to contest any allegation that it has failed to comply with this Order.

2. Payment of any penalties shall not in any way alter Respondent's obligations under this Order.

B. 1. Respondent shall not suffer any penalty or be subject to any proceeding or action in the event it cannot comply with any requirement of this Order as a result of any Force Majeure Event as provided at 6 NYCRR 375-1.5(b)(4).

2. If Department staff determines that Respondent failed to meet the burden set forth in 6 NYCRR 375-1.5(4)(ii) with respect to an event qualifying as a Force Majeure Event, Respondent shall be in violation of this Order unless it invokes dispute resolution pursuant to Paragraph XI and Respondent's position prevails.

IV. Entry upon Site

A. Respondent hereby consents, upon reasonable notice under the circumstances presented, to entry upon the Site (or areas in the vicinity of the Site which may be under the control of Respondent) by any duly designated officer or employee of the Department or any State agency having jurisdiction with respect to matters addressed pursuant to this Order, and by any agent, consultant, contractor, or other person so authorized by the Commissioner, all of whom shall abide by the health and safety rules in effect for the Site, for inspecting, sampling, copying records related to the contamination at the Site, testing, and any other activities necessary to ensure Respondent's compliance with this Order. Upon request, Respondent shall (i) provide the Department with suitable work space at the Site, including access to a telephone, to the extent available, and (ii) permit the Department full access to all non-privileged records relating to matters addressed by this Order. Raw data is not considered privileged and that portion of any privileged document containing raw data must be provided to the Department. In the event Respondent is unable to obtain any authorization from third-party property owners necessary to perform its obligations under this Order, the Department may, consistent with its legal authority, assist in obtaining such authorizations.

B. The Department shall have the right to take its own samples and scientific measurements and the Department and Respondent shall each have the right to obtain split samples, duplicate samples, or both, of all substances and materials sampled. The Department shall make the results of any such sampling and scientific measurements available to Respondent.

V. Payment of Costs and Natural Resource Damages

A. Within forty-five (45) Days after the effective date of this Order, Respondent shall pay to the Department $170,000.00 which shall represent reimbursement for past State costs as provided at 6 NYCRR 375-1.5(b)(3).

B. Within forty-five (45) Days after the Department issues the Remedy, unless Respondent disputes the Remedy pursuant to Subparagraph I.B.1(b), Respondent shall pay $90,000.00, which shall represent payment of natural resource damages. Payment for natural resource damages can be made by check, money order, or by electronic funds transfer, payable to "NYSDEC-Natural Resource Damages Fund."

C. Within forty-five (45) Days after receipt of an itemized invoice from the Department, Respondent shall pay to the Department a sum of money which shall represent reimbursement for State Costs, other than those identified in Subparagraph V.A, for work performed at or in connection with the Site through and including the Termination Date, as provided at 6 NYCRR 375-1.5(b)(3).

D. Personal service costs shall be documented as provided by 6 NYCRR 375-1.5(b)(3(ii). The Department shall not be required to provide any other documentation of costs, provided however, that the Department's records shall be available consistent with, and in accordance with, Article 6 of the Public Officers Law.

E. Such invoice shall be sent to Respondent at the following address:

J. Michael Davis, Esq.
Assistant General Counsel (Environmental Affairs)
Georgia-Pacific LLC
133 Peachtree Street, N.E.
Atlanta, GA 30303

F. Each such payment shall be made payable to the Department of Environmental Conservation and shall be sent to:

Bureau of Program Management
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7012

G. Each party shall provide written notification to the other within ninety (90) Days of any change in the foregoing addresses.

H. Respondent may contest invoiced costs as provided at 6 NYCRR 375-1.5(b)(3)(v) and (vi).

VI. Reservation of Rights

A. Except as provided at 6 NYCRR 375-1.9, 375-2.9, and Subparagraph I.G, nothing contained in this Order shall be construed as barring, diminishing, adjudicating, or in any way affecting any of the Department's rights or authorities, including, but not limited to, the right to require performance of further investigations and/or response action(s), and/or to exercise any summary abatement powers provided to the Department in the ECL with respect to any person, including Respondent.

B. Except as otherwise provided in this Order, Respondent specifically reserves all rights and defenses under applicable law respecting any issue or matter addressed in this Order or concerning or in any way connected to the Site, including, but not limited to, all rights respecting the enforcement of this Order, including the rights to notice, to be heard, to appeal, and to any other due process. The existence of this Order or Respondent's compliance with it shall not be construed as an admission of liability, fault, wrongdoing, or breach of standard of care by Respondent, and shall not give rise to any presumption of law or finding of fact, or create any rights, or grant any cause of action, which shall inure to the benefit of any third party. Further, Respondent reserves such rights as it may have to seek and obtain contribution, indemnification, and/or any other form of recovery from its insurers and from other potentially responsible parties or their insurers for past or future response and/or cleanup costs or such other costs or damages arising from the contamination at the Site as may be provided by law, including but not limited to rights of contribution under section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B).

VII. Indemnification

Respondent shall indemnify and hold the Department, the State of New York, the Trustee of the State's natural resources, and their representatives and employees harmless as provided by 6 NYCRR 375-2.5(a)(3)(I).

VIII. Public Notice

A. Within thirty (30) Days after the effective date of this Order, Respondent shall provide notice as required by 6 NYCRR 375-1.5(a). Within sixty (60) Days of such filing, Respondent shall provide the Department with a copy of such instrument certified by the recording officer to be a true and faithful copy.

B. If Respondent proposes to transfer by sale or lease the whole or any part of Respondent's interest in the Site, or becomes aware of such transfer, Respondent shall, not fewer than forty-five (45) Days before the date of transfer, or within forty-five (45) Days after becoming aware of such conveyance, notify the Department in writing of the identity of the transferee and of the nature and proposed or actual date of the conveyance, and shall notify the transferee in writing, with a copy to the Department, of the applicability of this Order. However, such obligation shall not extend to a conveyance by means of a corporate reorganization or merger or the granting of any rights under any mortgage, deed, trust, assignment, judgment, lien, pledge, security agreement, lease, or any other right accruing to a person not affiliated with Respondent to secure the repayment of money or the performance of a duty or obligation.

IX. Environmental Easement

A. If a Department-approved final engineering report for the Site relies upon one or more institutional and/or engineering controls, Respondent (or the owner of the

Site) shall submit to the Department for approval an Environmental Easement to run with the land in favor of the State which complies with the requirements of ECL Article 71, Title 36, and 6 NYCRR 375-1.8(h)(2). Upon acceptance of an Environmental Easement by the State, Respondent shall comply with the requirements of 6 NYCRR 375-1.8(h)(2).

B. If the ROD provides for no action other than implementation of one or more institutional controls, Respondent shall use its best efforts to seek to cause an environmental easement to be recorded under the provisions of Subparagraph IX.A. If Respondent does not use its best efforts to seek to cause such environmental easement to be recorded in accordance with 6 NYCRR 375-1.8(h)(2), Respondent will not be entitled to the benefits conferred by 6 NYCRR 375-1.9. and 375-2.9.

X. Communications

A. All written communications required by this Order shall be transmitted by United States Postal Service, by private courier service, or hand delivered as follows:

1. Communication from Respondent shall be sent to:

Chek Ng
Division of Environmental Remediation
625 Broadway, 11th Floor
Albany, NY 12233
cbng@gw.dec.state.ny.us

Note: three hard copies (one unbound) of work plans are required, as well as one electronic copy.

with electronic copies to:

Steven Bates
Bureau of Environmental Exposure Investigation
New York State Department of Health
Flanigan Square
547 River Street
Troy, NY 12180-2216
smb02@health.state.ny.us

Andrew Guglielmi, Esq.
Office of General Counsel
New York State Department of Environmental Conservation
625 Broadway, 14th Floor
Albany, NY 12233

aoguglie@gw.dec.state.ny.us
(Correspondence only)

2. Communication to be made from the Department shall be sent to:

J. Michael Davis, Esq.
Assistant General Counsel (Environmental Affairs)
Georgia-Pacific LLC
133 Peachtree Street, N.E.
Atlanta, GA 30303

John L. Greenthal, Esq.
Nixon Peabody LLP
677 Broadway, 10th Floor
Albany, NY 12207
jgreenthal@nixonpeabody.com

B. The Department and Respondent reserve the right to designate additional or different addressees for communication upon written notice to the other.

C. Each party shall notify the other within ninety (90) Days after any change in the addresses in this Paragraph X or in Paragraph V.

XI. Dispute Resolution

In the event disputes arise under this Order, Respondent may, within fifteen (15) Days after Respondent knew or should have known of the facts which are the basis of the dispute, initiate dispute resolution in accordance with the provisions of 6 NYCRR 375-1.5(b)(2) and the provisions of 6 NYCRR 375-1.5(b)(2) shall apply to any dispute resolution. Nothing contained in this Order shall be construed to impair any right of Respondent to seek judicial review of the Department's selection of any remedy.

XII. Termination of Order

A. This Order will terminate upon the earlier of the following events:

1. Respondent's election to terminate pursuant to Subparagraphs I.B.1(b), I.B.1(c), I.C, or I.E.2. In the event of termination in accordance with this Subparagraph XII.A.1, this Order shall terminate effective the 5th Day after the Department's receipt of the written notification terminating this Order or the 5th Day after the time for Respondent to make its election has expired, whichever is earlier, provided, however, that if there are one or more Work Plan(s) for which a final report has not been approved at the time of Respondent's notification of its election to terminate this Order

pursuant to Subparagraphs I.B.1(c), or its failure to timely make such an election pursuant to Subparagraphs I.B.1(c), Respondent shall promptly complete the activities required by such previously approved Work Plan(s) consistent with the schedules contained therein. Thereafter, this Order shall terminate effective the 5th Day after the Department's approval of the final report for all previously approved Work Plans; or

2. The Department's written determination that Respondent has completed all phases of the Remedial Program (including Site Management), in which event the termination shall be effective on the 5th Day after the date of the Department's approval of the final report relating to the final phase of the Remedial Program and, further, Respondent shall be released and shall have no liability, responsibility or obligation whatsoever concerning or in any way connected to the Site.

B. Notwithstanding the foregoing, the provisions contained in Paragraphs V and VII shall survive the termination of this Order and any violation of such surviving Paragraphs shall be a violation of this Order, the ECL, and 6 NYCRR 375-2.11(a)(4), subjecting Respondent to penalties as provided under Paragraph III so long as such obligations accrued on or prior to the Termination Date.

C. If the Order is terminated pursuant to Subparagraph XII.A.1, neither this Order nor its termination shall affect any liability of Respondent for remediation of the Site and/or for payment of future State Costs, including implementation of removal and remedial actions, interest, enforcement, and any and all other response costs as defined under CERCLA, nor shall it affect any defenses to such liability that may be asserted by Respondent. Respondent shall also ensure that it does not leave the Site in a condition, from the perspective of human health and environmental protection, worse than that which existed before any activities under this Order were commenced. Further, the Department's efforts in obtaining and overseeing compliance with this Order shall constitute reasonable efforts under law to obtain a voluntary commitment from Respondent to implement the Remedy.

XIII. Miscellaneous

A. Except as otherwise provided by this Order, Respondent agrees to comply with and be bound by the provisions of 6 NYCRR Subparts 375-1 and 375-2; the provisions of such Subparts that are referenced herein are referenced for clarity and convenience only and the failure of this Order to specifically reference any particular regulatory provision is not intended to imply that such provision is not applicable to activities performed under this Order.

B. The Department may exempt Respondent from the requirement to obtain any state or local permit or other authorization for any activity conducted pursuant to this Order in accordance with 6 NYCRR 375-1.12(b), (c), and (d).

C. 1. Respondent shall use best efforts to obtain all Site access, permits, easements, approvals, institutional controls, and/or authorizations necessary to perform Respondent's obligations under this Order, including all Department-approved Work Plans and the schedules contained therein. If, despite Respondent's best efforts, any access, permits, easements, approvals, institutional controls, or authorizations cannot be obtained, Respondent shall promptly notify the Department and include a summary of the steps taken. The Department may, as it deems appropriate and within its authority, assist Respondent in obtaining same.

2. If an interest in property is needed to implement an institutional control required by a Work Plan and such interest cannot be obtained, the Department may require Respondent to modify the Work Plan pursuant to 6 NYCRR 375-1.6(d)(3) to reflect changes necessitated by Respondent's inability to obtain such interest.

D. The paragraph headings set forth in this Order are included for convenience of reference only and shall be disregarded in the construction and interpretation of any provisions of this Order.

E. 1. The terms of this Order shall constitute the complete and entire agreement between the Department and Respondent concerning the implementation of the activities required by this Order. No term, condition, understanding, or agreement purporting to modify or vary any term of this Order shall be binding unless made in writing and subscribed by the party to be bound. No informal advice, guidance, suggestion, or comment by the Department shall be construed as relieving Respondent of Respondent's obligation to obtain such formal approvals as may be required by this Order. In the event of a conflict between the terms of this Order and any Work Plan submitted pursuant to this Order, the terms of this Order shall control over the terms of the Work Plan(s). Respondent consents to and agrees not to contest the authority and jurisdiction of the Department to enter into or enforce this Order.

2. i. Except as set forth herein, if Respondent desires that any provision of this Order be changed, Respondent shall make timely written application to the Commissioner with copies to the parties listed in Subparagraph X.A.1.

ii. If Respondent seeks to modify an approved Work Plan, a written request shall be made to the Department's project manager, with copies to the parties listed in Subparagraph X.A.1.

iii. Requests for a change to a time frame set forth in this Order shall be made in writing to the Department's project attorney and project manager; such requests shall not be unreasonably denied and a written response to such requests shall be sent to Respondent promptly.

F. 1. If there are multiple parties signing this Order, the term "Respondent" shall be read in the plural, the obligations of each such party under this

Order are joint and several, and the insolvency of or failure by any Respondent to implement any obligations under this Order shall not affect the obligations of the remaining Respondent(s) under this Order.

2. If Respondent is a partnership, the obligations of all general partners (including limited partners who act as general partners) under this Order are joint and several and the insolvency or failure of any general partner to implement any obligations under this Order shall not affect the obligations of the remaining partner(s) under this Order.

3. Notwithstanding the foregoing Subparagraphs XIII.F.1 and 2, if multiple parties sign this Order as Respondents but not all of the signing parties elect to implement a Work Plan, all Respondents are jointly and severally liable for each and every obligation under this Order through the completion of activities in such Work Plan that all such parties consented to; thereafter, only those Respondents electing to perform additional work shall be jointly and severally liable under this Order for the obligations and activities under such additional Work Plan(s). The parties electing not to implement the additional Work Plan(s) shall have no obligations under this Order relative to the activities set forth in such Work Plan(s). Further, only those Respondents electing to implement such additional Work Plan(s) shall be eligible to receive the Liability Limitation referenced in Paragraph VI.

G. Respondent shall be entitled to receive contribution protection and/or to seek contribution to the extent authorized by ECL 27-1421(6) and 6 NYCRR 375-1.5(b)(5).

H. Unless otherwise expressly provided herein, terms used in this Order which are defined in ECL Article 27, or in regulations promulgated thereunder shall have the meaning assigned to them under said statute or regulations.

I. Respondent's obligations under this Order represent payment for or reimbursement of response costs and or natural resource damages, and shall not be deemed to constitute any type of fine or penalty.

J. Respondent and Respondent's successors and assigns shall be bound by this Order. Any change in ownership or corporate status of Respondent shall in no way alter Respondent's responsibilities under this Order.

K. This Order may be executed for the convenience of the parties hereto, individually or in combination, in one or more counterparts, each of which shall be deemed to have the status of an executed original and all of which shall together constitute one and the same.

L. The effective date of this Order is the date it is signed by the Commissioner or the Commissioner's designee.

DATED:

AUG 2 3 2011

JOSEPH J. MARTENS
COMMISSIONER
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

By: _____
Dale A. Desnoyers, Director
Division of Environmental Remediation

CONSENT BY RESPONDENT

Respondent hereby consents to the issuing and entering of this Order, waives its right to a hearing herein as provided by law, and agrees to be bound by this Order.

Georgia-Pacific LLC

By: _____

Title: ROGER J. HILARIDES SENIOR VICE PRESIDENT

Date: 7/18/2011

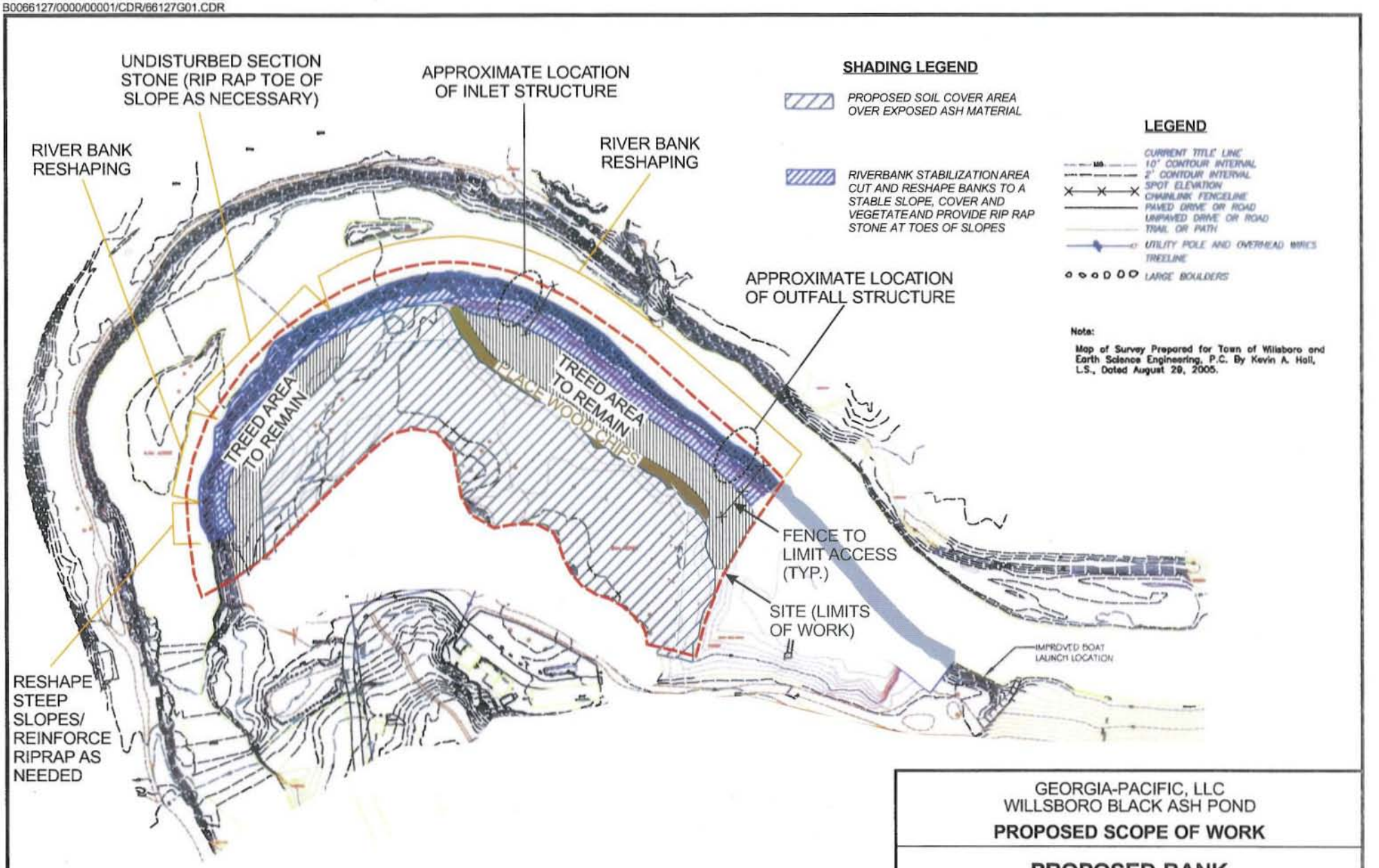
STATE OF)
) ss:
COUNTY OF)

On the 18th day of July, in the year 2011, before me, the undersigned, personally appeared Roger Hilarides, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Signature and Office of individual taking acknowledgment

ELIZABETH A. HALE NOTARY PUBLIC DEKALB COUNTY GEORGIA EXPIRES AUG. 1, 2012

EXHIBIT "A"
Map of the Site



NOT-TO-SCALE

REFERENCE: BASE FIGURE FROM ESE REMEDIAL INVESTIGATION REPORT

GEORGIA-PACIFIC, LLC
WILLSBORO BLACK ASH POND

PROPOSED SCOPE OF WORK

PROPOSED BANK STABILIZATION/SOIL COVER PROJECT

ARCADIS

FIGURE
1

EXHIBIT "B"
March 2007 ROD

Department of Environmental Conservation

Division of Environmental Remediation

Environmental Restoration
Record of Decision
Willsboro Black Ash Pond Site
Willsboro, Essex County, New York
Site Number E516009

March 2007

New York State Department of Environmental Conservation
ELIOT SPITZER, *Governor*

DECLARATION STATEMENT
ENVIRONMENTAL RESTORATION RECORD OF DECISION

Willsboro Black Ash Pond Environmental Restoration Site
Willsboro, Essex County, New York
Site No. E516009

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Willsboro Black Ash Pond site, an environmental restoration site. The selected remedial program was chosen in accordance with the New York State Environmental Conservation Law and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Willsboro Black Ash Pond environmental restoration site, and the public's input to the Proposed Remedial Action Plan (PRAP) presented by the Department. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this ROD, presents a current or potential significant threat to public health and/or the environment.

Description of Selected Remedy

Based on the results of the Site Investigation/Remedial Alternatives Report (SI/RAR) for the Willsboro Black Ash Pond site and the criteria identified for evaluation of alternatives, the Department has selected to consolidate and regrade the fill and stabilize the stream bank to decrease or eliminate the erosion of the black ash material into the Boquet River. Remediation of this site will also allow for the Town of Willsboro's proposed development of a Constructed Wetland as Tertiary Treatment for the Willsboro Waste Water Treatment Plant. The components of the remedy are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, maintenance, and monitoring of the remedial program.

2. Establish erosion and sediment controls consistent with a Storm Water Pollution Prevention Plan to be developed for this site to protect the Boquet River during the remedial construction activities.

3. Clearing of the trees and vegetation from the site.

4. Consolidation of the black ash waste, including the black ash identified on the Adirondack Nature Conservancy (ANC) property.

5. Construction of the stream bank stabilization features. Construct an earthen dike to an elevation which will prevent the river from coming in contact with the constructed black ash area and the constructed wetland treatment system proposed by the Town.

6. Construction of a soil cover over all of the combined black ash to prevent exposure to contaminated soils. Diversion berms and lined drainage ways will be constructed to control storm water flow and infiltration.

7. Imposition of an institutional control in the form of an environmental easement that will require (a) limiting the use and development of the area of the black ash to restricted residential use (restricted residential use as defined in 6 NYCRR Part 375 would include recreational activities); (b) compliance with the approved site management plan; (c) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and (d) the property owner to complete and submit to the Department a periodic certification of institutional and engineering controls.

8. Development of a site management plan which will include the following institutional and engineering controls: (a) management of the final cover system to restrict excavation below the soil layer, pavement, or buildings. Excavated soil will be properly handled to protect the health and safety of workers and the nearby community, and will be properly managed in a manner acceptable to the Department; (c) identification of any use restrictions on the site; (d) provisions for the continued proper maintenance of the components of the remedy.

9. The municipality (or other property owner) will provide a periodic certification of institutional and engineering controls, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the municipality in writing that this certification is no longer needed. This submittal will:(a) contain certification that the institutional controls and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications; (b) allow the Department access to the site; and (c) state that nothing has occurred that would impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the Department.

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy selected for this site is protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective.

3/31/07
Date

Dale A. Desnoyers, Director
Division of Environmental Remediation

TABLE OF CONTENTS

SECTION **PAGE**

1: SUMMARY OF THE RECORD OF DECISION 1

2: SITE LOCATION AND DESCRIPTION 2

3: SITE HISTORY 2
- 3.1: Operational/Disposal History 2
- 3.2: Remedial History 3

4: ENFORCEMENT STATUS 3

5: SITE CONTAMINATION 3
- 5.1: Summary of the Site Investigation 3
- 5.3: Summary of Human Exposure Pathways: 7
- 5.4: Summary of Environmental Assessment 7

6: SUMMARY OF THE REMEDIATION GOALS AND PROPOSED USE OF THE SITE .. 8

7: SUMMARY OF THE EVALUATION OF ALTERNATIVES 9
- 7.1: Description of Remedial Alternatives 9
- 7.2 Evaluation of Remedial Alternatives 12

8: SUMMARY OF THE SELECTED REMEDY 13

Tables
- Table 1: Remedial Alternative Costs .....

Figures
- Figure 1: Site Location Map .....
- Figure 2: Sample Locations .....
- Figure 3: Groundwater Flow .....
- Figure 4: Extent of the Waste .....
- Figure 5: Conceptual Drawing of the Selected Alternative .....

Photos
- Photo page 1 .....
- Photo page 2 .....

Appendices
- Appendix A: Responsiveness Summary .....
- Appendix B: Administrative Record .....

Environmental Restoration
RECORD OF DECISION

Willsboro Black Ash Pond
Willsboro, Essex County, New York
Site No. E516009
March 2007

SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected this remedy for the Willsboro Black Ash Pond Site. The presence of hazardous substances has created threats to human health and/or the environment that are addressed by this remedy.

The 1996 Clean Water/ Clean Air Bond Act provides funding to municipalities for the investigation and cleanup of brownfields. Under the Environmental Restoration Program, the state provides grants to municipalities to reimburse up to 90 percent of eligible costs for site investigation and remediation activities. Once remediated, the property can then be reused.

As more fully described in Sections 3 and 5 of this document, the discharge of industrial wastes to a lagoon constructed adjacent to the Boquet River has resulted in the disposal of hazardous substances, including heavy metals. These hazardous substances have contaminated the soils at the site, and have resulted in:

- an environmental threat associated with the potential impacts of contaminants to the Boquet River and its sediments. The Boquet River is part of the salmonid restoration program in Lake Champlain.

- a human health threat associated with potential direct contact and ingestion of the black ash in the former lagoon.

To eliminate or mitigate these threats, the Department has selected a plan to consolidate and regrade the fill and stabilize the stream bank to decrease or eliminate the erosion of the black ash material into the Boquet River.

Remediation of this site will also allow for the Town of Willsboro's proposed development of a Constructed Wetland as Tertiary Treatment for the Willsboro Waste Water Treatment Plant.

Some of the criteria for evaluating sites in the Environmental Restoration Program include providing a benefit to the environment and a potential for public or recreational use of the cleaned up property. In addition to mitigating the environmental impacts of this site on the river, this project will provide an open space near the river, available for public recreation. Remediation of the site will also provide better access to the Boquet River for recreational activities.

The selected remedy, discussed in detail in Section 8, is intended to attain the remediation goals identified for this site in Section 6. The remedy must conform with officially promulgated standards and criteria that are directly applicable, or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, criteria and guidance are hereafter called SCGs.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Willsboro Black Ash Pond site is located at the end of School Street in the Town of Willsboro, County of Essex. The Boquet River is found on the north and west sides of the site. Lands owned by the Adirondack Nature Conservancy (ANC) are found to the east and lands owned by the Town and the ANC are found to the south. The 26.65 acre property was deeded to the Town in 1966 by the Georgia-Pacific Corporation. The Town waste water treatment plant is located on the property south of the site. A Department fishing access parking area is located to the west of the site and along the river and a boat launch is located on the Boquet River to the east of the site. See Figure 1.

The site is located within the floodplain of the Boquet River, approximately 50 feet above mean sea level and approximately 2 miles west of Lake Champlain. River sediment type soils were found beneath the waste materials at the site. Regional geologic mapping of the bedrock indicates that the soils are underlain by the Potsdam Sandstone.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

From 1884 until 1964, the Champlain Fibre Company, later known as the Willsboro Pulp Mill, operated a pulp mill on the opposite side of the Boquet River from the black ash pond site. In 1964 the mill property was purchased by Georgia Pacific. In 1966 the Town of Willsboro acquired the black ash pond property from Georgia Pacific.

The black ash pond area was used as a deposition area for spent black liquor used in the making of paper pulp. The black liquor was a combination of soda ash, chemical lime, wood fiber and soft coal. The black ash is the residue of spent black liquor combustion dumped in a basin area approximately 900 ft long and 400 ft wide. The waste accumulated to a depth of up to 16 feet within the basin during the years of paper mill operation. Over time, the dike constructed to retain the waste has eroded away in some locations exposing the ash to the river. The ash is eroding directly into the river.

During the paper pulp mill operations, the mill was located on the north side of the River. The lagoon was created on the south side of the River by constructing a crescent shaped dike, 12 to 15 feet high along the river bank. Black ash materials were first trucked, then piped to the south side of the river and deposited within the lagoon created by the dike. The investigation found that the waste material varied in thickness from 4 feet to 20 feet below existing surface. The waste consisted of black ash materials underlain in many locations by a white sludge like

material. The wastes were saturated at the ash/sludge interface. The riverine soils encountered below the sludge were also saturated.

3.2: Remedial History

No remedial activities have been undertaken at this site.

SECTION 4: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past owners and operators, waste generators, and haulers.

There are currently no ongoing enforcement actions. However, legal action may be initiated at a future date by the State to recover State response costs should PRPs be identified. The Town of Willsboro will assist the State in its efforts by providing all information to the State which identifies PRPs. The Town will also not enter into any agreement regarding response costs without the approval of the Department.

SECTION 5: SITE CONTAMINATION

The Town of Willsboro has recently completed a site investigation/remedial alternatives report (SI/RAR) to determine the nature and extent of any contamination by hazardous substances at this environmental restoration site.

5.1: Summary of the Site Investigation

The purpose of the SI was to define the nature and extent of any contamination resulting from previous activities at the site. The SI was conducted between May 2005 and November 2006. The field activities and findings of the investigation are described in the SI report.

The Site Investigation included a review of existing information and interviews with numerous residents of the area. Subsurface test trenches were completed within the site to identify areas of environmental concern. Soil borings were completed to define the vertical limits of the black ash and or sludge material. Samples of the waste were collected for laboratory analysis. A number of borings were completed as groundwater monitoring wells to assess potential impacts to the shallow groundwater. Sediment samples were collected from the Boquet River to assess potential impacts from the black ash. Test trench, monitoring well, and sample locations are presented on Figure 2.

5.1.1: Standards, Criteria, and Guidance (SCGs)

To determine whether the soil, groundwater, surface water and sediments contain contamination at levels of concern, data from the investigation were compared to the following SCGs:

- Groundwater, drinking water, and surface water SCGs are based on the Department's "Ambient Water Quality Standards and Guidance Values" and Part 5 of the New York State Sanitary Code.

- Soil SCGs are based on the Department's Cleanup Objectives ("Technical and Administrative Guidance Memorandum [TAGM] 4046; Determination of Soil Cleanup Objectives and Cleanup Levels." and 6 NYCRR Subpart 375-6 - Remedial Program Soil Cleanup Objectives)."

- Sediment SCGs are based on the Department's "Technical Guidance for Screening Contaminated Sediments."

- For the Site Investigation, background soil samples were taken from 2 locations. These locations were upgradient of the site, and were unaffected by historic or current site operations. Background sediment samples were collected from two locations. These locations were upgradient of the site. The samples were analyzed for volatile organic compounds, semivolatile organic compounds, PCBs and pesticides, and metals. The results of the background sample analysis were compared to relevant SI data to determine appropriate site remediation goals.

Based on the SI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site require remediation. These are summarized in Section 5.1.2. More complete information can be found in the SI report.

5.1.2: Nature and Extent of Contamination

This section describes the findings of the investigation for all environmental media that were investigated.

As described in the SI report, many soil, groundwater and sediment samples were collected to characterize the nature and extent of contamination. Images of the Black Ash Pond site can be found on Photo Page 1. A photo of the ash exposed to the River can be found on Photo Page 2. The main categories of contaminants that exceed their SCGs are inorganics (metals). For comparison purposes, where applicable, SCGs are provided for each medium.

Chemical concentrations are reported in parts per billion (ppb) for water and parts per million (ppm) for waste, soil, and sediment. Samples collected during the investigation were analyzed for the Target Compound List (TCL) parameters. TCL parameters include Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), PCBs and Pesticides, and Metals.

Within the 25 acres of the site, water was found in the monitoring wells at various depths ranging from 7 to 16 feet. In general, the flow of groundwater in the vicinity of the site is from the higher elevations south of the site toward the Boquet River. See Figure 3.

Figure 4 shows the extent of the black ash waste on the property. The waste contains levels of metals which exceed the clean up goals established in TAGM 4046. For metals, the clean up goal is often established as equivalent to site background levels. The following are the media which were investigated and a summary of the findings of the investigation.

Waste Materials

During the site investigation, the former lagoon was characterized during the excavation of 37 test trenches and 13 soil borings. After visual examination of the materials exposed during the excavation of trenches and advancement of borings, 16 subsurface samples were sent to the lab for analysis. With the exception of acetone and methylene chloride, VOCs were not identified in any of the samples. Acetone and methlyene chloride are believed to be laboratory artifacts and not a result activities at the site.

SVOCs were detected at low levels in the several samples. One SVOC, benzo(a)pyrene was detected above the recommended soil cleanup objectives (RSCO) in two samples at levels of 630 ppb and 84 ppb. From TAGM 4046, the RSCO for benzo(a)pyrene is 61 ppb. The 6 NYCRR Part 375 Soil Cleanup Objective (SCO) for benzo(a)pyrene, for both unrestricted use and protection of ecological resources is 1,000 ppb. The pesticides methoxychlor and alpha-BHC were detected in one sample, both at levels below the RSCO.
Metals analysis of the waste materials identified aluminum, arsenic, antimony, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, potassium, sodium, vanadium, and zinc at levels above the RSCOs in TAGM 4046. None of the metals identified in the waste materials exceeded the SCOs for those metals with SCOs established in the 6 NYCRR Part 375, for both unrestricted use and protection of ecological resources .

Wastes identified during the SI/RAR will be addressed in the remedy selection process.

Groundwater

Seven monitoring wells were installed and sampled to gather water quality data. VOCs were not detected in any of the groundwater samples. SVOCs were not detected in 5 of the 7 wells. Ddiethlyphthalate, di-n-butylphthalate, and butlybenzylphthalate were detected in two wells, MW-1 and MW-2 at levels below the drinking water standard of 50 ppb. PCBs and pesticides were not detected in any of the groundwater samples.

Aluminum, antimony, chromium, iron, magnesium, manganese, sodium, and thallium were detected in the groundwater samples collected within the footprint of the black ash pond at levels exceeding the class GA standards for groundwater.

Groundwater contamination identified during the SI/RAR will be addressed in the remedy selection process.

Surface Water

Additional sampling of the surface water recommended during an agency review of the SI will take place as part of a supplemental data collection activity.

Sediments

Sediment samples were collected at two depths at 2 upgradient and 4 downgradient locations. The depth of the sediment samples at each location was 6 inches and 18 inches. Although the low level presence of acetone was detected within 3 of the 12 samples, acetone was also detected in the trip blank indicating the presence of acetone occurred as an inadvertent result of laboratory cross contamination. SVOCs were not identified within the majority of sediment samples collected, with the exception of dimethylphthalate and 2,6-dinitrotoluene and pyrene. Levels of VOCs and SVOCs found in the sediments were compared with the criterion in the NYSDEC Technical Guidance for Screening Contaminated Sediment, reprinted in January of 1999. Each of the VOC or SVOC parameters detected were identified at concentrations significantly below one or more of the three parameter specific sediment criteria categories in the NYSDEC guidance.

PCBs and pesticides were not detected in the sediment samples.

Metals analysis of the sediments identified elevated concentrations of aluminum, antimony, barium, calcium, iron, magnesium, manganese, nickel, potassium, sodium, and zinc. Of the metals identified at elevated concentrations, only antimony and nickel were found at levels which exceed guidance levels in the NYSDEC Technical Guidance for Screening Contaminated Sediments.

Sample ID	Metal	Concentration	Lowest Effect Level	Severe Effect Level
SD-5 18" (downgradient)	Antimony	68.5 mg/kg	2.0 mg/kg	25.0 mg/kg
SD-2 18" (upgradient)	Antimony	7.2 mg/kg	2.0 mg/kg	25.0 mg/kg
SD-4 06" (downgradient)	Antimony	16.5 mg/kg	2.0 mg/kg	25.0 mg/kg
SD-4 18" (downgradient)	Antimony	6.0 mg/kg	2.0 mg/kg	25.0 mg/kg
SD-5 18" (downgradient)	Nickel	16.6	16.0 mg/kg	50.0 mg/kg

Additional sampling of the sediments recommended during an agency review of the SI will take place as part of a supplemental data collection activity. Sediment contamination identified during the SI/RAR will be addressed in the remedy selection process.

Soil Vapor/Sub-Slab Vapor/Air

No VOCs were identified during the SI. No site-related soil vapor and/or indoor air contamination of concern was identified during the SI/RAR. Therefore, no remedial alternatives need to be evaluated for this medium.

5.2: Interim Remedial Measures

There were no IRMs performed at this site during the SI/RAR.

5.3: Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the human exposure pathways can be found in Section 3.6, Qualitative Human Health Risk Assessment, of the SI report. An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.

The source of contamination is the location where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

Potential exposure pathways exist at the Black Ash Pond site. These pathways include direct contact, inhalation or ingestion of contaminated ash and ash dust by trespassers or persons accessing the Town boat launch and fishing access site. Town employees could also come into contact with contaminated ash that may enter nearby sewers. Recreational use of the Boquet River could lead to exposures via direct contact or ingestion, due to the migration of the ash into the surface water and sediments adjacent to and downgradient of the site. If construction were to occur on the site, construction workers could come into contact with the contaminated ash.

Public water serves the area surrounding the site, making contact with contaminated groundwater unlikely. In addition, the site and adjacent areas, with the exception of a wastewater treatment plant, are vacant. The nearest residences are upgradient of the site. Site contaminants have not impacted soil vapor.

5.4: Summary of Environmental Assessment

The wastes disposed of within the former black ash lagoon can be characterized as metal contaminated industrial wastes. The berm which used to separate the wastes from the river has deteriorated and no longer functions to contain the waste mass. The black ash is directly exposed to the river and erosion of the material is impacting the river. The extremely fine grained nature of the waste makes it readily subject to transport and erosion.

The Fish and Wildlife Impact Analysis, which is included in the SI report (Appendix F) presents a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors.

The following environmental exposure pathways and ecological risks have been identified:

- Fish spawning habitat: Siltation from the eroding ash deposit could reduce and even eliminate trout and salmon spawning habitat. Female trout and salmon reproduce by building a "redd" or nest in clean gravel. Deposition of fine sediments from the ash beds appears to be reducing the suitable spawning habitat. Reducing siltation is the most effective way to encourage additional natural fish reproduction in the Boquet River.

- Egg Incubation and Early Development of Fish: If the erosion of the ash deposit results in high levels of siltation during spawning season the result can be a loss of developing eggs and sac fry. This includes the very critical early development stage (approximately 90 days) when fish eggs are incubating in the stream bed and when young fish are not fully developed.

- Physical Abrasion to Gill Breathing Aquatic Life: Siltation from the black ash could lead to excessive abrasion to the gills of fish, some aquatic insects, and amphibians. This will decrease their vitality and can contribute to mortality during periods of stress, such as the early spring recovery period (from winter stress), spawning periods, and late summer low dissolved oxygen periods.

- Interruption of Aquatic Food Chains: Black ash eroding into the river will contribute to increased sedimentation which can interrupt food chains in the river. Macroinvertebrates, such as the larvae of craneflies, mayflies, stoneflies, caddisflies, and beetles require clean, oxygen rich water to develop in the interstitial spaces of the gravel and stone of the stream bed.

- Transport of Chemical Contaminants: Erosion of the materials from the ash beds and sludge lagoons will increase the transport of chemical contaminants to the Boquet River.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS AND PROPOSED USE OF THE SITE

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. At a minimum, the remedy selected must eliminate or mitigate all

significant threats to public health and/or the environment presented by the hazardous substances disposed at the site through the proper application of scientific and engineering principles.

The remediation goals for this site are to eliminate or reduce to the extent practicable:

- the migration of contaminants of concern: specific (non-native) heavy metals, including: antimony, arsenic, cadmium, chromium, copper, iron, lead, magnesium, vanadium, and zinc as identified during the SI;

- the human health exposure pathway (via ingestion and direct contact) to contaminated waste media, exceeding NYSDEC TAGM 4046 recommended soil cleanup objectives and background soil conditions;

- environmental exposures of flora or fauna to fine grained sedimentation and metals contamination in the Boquet River water and sediments;

- the release of contaminants from the waste area into the Boquet River through erosion.

- the potential for migration and leaching of contaminated waste media and dissolved heavy metals to the adjacent river and groundwater environment;

Further, the remediation goals for the site include attaining to the extent practicable:

- ambient groundwater quality standards; and

- improve access to and the quality of the recreational resource which is the Boquet River.

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

The selected remedy must be protective of human health and the environment, be cost-effective, comply with other statutory requirements. Potential remedial alternatives for the Black Ash Pond were identified, screened and evaluated in the RA report which is available at the document repositories established for the site.

A summary of the remedial alternatives that were considered for this site is discussed below. The present worth represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved.

7.1: Description of Remedial Alternatives

The following potential remedies were considered to address the contaminated waste media deposited in the former lagoon at the site.

Alternative 1: No Action

The No-Action Alternative, consists of maintaining the current conditions at the site.
The No Action Alternative is evaluated as a procedural requirement and as a basis for comparison. It allows the site to remain in an unremediated state. This alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment.

Present Worth: $0
Capital Cost: $0

Alternative 2: Restricting Access and Monitoring

Alternative 2 consists of implementing limited action items. The limited action items consist of constructing a perimeter fence around the Black Ash Pond, posting warning signs, an environmental easement, conducting groundwater and/or leachate monitoring, and conducting a review of the site every five (5) years to evaluate current conditions.

Present Worth: $222,000
Capital Cost: $81,800

Alternative 3 – Clay Soil Cover (Including Waste Consolidation, Grading, Surface Controls) and Limited Action Items

Alternative 3 would include consolidating the black ash then covering the black ash material with a layer of clean soil. Black Ash material identified on the adjacent ANC property would be consolidated into the waste mass on the site. Black Ash materials on the site would be moved to an area of reduced foot print away from the river. Regrading of the site would be combined with construction of diversion berms and lined drainage ways to control storm water flow and infiltration. The black ash material would be covered with an 18" layer of clean soil of low permeability (projected 10^{-5}). Six inches of soil capable of supporting vegetation would be placed on top of the 18" layer of soil cover. Soil cover would comply with the requirements provided in 6 NYCRR Part 375, 6.7 (d).
The primary purpose of this alternative would be to isolate the black ash waste media from the surface environment. Other benefits of this alternative would include minimizing erosion of the ash, re-directing surface runoff over and around the waste mass, and minimizing ash contact/transport to the river environment.
Additionally, institutional controls such as an environmental easement would be implemented as part of this alternative.

Present Worth: *$618,200*
Capital Cost: *$472,900*

Alternative 4 – Soil Cover, Including Grading to Control Storm Water Flow and Infiltration, Riverbank Stabilization Features with Limited Actions

Alternative 4 will include consolidation of the black ash, then covering the black ash material with a layer of clean soil combined with the construction of riverbank stabilization features. Black Ash material identified on the adjacent ANC property will be consolidated into the waste mass on the site. Black Ash materials on the site will be moved to an area of reduced foot print away from the river. Regrading of the site will be combined with construction of diversion berms and lined drainage ways to control storm water flow and infiltration. The black ash material will be covered with an 18" layer of clean soil of low permeability (projected 10^{-5}). Six inches of soil capable of supporting vegetation will be placed on top of the 18" layer of soil cover. Soil cover will comply with the requirements provided in 6 NYCRR Part 375, 6.7 (d). The riverbank stabilization will include construction of an earthen dike to an elevation which will prevent the river from coming in contact with the constructed black ash area and the constructed wetland treatment system proposed by the Town. The earthen dike will be reinforced with rip rap on a 2.5 to 1 slope and underlain with a geotextile fabric. Natural plants, such as willow stakes, will be used on the face of the riverbank to provide a transition zone which will support the natural ecology but be resistant to erosion. It may be necessary to include some short sheet piling at the east end of the project near the boat launch to stabilize the bank without impacting the boat launch.
The primary purpose of this alternative will be to isolate the black ash waste media from the surface environment. Other benefits of this alternative will include minimizing erosion of the ash, re-directing surface runoff around and over the waste mass, minimizing ash contact/transport to the river environment, and stabilizing the river bank to prevent the ash from being exposed to the river. Additionally, institutional controls such as an environmental easement will be implemented as part of this alternative.

Present Worth: $3,961,200
Capital Cost: $3,893,600

Alternative 5 - Engineered Cap, Upgradient Groundwater Collection/Diversion Trench and Limited Action Items

Alternative 5 would include construction of an engineered cap over the consolidated ash, combined with construction of riverbank stabilization features. The engineered cap would be generally consistent with 6 NYCRR Part 360 regulations. Regrading of the site would be combined with construction of diversion berms and lined drainage ways to control storm water flow and infiltration. The black ash material would be covered with an engineered cap. Six inches of soil capable of supporting vegetation would be placed on top of the constructed cap. Soil cover would comply with the requirements provided in 6 NYCRR Part 375, 6.7 (d). The riverbank stabilization would include construction of an earthen dike to an elevation which would prevent the river from coming in contact with the constructed black ash area and the constructed wetland treatment system proposed by the Town. The earthen dike would be reinforced with rip rap on a 2.5 to 1 slope and underlain with a geotextile fabric. Natural plants, such as willow stakes, would be used on the face of the riverbank to provide a transition zone which would support the natural ecology but be resistant to erosion. It may be necessary to include some short sheet piling at the east end of the project near the boat launch to stabilize the bank without impacting the boat launch.

The primary purpose of this alternative would be to isolate the black ash from the surface environment and minimize the generation of ash related leachate and transport thereof to shallow groundwater and the near river environment. Other benefits of this alternative would include minimizing the erosion of the ash, re-directing surface runoff over and around the waste mass, minimizing ash contact/transport to the river, and stabilizing the river bank to prevent the ash from being exposed to the river.
Additionally, institutional controls such as an environmental easement would be implemented as part of this alternative.

Present Worth: $5,504,300
Capital Cost: $5,436,700

Alternative 6 - Engineered Cap, Upgradient Groundwater Cutoff/Diversion Wall, Limited Action Items, and Supplemental Remedial Measures

Alternative 6 consists of constructing an engineered cap over the Black Ash Pond, constructing an upgradient slurry wall to minimize (almost eliminate) the flow of groundwater through the black ash, combined with construction of riverbank stabilization features. The primary difference between alternatives 5 & 6 is; alternative 6 includes the construction of 1,800 feet of slurry wall along the south and west sides of the waste mass.
The primary purpose of this alternative would be to isolate the black ash waste media from the surface environment and significantly minimize the generation of ash related leachate and transport of such leachate to the local shallow groundwater and the Boquet River. Other benefits of this alternative would include minimizing erosion of the ash waste, directing surface runoff over and around the Black Ash Pond, minimizing black ash contact/transport to the river environment, and stabilizing the river bank to prevent the ash from being exposed to the river.
Additionally, institutional controls such as an environmental easement would be implemented as part of this alternative.

Present Worth: *$5,737,900*
Capital Cost: *$5,670,300*

7.2 Evaluation of Remedial Alternatives

The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375, which governs the remediation of environmental restoration projects in New York A detailed discussion of the evaluation criteria and comparative analysis is included in the RA report.

The first two evaluation criteria are termed "threshold criteria" and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with

SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

7. Cost-Effectivness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision. The costs for each alternative are presented in Table 1 at the end of the PRAP.

This final criterion is considered a "modifying criterion" and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

8. Community Acceptance - Concerns of the community regarding the SI/RAR reports and the PRAP have been evaluated. The responsiveness summary (Appendix A) presents the public comments received and the manner in which the Department addressed the concerns raised.

In general, the public comments received were supportive of the selected remedy.

SECTION 8: SUMMARY OF THE SELECTED REMEDY

Based on the Administrative Record (Appendix B) and the discussion presented below, the

Department has selected Alternative 4, Soil Cover (including grading to control storm water and infiltration), Riverbank Stabilization Features with Limited Actions as the remedy for this site. The elements of this remedy are described at the end of this section.

The selected remedy is based on the results of the SI and the evaluation of alternatives presented in the RAR.

Alternative 4 was selected because, as described below, it satisfies the threshold criteria and provides the best balance of the primary balancing criteria described in Section 7.2. It will achieve the remediation goals for the site by providing a barrier to the waste, eliminating direct contact. Consolidating the waste mass, regrading the property, and decreasing the severity of the slope along the river bank, will decrease the erosional forces currently exposing and transporting the ash to the river. This will reduce the impact of the ash and the contaminants in the ash on the River. Precipitation and runoff both infiltrate into the waste mass as it exists today. Regrading the surface of the site and the proposed storm water control will divert the water which currently infiltrates into the waste mass and reduce the contaminant impact on the groundwater. Stabilizing the stream bank will eliminate the impact of the ash on the river and the fish and wildlife ecosystems associated with the river. Regrading the site and stabilizing the stream bank will also increase the access to the Boquet River enhancing the recreational opportunities in this area.

Alternatives 1 and 2 do not satisfy the threshold criteria.

Alternative 3 would reduce the direct contact with the waste material, but does not provide long term effective means to reduce the stream bank erosion. The ash could be exposed to the river again in the future.

Because Alternatives 4, 5, and 6 satisfy the threshold criteria, the five balancing criteria are particularly important in selecting a final remedy for the site. Each of these alternatives would involve regrading and providing a cover for the site, and stabilizing the stream bank. To eliminate direct contact with the waste, Alternative 4 will provide for a soil cover, Alternatives 5 & 6 would provide for an engineered cap. To control water infiltration into the waste, Alternatives 4 & 5 would provide for storm water controls, alternative 6 would provide for a slurry wall to eliminate groundwater movement into the waste mass. Each of these combinations of methods would achieve the criteria for remediation at this site. The cost of the alternatives varies significantly. Alternative 4 satisfies the threshold criteria and the other criteria and is significantly less expensive than Alternative 5 or 6. Alternative 4 is the recommended alternative.

The estimated present worth cost to implement the remedy is $3,961,200. The cost to construct the remedy is estimated to be $3,893,600 and the estimated average annual costs for 30 years is $6,000.

The elements of the selected remedy are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program.

2. Establish erosion and sediment controls consistent with a Storm Water Pollution Prevention

Plan to be developed for this site to protect the Boquet River during the remedial activities.

3. Clearing of the trees and vegetation from the site. In order to consolidate the ash and regrade the site to meet the design requirements, it will be necessary to remove the existing trees and vegetation.

4. Consolidation of the black ash waste, including the black ash identified on the Adirondack Nature Conservancy property. Black ash wastes found on the ANC property during the SI will be moved to the black ash lagoon area. Wastes within the lagoon, particularly those adjacent to the river, will be consolidated away from the river to achieve the designed contours of the remedial project. The site will be graded to mitigate the infiltration of water by diverting storm water flow around the waste mass and eliminate ponding on the waste mass.

5. Construction of the stream bank stabilization features. Construct an earthen dike to an elevation which will prevent the river from coming in contact with the constructed black ash area and the constructed wetland treatment system proposed by the Town. The earthen dike will be reinforced with rip rap on a 2.5 to 1 slope and underlain with a geotextile fabric. Natural plants, such as willow stakes, will be used on the face of the riverbank to provide a transition zone which will support the natural ecology but be resistant to erosion. It may be necessary to include some short sheet piling at the east end of the project near the boat launch to stabilize the bank without impacting the boat launch.

6. Construction of a soil cover over all of the combined black ash to prevent exposure to contaminated soils. Diversion berms and lined drainage ways will be constructed to control storm water flow and infiltration. The surface of the cover will be graded to provide proper storm water control, drainage, and enhanced recreational opportunities. The 2-foot thick cover will consist of 18 inches soil cover and 6 inches of soil of sufficient quality to support vegetation chosen to protect the cover and enhance the recreational opportunities along the river. Soil cover will comply with the requirements provided in 6 NYCRR Part 375, 6.7 (d). Non-vegetated areas (buildings, roadways, parking lots, etc.) will be covered by a paving system or concrete at least 6 inches thick.

7. Imposition of an institutional control in the form of an environmental easement that will require (a) limiting the use and development of the area of the black ash to restricted residential use (restricted residential use as defined in 6 NYCRR Part 375 will include recreational activities); (b) compliance with the approved site management plan; (c) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and (d) the property owner to complete and submit to the Department a periodic certification of institutional and engineering controls.

8. Development of a site management plan which will include the following institutional and engineering controls: (a) management of the final cover system to restrict excavation below the soil layer, pavement, or buildings. Excavated soil will be properly handled to protect the

health and safety of workers and the nearby community, and will be properly managed in a manner acceptable to the Department; (c) identification of any use restrictions on the site; (d) provisions for the continued proper maintenance of the components of the remedy.

9. The municipality (or other property owner) will provide a periodic certification of institutional and engineering controls, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the municipality in writing that this certification is no longer needed. This submittal will:(a) contain certification that the institutional controls and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications; (b) allow the Department access to the site; and (c) state that nothing has occurred that would impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the Department.

SECTION 9: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the environmental restoration process, a number of Citizen Participation activities were undertaken to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- Repositories for documents pertaining to the site were established.
- A public contact list, which included nearby property owners, elected officials, local media and other interested parties, was established.
- A public meeting was held on February 28, 2007 to present and receive comment on the PRAP.
- A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the PRAP.

Table 1
Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
No Action	0	0	0
Restricting Access and Monitoring	$81,800	$12,900	$222,000
Soil Cover, Limited Actions	$472,900	$12,900	$618,200
Soil Cover, River bank stabilization	$3,893,600	$6,000	$3,961,200
Engineered Cap, Stabilization	$5,436,700	$6,000	$5,504,300
Engineered Cap, Stabilization, Groundwater cutoff	$5,670,300	$6,000	$5,737,900

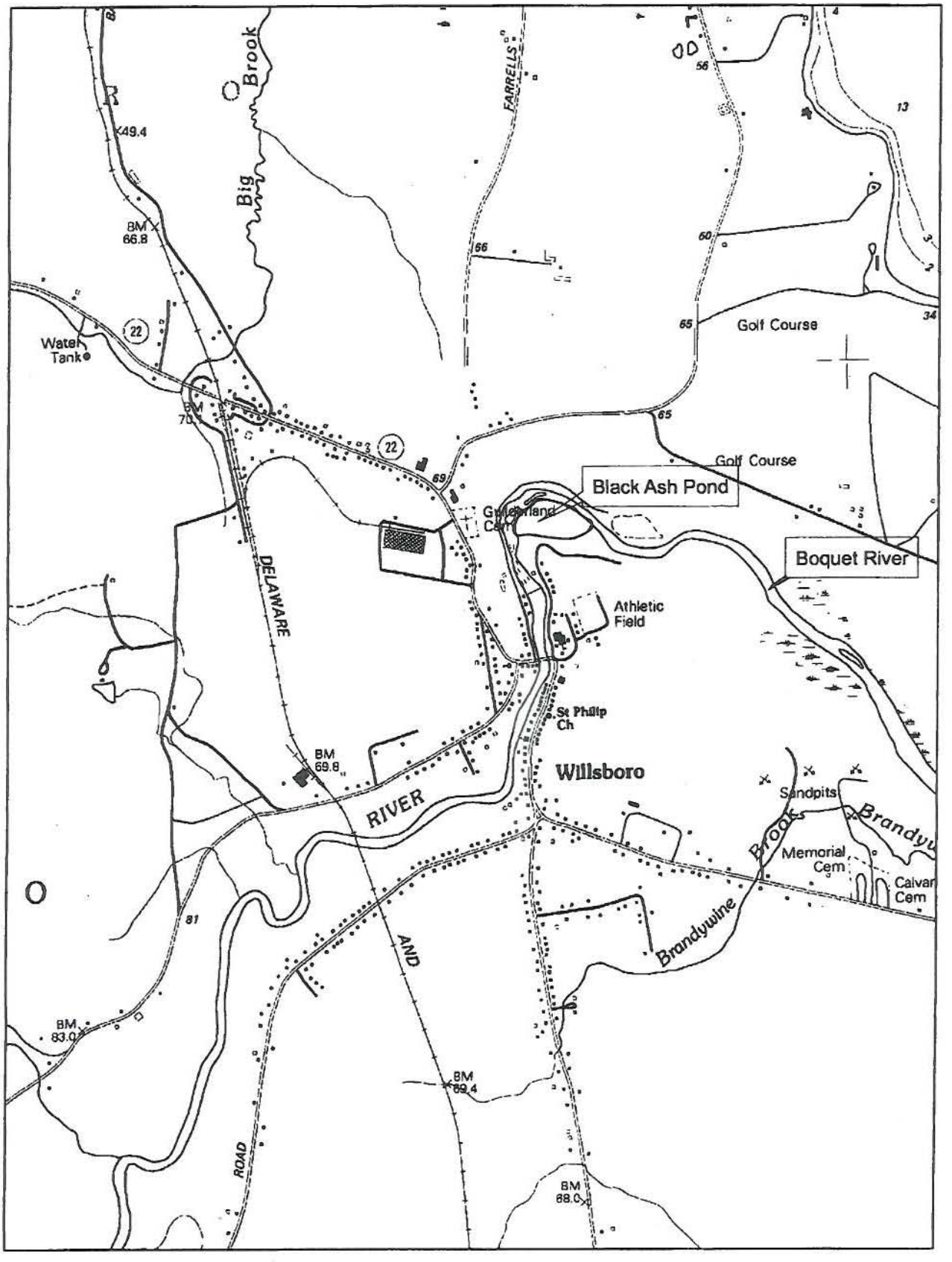


Figure 1
Willsboro Black Ash Pond
Site Location Map

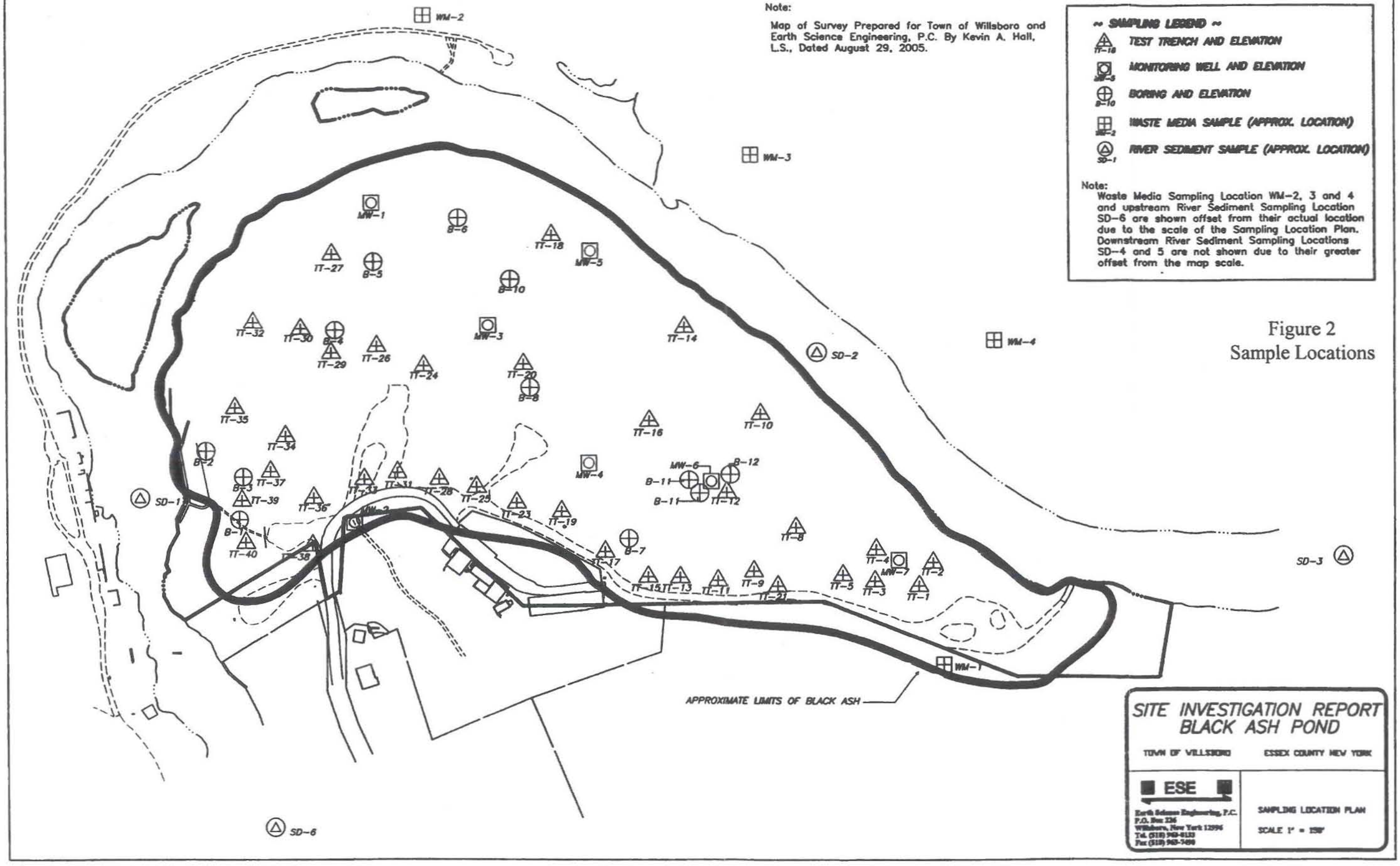


Figure 2
Sample Locations

Figure 2

Figure 3
Groundwater Flow Direction

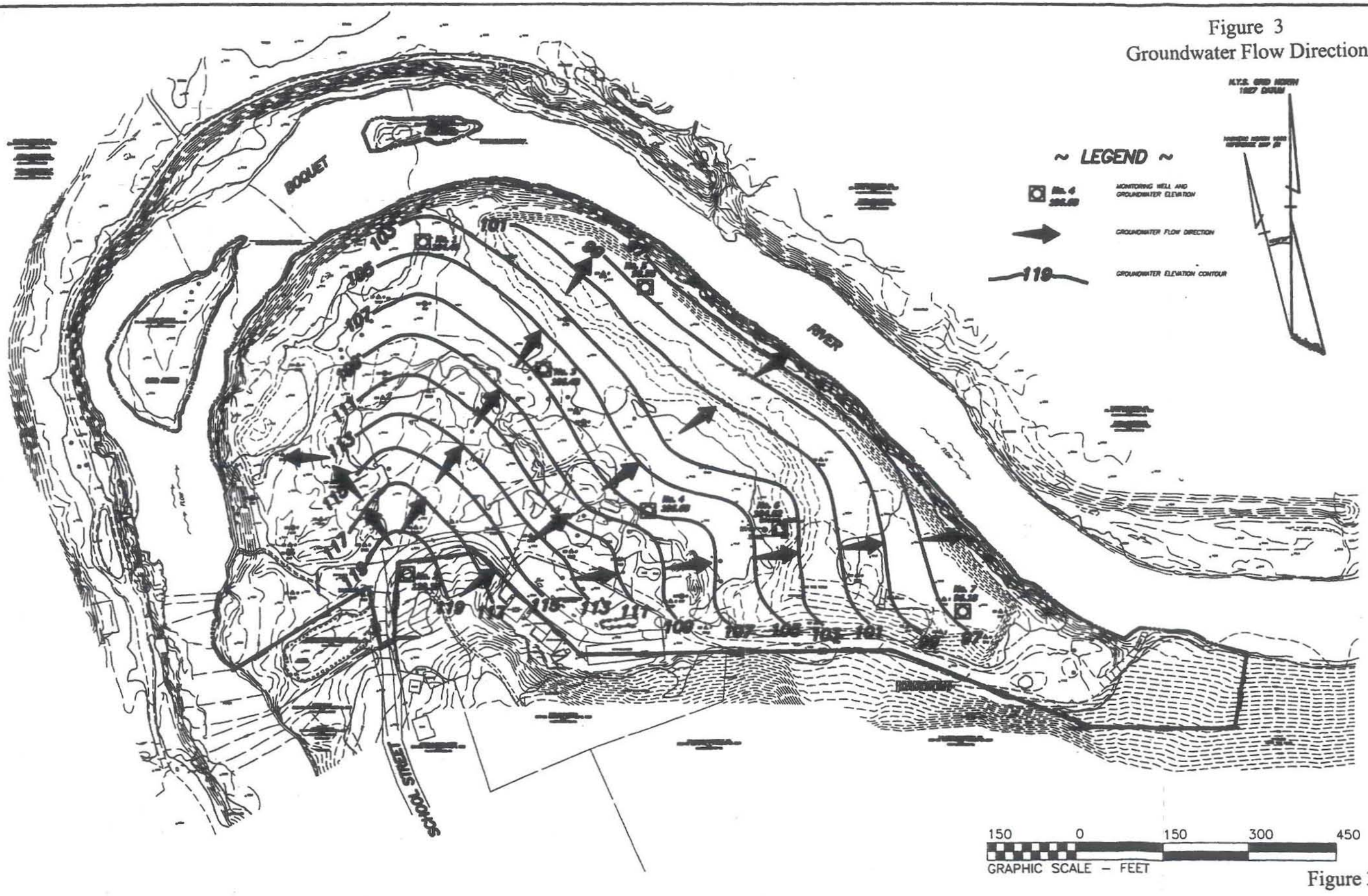


Figure 3

Note:

Map of Survey Prepared for Town of Willsboro and Earth Science Engineering, P.C. By Kevin A. Hall, L.S., Dated August 29, 2005.

~ SAMPLING LEGEND ~

- TT-1a — TEST TRENCH AND ELEVATION
- MW-5 — MONITORING WELL AND ELEVATION
- B-10 — BORING AND ELEVATION
- WM-2 — WASTE MEDIA SAMPLE (APPROX. LOCATION)
- SD-1 — RIVER SEDIMENT SAMPLE (APPROX. LOCATION)

Note:
Waste Media Sampling Location WM-2, 3 and 4 and upstream River Sediment Sampling Location SD-6 are shown offset from their actual location due to the scale of the Sampling Location Plan. Downstream River Sediment Sampling Locations SD-4 and 5 are not shown due to their greater offset from the map scale.

WM-2
WM-3
WM-4
WM-1
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
B-1
B-2
B-3
B-4
B-5
B-6
B-7
B-8
B-10
B-11
B-12
TT-1
TT-2
TT-3
TT-4
TT-5
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TT-36
TT-37
TT-38
TT-39
TT-40
SD-1
SD-2
SD-3
SD-6

Extent of the Waste

APPROXIMATE LIMITS OF BLACK ASH

SITE INVESTIGATION REPORT
BLACK ASH POND

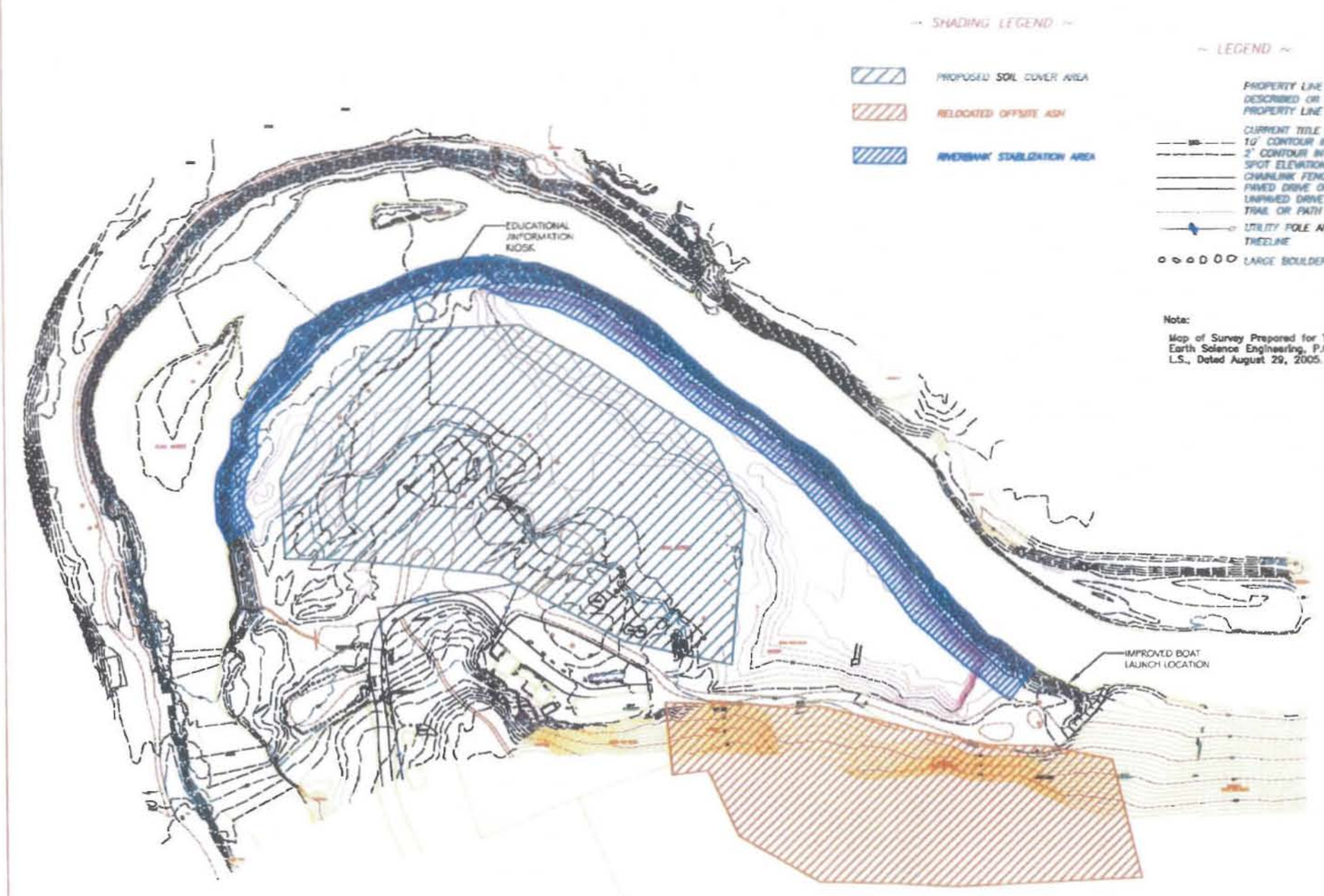
TOWN OF WILLSBORO — ESSEX COUNTY NEW YORK

ESE
Earth Science Engineering, P.C.
P.O. Box 226
Willsboro, New York 12996
Tel. (518) 963-8333
Fax (518) 963-7490

SAMPLING LOCATION PLAN
SCALE 1" = 150'

Figure 4
Extent of the Waste

Figure 5



~ SHADING LEGEND ~

PROPOSED SOIL COVER AREA

RELOCATED OFFSITE ASH

RIVERBANK STABILIZATION AREA

~ LEGEND ~

PROPERTY LINE AND CORNER MARKER AS DESCRIBED OR C.P. = COMPUTED POINT

PROPERTY LINE ALONG EDGE OF RIVER

CURRENT TITLE LINE

10' CONTOUR INTERVAL

2' CONTOUR INTERVAL

SPOT ELEVATION

CHAINLINK FENCELINE

PAVED DRIVE OR ROAD

UNPAVED DRIVE OR ROAD

TRAIL OR PATH

UTILITY POLE AND OVERHEAD WIRES

TREELINE

LARGE BOULDERS

Note:

Map of Survey Prepared for Town of Willsboro and Earth Science Engineering, P.C. By Kevin A. Hall, L.S., Dated August 29, 2005.

ALTERNATIVE 4
CONCEPTUAL DESIGN
BLACK ASH POND

TOWN OF WILLSBORO ESSEX COUNTY NEW YORK

ESE

Earth Science Engineering, P.C.
P.O. Box 226
Willsboro, New York 12996
Tel: (518) 963-4133
Fax: (518) 963-7490

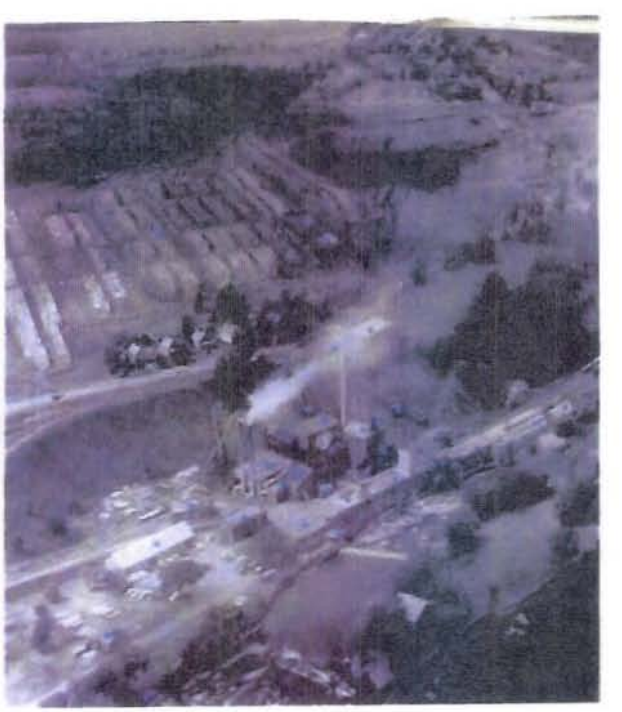
PLAN
DATE: 1/26/07
Scale: NTS

Figure 5

Black Ash Pond, looking west

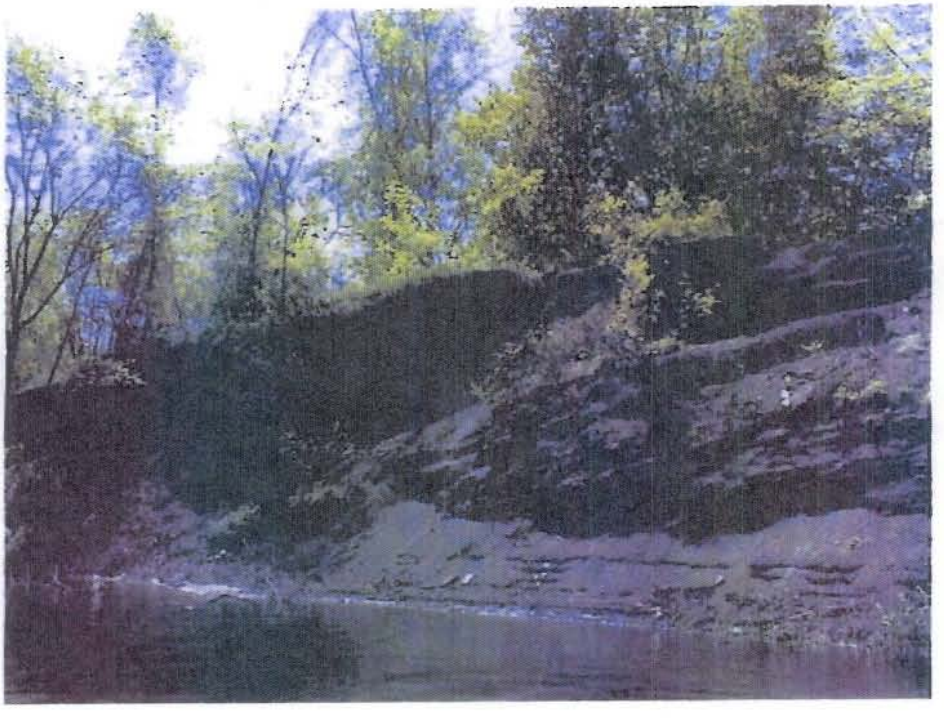
Black Ash Pond and Sludge Lagoon, looking west

Town Waste Water Treatment Plant with Black Ash Pond in foreground



Former Pulp Mill

View from the river of the eroded bank



Black ash collapsing into the river

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Willsboro Black Ash Pond Environmental Restoration Site
Willsboro, Essex County, New York
Site No. E516009

The Proposed Remedial Action Plan (PRAP) for the Willsboro Black Ash Pond site was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 14, 2007. The PRAP outlined the remedial measure proposed for the contaminated soils and sediments at the Willsboro Black Ash Pond site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on February 28, 2007, which included a presentation of the Site Investigation (SI) and the Remedial Alternatives Report (RAR) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 30, 2007.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

COMMENT 1: During the presentation of the PRAP at the public meeting, it was noted that the cost estimates for alternatives 4, 5, and 6 were incorrect and require correction. The unit cost/estimated quantity calculation was incorrect for the river bank stabilization estimate. The cost of each of the alternatives would increase approximately $335,000.

RESPONSE 1: The costs presented in the ROD have been corrected.

COMMENT 2: Can the value of the property be used by the municipality as part of the 10% contribution by the Town?

RESPONSE 2: No. The Town cannot use a projected value of the real property as payment for the project. The money to complete the project is funded by the Town and the State, the State will reimburse the Town for 90% of the cost.

COMMENT 3: To save the Town the cost of requesting bids on two separate projects, can the constructed wetland project be "piggy backed" on the bidding of the remediation project?

RESPONSE 3: Costs associated with the constructed wetland project would need to be tracked separately, but the bids could be requested as one package.

COMMENT 4: Are there public health concerns associated with people, especially kids and teenagers, playing and swimming in the Boquet River?

RESPONSE 4: Levels of contaminants in the waste materials, which have eroded into the river, are above background concentrations but below Part 375 cleanup levels for unrestricted use. Therefore, contact with the sediments by persons accessing the fishing area or the Town beach is unlikely to cause health problems. The goal of the remedial project to minimize or eliminate contact in the future is primarily based on ecological factors, which would also be protective of public health.

COMMENT 5: What will happen to the trees onsite?

RESPONSE 5: Most or all of the trees onsite will need to be cut down to facilitate the construction project.

COMMENT 6: Has any sampling of the biota in the River been conducted?

RESPONSE 6: The State did look at this option. After discussion with our fish and wildlife staff, it was decided that the levels in the sediments were not high enough to warrant sampling.

COMMENT 7: The Town expressed some concern as to where the 10% contribution from the Town would come from.

RESPONSE 7: The DEC offers a resource manual on our website, www.dec.state.ny.us, to address questions like this. While not the only programs, two programs were suggested to which the Town could apply for funding independent of the State Assistance Grant. One; the EPA brownfield grant program. Under the Environmental Restoration Program (ERP), grants obtained from other programs or entities can be used by the Town to pay for it's share of the cost. Two; the Environmental Facilities Corporation (EFC) offers Towns a low interest loan for ERP projects. During the discussion, the Town indicated that they had applied for the EFC loan already and would be applying to the EPA for a brownfield grant.

COMMENT 8: How is the ash problematic to the fish?

RESPONSE 8: The physical nature of the ash has an impact on the fish. Ash can cause abrasion of fish gills and eggs which causes problems for the fish.

APPENDIX B

Administrative Record

Administrative Record

Willsboro Black Ash Pond

Site No. E516009

1. Proposed Remedial Action Plan for the Willsboro Black Ash Pond site,, dated February 2007, prepared by the Department.

2. Black Ash Pond, ERP, Final Site Investigation Report November 2006

3. Black Ash Pond, ERP, Remedial Alternatives Report March 2007

4. Site Investigation Workplan, July 2004

5. Site Investigation Workplan Response, August 2004

6. PRAP Fact Sheet, February 2007

Exhibit "C"
Scope of Work

July 7, 2011

Willsboro Black Ash Pond
Scope of Work

This attachment describes a proposed scope of work (SOW) to address the former Black Ash Pond located in Willsboro, New York. The SOW will stabilize the Boquet River banks, consolidate excavated material in the former black ash lagoon area and cover the former lagoon area. The SOW consists of three phases: 1) Pre-Construction Activities; 2) Construction Activities; and 3) Post-Construction Activities. Each phase is summarized below. This SOW includes input received from the New York State Department of Environmental Conservation (NYSDEC) in a December 7, 2010 letter to Georgia-Pacific LLC (GP) and an April 28, 2011 site meeting among NYSDEC, GP and ARCADIS.

Access to the site is assumed to be free and clear. Any access agreements required with the owner will be obtained by GP for pre-design investigations and construction/post-construction activities.

1. Pre-Construction Activities

Pre-construction activities include: a) Pre-Design Investigation (including geotechnical program and a topographic survey); and b) Remedial Action Work Plan (RA Work Plan) preparation as described below. The RA Work Plan will be the first submittal to the NYSDEC following completion of the Pre-Design Investigation.

a. Pre-Design Investigation

The Pre-Design Investigation includes geotechnical soil sampling and testing activities to inform the remedial design presented in the RA Work Plan. Standard Operating Procedures (SOP) will be followed for sample collection, packaging and shipping. These SOP are consistent with the procedures described in NYSDEC DER-10. A Health and Safety Plan (HASP) will also be prepared for use at the site. No permits will be required for the field activities conducted for the Pre-Design Investigation.

The purpose of this geotechnical program is to evaluate the engineering characteristics of the native soils where the consolidated ash and a soil cover will be placed.

The geotechnical program may consist of installing five soil borings or several test pits, collecting soil samples and testing the following geotechnical parameters.

- Moisture content as a percentage of dry weight (ASTM D2216)
- Grain-size analysis with hydrometer (ASTM D422)
- Specific gravity (ASTM D854)
- Atterberg limits (ASTM D4318), as necessary

- Consolidated undrained triaxial shear test (ASTM D4767), as necessary
    - This will require the collection of an undisturbed Shelby Tube
- Direct-shear test (ASTM D3080), as necessary

The geotechnical data will provide information about the physical characteristics of the material where the ash and soil cover will be excavated/placed. The evaluation of these data will help identify whether the material can support construction equipment, how compressible the material is and how much it will consolidate after the placement of ash and soil cover, and whether the material will need to be stabilized to reduce settling and consolidation. In addition, the physical properties of the material will be used to assess the final slopes of proposed grades.

The Pre-Design Investigation topographic survey will be performed to provide a contour map of the areas where construction would occur. The survey data will be accurate to within 0.1 feet and provided in State Plane Coordinates (North American Datum 1983) based on the National Geodetic Vertical Datum of 1929 (feet above mean sea level). The topographic survey will result in a site map with 1-foot contour intervals.

b. RA Work Plan

Following completion of the Pre-Design Investigation, a RA Work Plan will be prepared to direct the subsequent remedial activities. The RA Work Plan will integrate relevant construction materials and work activity specifications similar to those developed by the USDA Natural Resource Conservation Service (NRCS) for the portion of the Willsboro Black Ash Streambank Stabilization Project already completed downriver of the site. The Work Plan will provide sufficient detail to complete the RA and will:

- Present Pre-Design Investigation results and how they apply to the engineering properties of the project area.
- Discuss the Remedial Design, which will include the following:
    - Reinforcing existing erosion control structures placed by others, where necessary.
    - Reshaping select sections of the berm along the length of the river within the site boundary as discussed during the recent site meeting and shown on Figure 1. The reshaping of the berms along the river is intended to minimize the riverbank erosion. The bottom approximately 10 feet of the berm slope will be covered with a non-woven geotextile and riprap to minimize erosion of the bank. The sizing and source for

riprap materials will be specified. The upper portion of the berm will be covered with top soil and seeded.

- Reconnection of the river and remnant floodplain using inlet and outlet structures with lowered portions of the existing berm along the river (Figure 1). The configuration of the inlet and outlet structures elevations will also be presented.

- Berm material will be reshaped from the river side to the inland side to provide stable slopes or be placed in the former black ash lagoon area (Figure 1). The RA Work Plan will include details such as the recontoured grading plan, the location of the inlet and outlet of the berm, and the location of the cover placement of the inland area.

- Site preparation will consist of an access road constructed to minimize the impact of the construction vehicles. This includes methods to reduce vegetation loss due to repeat construction vehicle traffic.

- The areas containing black ash and the berm materials removed from the riverbank will be covered with top soil and will be planted with grass seed to limit erosion and reduce the transport of the black ash material to the river.

- The toe of the river slope will be protected by rip rap similar to the Willsboro Black Ash Streambank Stabilization Project already completed downriver of the site, as necessary (as shown on Figure 1).

- Installation of restrictive access controls in select areas, including fencing.

- Summarize the evaluation of river hydrodynamics from existing United States Geological Survey (USGS) data and size riprap stone.

- Refine proposed construction activities, including:

  - Areas where existing mature trees will remain (Figure 1).

  - Areas to be capped (Figure 1).

  - Present a schematic of the inlet and outlet structures.

  - Discuss the restoration plan.

- Discuss how substantive permit requirements that pertain to erosion and sedimentation controls will be met

- Discuss remedial investigation data previously obtained by NYSDEC and Willsboro with regard to risk assessment and the rationale for not needing a Field Sampling Plan (FSP) and Quality Assurance Project Plan (QAPP). The site has been sufficiently characterized based on the previous Site Investigation completed by the Town of Willsboro and no further characterization is necessary. Based on that characterization it has been determined that the remedial action will not require off-site removal or treatment activities and will only involve activities that address the physical nature and location of black ash identified on the site. As such, a FSP and QAPP will not be necessary for this work.

- Discuss Construction Quality Control (it is anticipated a stand-alone Construction Quality Control Plan is not needed)

- Provide a Health and Safety Plan in an appendix

- Identify required Post-Construction Reporting Activities

- Describe the Drawings and Figures, which will depict the proposed construction activities and could include:

    - Site Plan
    - Site Preparation Plan
    - Excavation Plan
    - Cross Sections
    - Final Grading Plan
    - Restoration Plan
    - Miscellaneous Details

The RA Work Plan will be submitted to NYSDEC and it is anticipated that NYSDEC will provide one round of comments within 60 days.

2. Construction Activities

After NYSDEC approves the RA Work Plan, construction activities will begin when river elevations are anticipated to be at median flow conditions.

Construction activities are anticipated to require approximately two months. Oversight will be provided on a part-time basis (i.e., assumed two site visits per week by a geotechnical engineer,

including visits when significant construction activities will occur). The anticipated construction activities include:

- Site preparation
- Installation of temporary erosion sediment controls
- Riverbank reshaping using visual/grading criteria (no post-excavation sampling is anticipated)
- On-site consolidation of the ash material and the former ash lagoon area
- Placement of the soil cover on the former ash lagoon area
- Restoration of the riverbank and soil cover
- Remaining site restoration

Construction will result in the riverbank being excavated to a minimum 2:1 slope, increasing the floodplain area along this section of the river. The reshaped riverbank will be stabilized minimizing bank erosion. Material excavated will be consolidated in the area shown on Figure 1. Upon completion of the ash consolidation, soil cover placement, and bank reshaping, the site will be restored. NYSDEC will exempt GP from the need to obtain State and Local permits to conduct construction activities. It is anticipated that any Federal permit requirements will be similar to any requirements imposed for the recently completed riverbank work at the adjacent publically owned treatment works.

3. Post-Construction Activities

Post-construction activities include: a) Site Management Plan; b) Final Engineering Report; and c) Annual Reports. The Site Management Plan will be the first submittal to the NYSDEC following construction activities.

a. Final Report and Final Engineering Report

GP will prepare and submit to NYSDEC a Final Report per 6 NYCRR 375-1.6(b) and a Final Engineering Report per 6 NYCRR 375-1.6(c).

b. Site Management Plan

The Site Management Plan will identify and implement institutional and engineering controls required for the site. The Plan will also describe monitoring and maintenance activities that GP will conduct for 4 years. Annually, GP will conduct monitoring of the remedy for impacts related to natural acts and perform vegetation replacement (for dead loss). After 4 years of post-construction monitoring and maintenance, GP can petition NYSDEC to end GP's involvement in implementation of the Site Management Plan.

c. Annual Reports

GP will prepare and submit an Annual Report to NYSDEC during the period of GP's involvement in implementation of the Site Management Plan.