

# 932013



**DUPONT/OLIN  
GILL CREEK REMEDIATION  
PROJECT  
CONSTRUCTION  
CERTIFICATION**

Submitted to:  
NYS Department of Environmental Conservation  
Division of Hazardous Waste Remediation  
270 Michigan Avenue  
Buffalo, New York 14203

Prepared for:  
E.I. du Pont de Nemours & Company Inc.  
26th Street and Buffalo Avenue  
Niagara Falls, New York 14302  
and  
Olin Corporation  
Lower River Road  
Charleston, Tennessee 37310  
March 1993

**Woodward-Clyde** 

Woodward-Clyde Consultants  
3571 Niagara Falls Boulevard  
North Tonawanda, New York 14120  
Project Number 22915 T104



CHEMICALS

P.O. Box 787  
Buffalo Ave. & 26th Street  
Niagara Falls, NY 14302-0787  
(716) 278-5100

RECEIVED

SEP 07 1993

N.Y.S. DEPT. OF  
ENVIRONMENTAL CONSERVATION  
REGION 9

September 2, 1993

Mr. Michael J. Hinton, P.E.  
NYS Department of Environmental Conservation  
270 Michigan Avenue  
Buffalo, NY 14203-2999

Dear Mr. Hinton:

**GILL CREEK REMEDIATION**  
**ADDENDUM TO CONSTRUCTION CERTIFICATION**

Ref. Letter M. J. Hinton to A. K. Masse Dated 5/21/93

As requested in your letter to DuPont dated May 21, 1993, enclosed are two as-built construction plans showing the detail of the seep control measures used in Area 2D and Area 3. Figure 1 is the plan view and Figure 2 is the cross-sectional view for both seep areas. These figures are to be considered an addendum to the Gill Creek certification package submitted to NYSDEC on March 17, 1993.

Should you have any questions, please call me at (716) 278-5317.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ann K. Masse".

Ann K. Masse, Ph.D.  
Area Engineer, Engineering  
and Environmental Affairs

AKM:klf  
Enc.  
25228

cc: A. Wakeman - NYSDOH, Albany  
A. English - NYSDEC, Albany  
M. Podd - NYSDEC, Buffalo  
J. Brown - Olin

3571 Niagara Falls Boulevard  
North Tonawanda  
New York 14120  
(716) 692-7172  
Fax (716) 692-1512

**Woodward-Clyde Consultants**

May 19, 1993  
92C2255-6

Dr. Ann Masse  
E.I. du Pont de Nemours & Company  
26th Street and Buffalo Avenue  
Niagara Falls, New York 14302

Mr. James Brown  
Olin Corporation  
Lower River Road  
Charleston, Tennessee 37310

Re: Gill Creek Certification Package - Supplemental Figures Detailing Seep Remediation

Dear Dr. Masse and M. Brown:

As requested, we have prepared the attached Figures 1 & 2, detailing measures taken to address groundwater seeps which were discovered during the Gill Creek Remediation Project. These figures supplement the "Final Engineering Drawings", which were submitted to NYSDEC on March 17, 1993.

We appreciate this opportunity to be of service to DuPont and Olin. Please advise if you have questions or comments regarding these figures.

Very truly yours,

*Martin S. Leonard*  
Martin S. Leonard, P.E.  
Senior Project Engineer

*Kelly R. McIntosh*  
Kelly R. McIntosh, P.E., P.HGW.  
Associate



Consulting Engineers, Geologists  
and Environmental Scientists  
Offices in Other Principal Cities



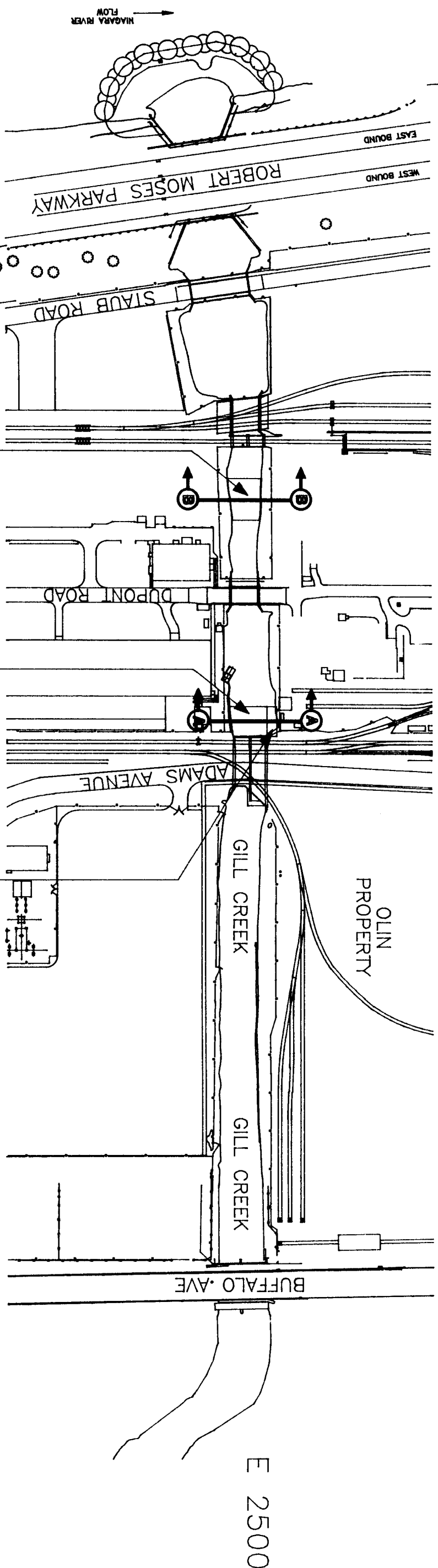


N 1000

N 1500

N 2000

N 2500



E 3000

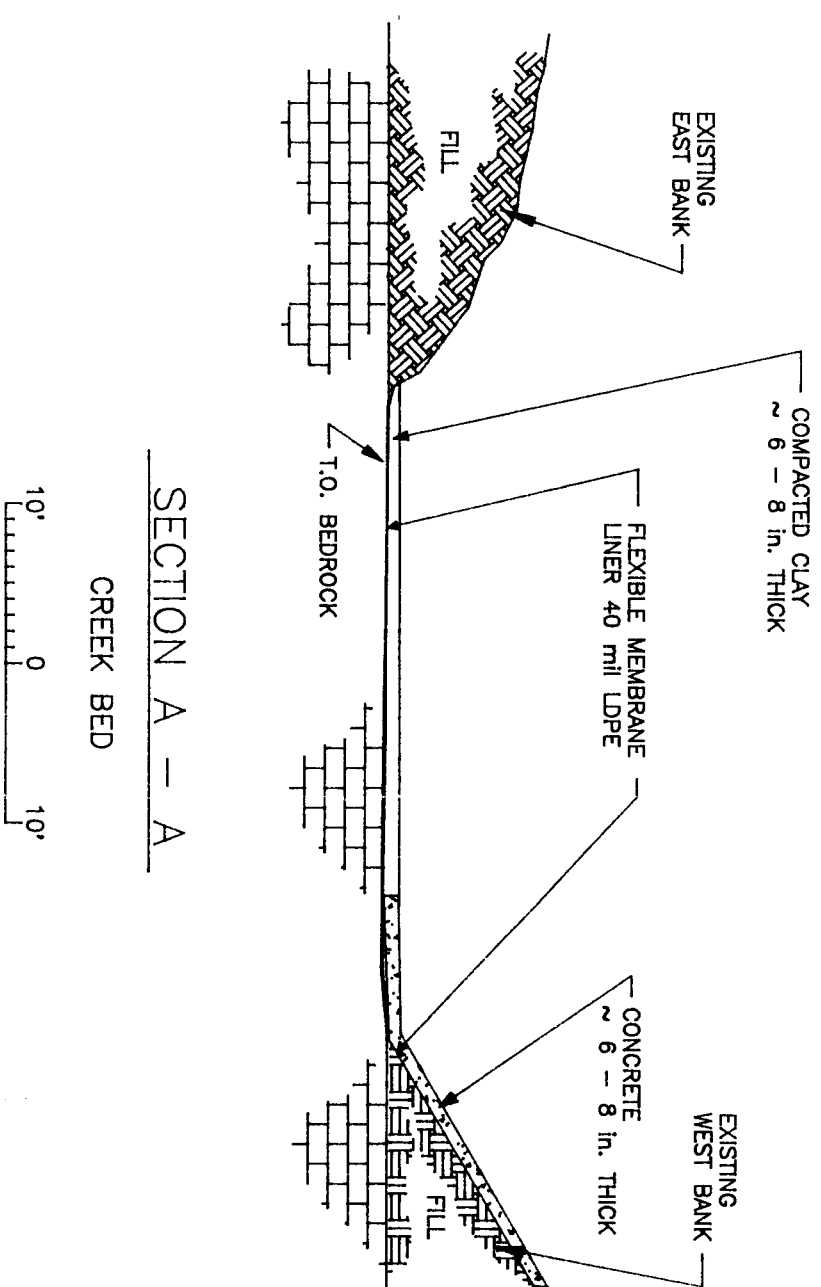
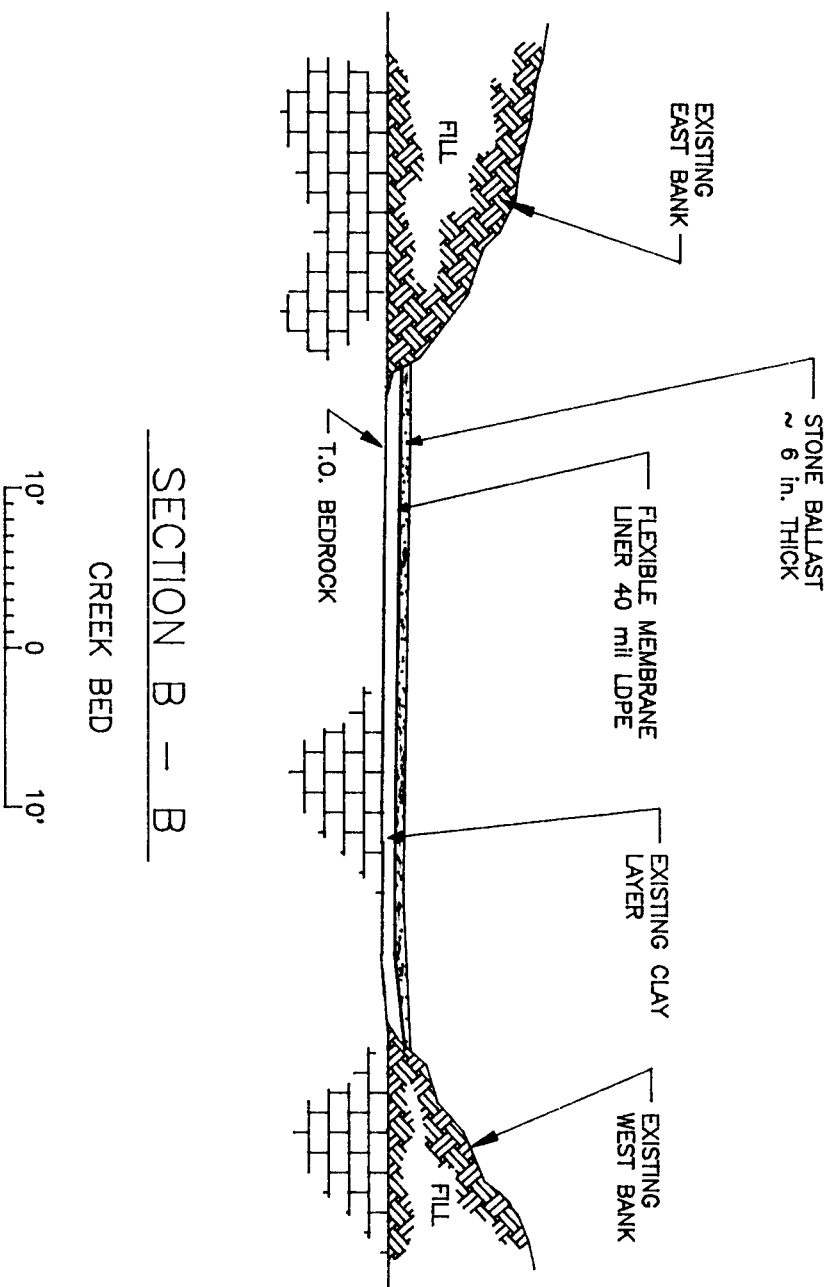
E 2500

E.I. du Pont de Nemours and Company, Inc.  
OLIN CHEMICAL CORPORATION

**WOODWARD-CLYDE CONSULTANTS**  
Consulting Engineers, Geologists and Environmental Scientists

GILL CREEK REMEDIATION PROJECT  
GROUNDWATER SEEP REMEDIATION LOCATIONS

Job No.: 92C2255	Drawn by: WSM	Date: 17MAY83
Checked by:	Rev. No.:	
Scale:	AS NOTED	Figure 1



E.I. du Pont de Nemours and Company, Inc.  
OLIN CHEMICAL CORPORATION

**WOODWARD-CLYDE CONSULTANTS**  
Consulting Engineers, Geologists and Environmental Scientists

GILL CREEK REMEDIATION PROJECT  
GROUNDWATER SEEP REMEDIATION DETAILS

Job No.: 92C2255 Drawn by: WSM Date: 17MAY93

Checked by: Rev. No.:

Scale:

AS NOTED Figure 2



CHEMICALS

P.O. Box 787  
Buffalo Ave. & 26th Street  
Niagara Falls, NY 14302-0787  
(716) 278-5100

RECEIVED

MAR 17 1993

N.Y.S. DEPT. OF  
ENVIRONMENTAL CONSERVATION  
REGION 9

March 17, 1993

Mr. Michael J. Hinton, P.E.  
Environmental Engineer II  
NYS Dept. of Environmental Conservation  
Division of Hazardous Waste Remediation\*  
270 Michigan Avenue  
Buffalo, NY 14203-2999

Dear Mr. Hinton:

**DUPONT/OLIN GILL CREEK REMEDIATION  
CONSTRUCTION CERTIFICATION**

Attached are the certifications as required by Section VI and Section VII of the Order on Consent (Index #B9-0206-90-01). The certifications are as follows:

1. A certification letter stating that the construction was supervised by a qualified full-time representative of DuPont and Olin as required by Section VI. DuPont and Olin used the DuPont Niagara Engineering Organization (NEO) to provide oversight and construction management services. James F. McClincy from NEO was the senior project manager for the construction of the Gill Creek Remediation Project.
2. A certification letter stating that the construction was completed in accordance with the "Approved Proposal" as required by Section VII. DuPont and Olin retained the services of Woodward-Clyde Consultants (WCC) to review and advise on the construction phase of the project and conduct inspections as portions of the project were completed. Both Martin S. Leonard and Kelly R. McIntosh of WCC are certified professional engineers licensed to practice in the state of New York.
3. The Final Engineering drawings as required by Section VII. These drawings are updated versions of the set sent to the NYSDEC as part of the Plans and Specifications showing approved changes to the design. Each drawing has been certified by a professional engineer.



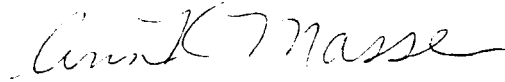
Mr. Michael J. Hinton, P.E.

2

March 17, 1993

Should you have any questions on this submittal, please  
contact me at (716) 278-5317.

Sincerely,



Ann K. Masse, Ph.D.  
Area Engineer, Engineering  
and Environmental Affairs

AKM:klf  
Enc.  
23325

cc: NYSDEC - Division of Environmental Enforcement (Buffalo)\*  
NYSDEC - Division of Hazardous Waste Remediation (Albany)\*  
NYSDOH - Bureau of Environmental Exposure Investigation  
(Albany)\*

\* Two copies per order on consent



P.O. Box 787  
Buffalo Ave. & 26th Street  
Niagara Falls, NY 14302-0787  
(716) 278-5100

March 17, 1993

Mr. Michael Hinton, P.E.  
Environmental Engineer II  
NYS Dept. of Environmental Conservation  
Division of Hazardous Waste Remediation  
270 Michigan Avenue  
Buffalo, NY 14203-2999

Dear Mr. Hinton:

**DUPONT/OLIN GILL CREEK REMEDIATION  
CONSTRUCTION CERTIFICATION**

Section VI of the Order on Consent (Index #B9-0206-90-01) for the Gill Creek Remediation Project requires that a certification be submitted to the New York State Dept. of Environmental Conservation stating that during construction DuPont and Olin would have on site a full-time representative who is qualified to inspect the work and certify its compliance with the approved plans.

Throughout the construction phase of this program, DuPont Niagara Engineering Organization (NEO) supervised all field work with three qualified full-time representatives to ensure compliance with the Approved Plans. Based on site inspections and review of construction reports and records, DuPont NEO certifies that the construction was performed in accordance with the Approved Plans.

Sincerely,

A handwritten signature in cursive script, reading "James F. McClincy".

James F. McClincy  
Senior Engineer

JFM:k1f  
23326



March 17, 1993  
92C2255

Mr. Michael J. Hinton, P.E.  
Environmental Engineer II  
NYS Department of Environmental Conservation  
Division of Hazardous Waste Remediation  
270 Michigan Avenue  
Buffalo, New York 14203-2999

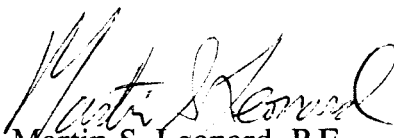
Re: Du Pont/Olin Gill Creek Remediation - Construction Certification

Dear Mr. Hinton:

Section VII of the Order-On-Consent (Index #B9-0206-90-01) for the Gill Creek Remediation Project, requires that a certification be submitted to the New York State Department of Environmental Conservation (NYSDEC) stating that construction was completed in accordance with the Approved Proposal. The Approved Proposal for this project consists of the Plans and Specifications, together with all NYSDEC approved revisions and addenda. The documents constituting the Approved Proposal are listed in Attachment 1 to this letter.

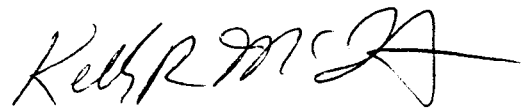
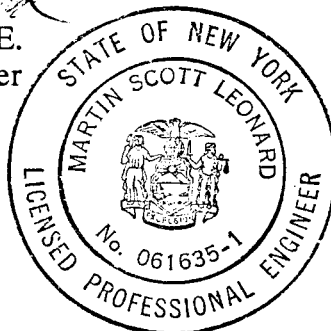
Based on our periodic inspections of the project site during construction; visual inspection of the creek bed areas after sediment removal, and before placement of backfill (see Attachments 2 and 3); and review of construction reports and records developed during the course of the project; Woodward-Clyde Consultants (WCC) certifies that the construction was completed in accordance with the Approved Proposal.

Very truly yours,

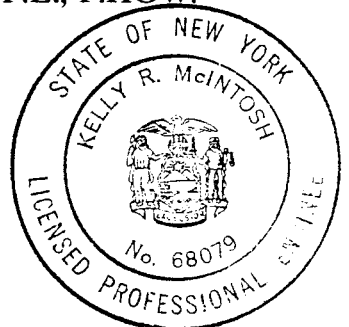


Martin S. Leonard, P.E.  
Senior Project Engineer  
Project Manager

MSL/KRM:jee



Kelly R. McIntosh, P.E., P.HGW.  
Associate



Recycled  
Paper

Consulting Engineers, Geologists  
and Environmental Scientists

Offices in Other Principal Cities



**ATTACHMENT 1**

**Letter to Michael J. Hinton (NYSDEC)  
from Martin S. Leonard and Kelly R. McIntosh (WCC)  
Dated March 17, 1993  
Regarding Gill Creek Remediation Project  
Construction Certification**

**Documents Constituting the "Approved Proposal"**

1. "Gill Creek Remediation, Construction Plans and Specifications", transmitted with a cover letter to Yavuz Erk (NYSDEC) from Leslie Warner (Du Pont) and James Brown (Olin) dated April 28, 1992.
2. Correspondence between Du Pont and the City of Niagara Falls regarding Significant Industrial User Permit No. 7:
  - Letter from M. Crowe (Du Pont) to A. Zaepfel (City of Niagara Falls) dated April 16, 1992
  - Letter from Zaepfel to Crowe dated April 24, 1992
  - Letter from Crowe to Zaepfel dated May 5, 1992
3. Significant Industrial User Permit No. 7 - Amendment, dated May 27, 1992, transmitted with a cover letter to David Leemhuis (NYSDEC), from Albert Zaepfel (City of Niagara Falls), dated May 28, 1992.
4. Letter to William Hinkle (NYPA) from Paula Daukas (WCC), dated June 2, 1992, requesting work permit modification related to cellular cofferdam.
5. Letter to Gary McDannell (Corps of Engineers) from Paula Daukas (WCC) dated June 2, 1992, for permit modification related to cellular cofferdam.
6. "Safety & Health Plan", transmitted with a cover letter to Michael Hinton (NYSDEC) from Leslie Warner (Du Pont) dated June 5, 1992.
7. Letter to Michael Hinton (NYSDEC) from Leslie Warner (Du Pont) dated June 18, 1992, requesting approval of reduced reserve capacity in Hyde Park Lake.

**ATTACHMENT 1 (continued)**

**Letter to Michael J. Hinton (NYSDEC)  
from Martin S. Leonard and Kelly R. McIntosh (WCC)  
Dated March 17, 1993  
Regarding Gill Creek Remediation Project  
Construction Certification**

**Documents Constituting the "Approved Proposal"**

8. Letter to Hank Mazzucca (EPA) from Max Vermersch (WCC) dated June 18, 1992, regarding remediation water treatment system plans and specification, sampling and analysis plan, and OHM equipment proposal.
9. Cellular cofferdam plans and specification sent to Michael Hinton (NYSDEC) by WCC (Paula Daukas) with transmittal form dated June 19, 1992.
10. Submittal of Air Permit Application (Forms 76-19-3) and related information, with a transmittal letter to Michael Hinton (NYSDEC) from Leslie Warner (Du Pont) dated June 26, 1992.
11. Letter to Leslie Warner (Du Pont) from Michael Hinton (NYSDEC) authorizing site preparation and cofferdam construction.
12. "Remediation Bench-Scale Testing Report" sent to David Leemhuis (NYSDEC), Albert Zaepfel (City of Niagara Falls), Ed Struzeski (SAIC), and Hank Mazzucca (EPA), with transmittal letters from David Spanfelner, dated July 17, 1992. Sent to Michael Hinton (NYSDEC) by Leslie Warner, with transmittal dated July 22, 1992.
13. "Floodplain Development Permit Application", sent with a transmittal letter to Frank Shiapetti (City of Niagara Falls) from Leslie Warner (Du Pont) dated July 21, 1992.
14. Contingency plan for use of steam stripper for water treatment, sent in letter to Albert Zaepfel (City of Niagara Falls) from Leslie Warner (Du Pont), dated July 21, 1992.

**ATTACHMENT 1 (continued)**

**Letter to Michael J. Hinton (NYSDEC)  
from Martin S. Leonard and Kelly R. McIntosh (WCC)  
Dated March 17, 1993  
Regarding Gill Creek Remediation Project  
Construction Certification**

**Documents Constituting the "Approved Proposal"**

15. Required revisions to Health and Safety Plan sent to Leslie Warner (Du Pont) in a letter from Michael Hinton (NYSDEC) dated July 31, 1992.
16. Corrected figures for "Floodplain Development Permit Application", sent with transmittal letter to Frank Shiapetti (City of Niagara Falls) from Leslie Warner (Du Pont), dated August 4, 1992.
17. S.I.U. Permit No. 7 Amendment, issued by City of Niagara Falls on August 5, 1992.
18. Modifications to "Safety and Health Plan" documented in letter to Michael Hinton (NYSDEC) by Joseph Clark (Du Pont) dated August 14, 1992.
19. Final Sampling and Analysis Plan sent to NYSDEC (David Leemhuis and Michael Hinton) and City of Niagara Falls (A. Zaepfel), sent with transmittal letter from David Spanfelner (Du Pont) dated August 20, 1992.
20. Request for change in cofferdam design (breach elevation) sent to Michael Hinton (NYSDEC) by Leslie Warner (Du Pont) in letter dated August 28, 1992.
21. Approval of "Gill Creek Remediation Plans and Specifications", with conditions, in letter from Michael Hinton (NYSDEC) to Leslie Warner (Du Pont) and James Brown (Olin) dated August 31, 1992.
22. Air monitoring plan proposal sent to Larry Stiller (NYSDEC) in letter from Susan Dreyer (Du Pont) dated September 2, 1992.
23. S.I.U. Permit No. 7 Amendment, revised by City of Niagara Falls, on September 3, 1992.

**ATTACHMENT 1 (continued)**

**Letter to Michael J. Hinton (NYSDEC)  
from Martin S. Leonard and Kelly R. McIntosh (WCC)  
Dated March 17, 1993  
Regarding Gill Creek Remediation Project  
Construction Certification**

**Documents Constituting the "Approved Proposal"**

24. "August Progress Report", sent to Michael Hinton (NYSDEC) by Leslie Warner (Du Pont) on September 8, 1992, documents verbal approvals by Michael Hinton for proceeding with the following activities, prior to final approval:
  1. Construction of Diversion Structures 1, 3, and 3A;
  2. Diversion of creek flow to storm sewer;
  3. Testing treatment system using potable water; and
  4. Completion of cofferdam.
25. Revisions to air monitoring plan sent to Larry Stiller (NYSDEC) by Susan Dreyer (Du Pont) in letter dated September 9, 1992.
26. Signed copy of NYSDEC final approval, transmitted to Michael Hinton (NYSDEC) by Leslie Warner (Du Pont) with a letter dated September 9, 1992.
27. Signed copy of NYSDEC final approval, transmitted to Michael Hinton (NYSDEC) by J.C. Brown (Olin) with a letter dated September 9, 1992.
28. NYSDEC approval of increase in cofferdam breach elevation, in a letter from Michael Hinton (NYSDEC) to Leslie Warner (Du Pont) dated September 10, 1993.
29. NYSDEC approval of air monitoring plan, in a letter from Michael Hinton (NYSDEC) to Leslie Warner (Du Pont) dated September 10, 1993.
30. Revisions to Air Discharge Emission Limits, transmitted with a letter from Michael Hinton (NYSDEC) to Leslie Warner (Du Pont) dated September 14, 1993.

**ATTACHMENT 1 (continued)**

**Letter to Michael J. Hinton (NYSDEC)  
from Martin S. Leonard and Kelly R. McIntosh (WCC)  
Dated March 17, 1993  
Regarding Gill Creek Remediation Project  
Construction Certification**

**Documents Constituting the "Approved Proposal"**

31. Approved discharge to the Niagara River, in a letter from Leslie Warner to Michael Hinton dated September 24, 1992.
32. Notification of a change in designated addresses, in a letter from Leslie Warner to Michael Hinton dated September 28, 1992.
33. Report of deviation from approved plans and specifications, in a letter from Leslie Warner to Michael Hinton dated September 29, 1992.
34. Approval for changes to approved plan and specifications, in a letter from Michael Hinton to Leslie Warner dated October 6, 1992. Refer to fax detailing proposed changes from Leslie Warner to Michael Hinton dated September 30, 1992.
35. Revised air modeling calculation, in a letter from Susan Dreyer to Michael Hinton dated October 16, 1992.
36. Alternate procedures for exclusion zone air monitoring, in a letter from Ann Masse to Michael Hinton dated October 21, 1992.
37. Area 2D seep test results, in a letter from Ann Masse to Michael Hinton, dated November 4, 1992.
38. Area 2D and Area 3 seeps, in a letter from Ann Masse to Michael Hinton dated November 5, 1992.
39. Gill creek remediation/cobblebar removal, in a letter from Ann Masse to Michael Hinton, dated November 9, 1992.
40. Area 2D seeps, in a letter from Ann Masse to Michael Hinton, dated November 13, 1992.

ATTACHMENT 2

Letter to Michael J. Hinton (NYSDEC)  
from Martin S. Leonard and Kelly R. McIntosh (WCC)  
Dated March 17, 1993  
Regarding Gill Creek Remediation Project  
Construction Certification

Inspection Report  
Gill Creek Sediment Removal  
Areas 2d and 3  
Dated October 28, 1992



October 28, 1992  
92C2255-6

Dr. Ann Masse  
E.I. du Pont de Nemours & Company, Inc.  
26th Street and Buffalo Avenue  
Niagara Falls, New York 14302

Mr. James Brown  
Olin Corporation  
Lower River Road  
Charleston, Tennessee 37310

Re: Inspection Report - Gill Creek Sediment Removal - Areas 2d and 3

Dear Dr. Masse and Mr. Brown:

On October 13, 1992, Woodward-Clyde Consultants (WCC) inspected the reach of Gill Creek from north of Adams Avenue (the north end of Area 3) to south of the railroad bridge (the south end of Area 2d) as indicated on Figure 1. The purpose of this inspection was to verify that contaminated sediments had been removed from the creek in accordance with the plans and specifications. Specifically, the specifications (Gill Creek Remediation Plans and Specifications, WCC, April 1992) require that sediments in Area 3 be removed to bedrock. In Area 2d, sediments are to be removed to the underlying clay which was placed in the creek channel in 1981 during the earlier remedial efforts. These specifications also establish the methods to be used for sediment removal. In Area 3, sediments are to be excavated, with final cleanup achieved by water spraying and vacuuming. In Area 2d, sediments are to be removed with vacuum dredging techniques. The specifications do not establish absolute standards for removal of sediments; WCC's opinion regarding the adequacy of sediment removal is based on the level of removal practically achievable given the site-specific conditions, and technologies employed.

### Creek Sediment Removal Inspection

Based on our visual inspection of Area 3, sediments have been removed to the bedrock surface, which is characterized by rounded masses known as stromatolites. The only identifiable unconsolidated materials remaining in the area are present in small quantities in the narrow (approximately 0.5 feet or less) depressions between the stromatolites under the bridge. The depth of sediment or soil in these depressions rarely exceeds 1 inch. Depressions between the stromatolites were clean in Area 3 downstream

Gcinspec.let



Consulting Engineers, Geologists  
and Environmental Scientists

Offices in Other Principal Cities



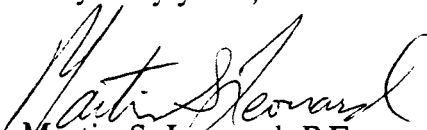
Dr. Ann Masse  
E.I. du Pont de Nemours & Company, Inc.  
Mr. James Brown  
Olin Corporation  
October 28, 1992  
Page 2


of the Adams Avenue Bridge. Based on our examination, it was apparent that the bedrock under the bridge had been subjected to a pressure wash and vacuum, meeting the project specifications. In Area 2d, our visual inspection indicated that sediments had been removed to the underlying clay.

It is WCC's opinion that the sediments in Areas 3 and 2d have been removed in accordance with the specifications.

If you have any questions or comments concerning this inspection report, please feel free to call.

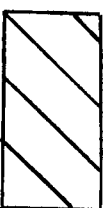
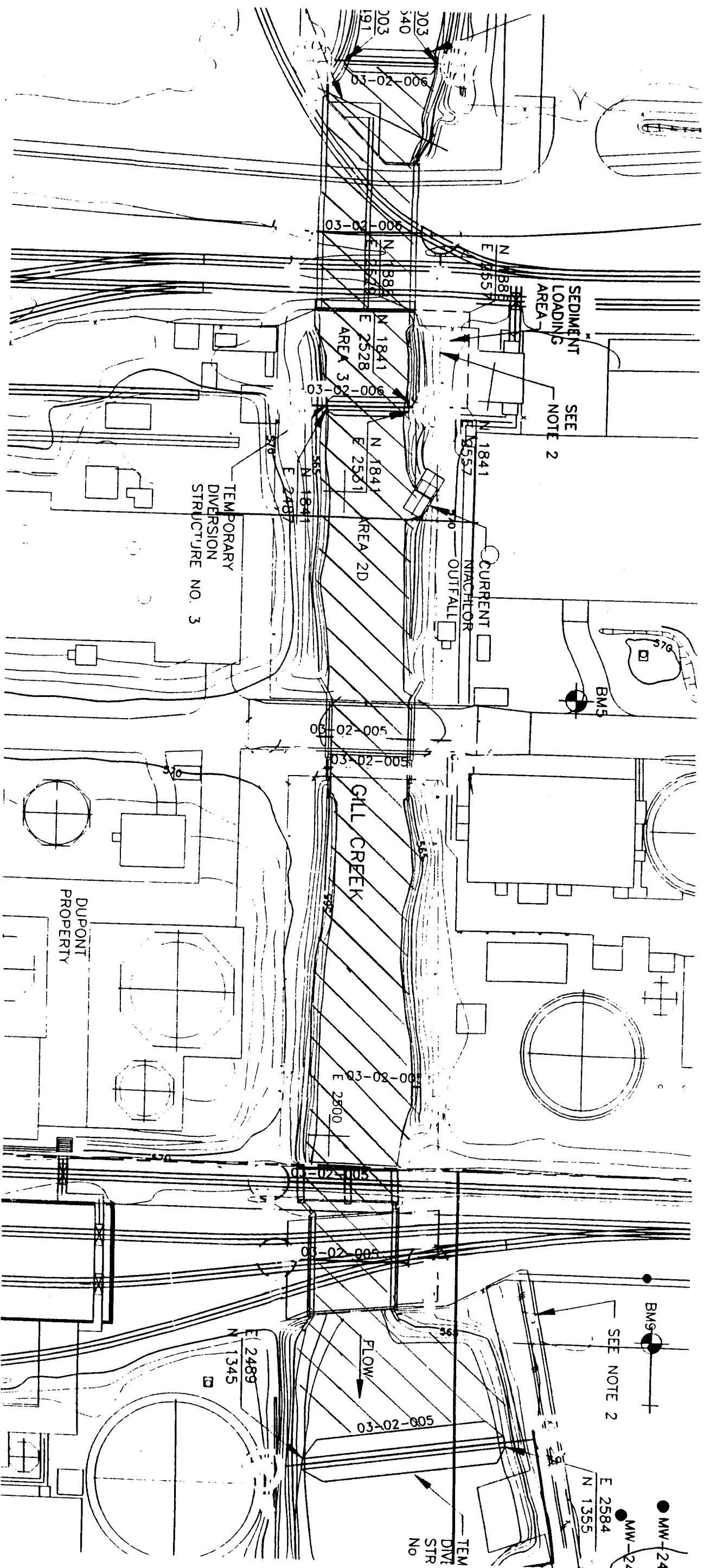
Very truly yours,

  
Martin S. Leonard, P.E.  
Senior Project Engineer

  
Kelly R. McIntosh, P.E.  
Associate

MSL/KRM:jee

cc: Mr. Jim McClincy (Du Pont - Niagara Falls)  
Mr. Tony Wolfskill (WCC - Houston)



AREA INSPECTED

<b>E. I. DUPONT de NEMOURS &amp; COMPANY</b> NIAGARA FALLS, NEW YORK	
<b>WOODWARD-CLYDE CONSULTANTS</b> Consulting Engineers, Geologists and Environmental Scientists	
GILL CREEK INSPECTION AREA	
Job No: 92C2255	Drawing No. 22552001 Date:
Checked by:	Rev. No.:
Scale:	FIGURE 1

NOT TO SCALE

ATTACHMENT 3

Letter to Michael J. Hinton (NYSDEC)  
from Martin S. Leonard and Kelly R. McIntosh (WCC)  
Dated March 17, 1993  
Regarding Gill Creek Remediation Project  
Construction Certification

Inspection Report  
Gill Creek Sediment Removal  
Area 1  
Dated November 11, 1992

November 11, 1992  
92C2255-6

Dr. Ann Masse  
E.I. du Pont de Nemours & Company, Inc.  
26th Street and Buffalo Avenue  
Niagara Falls, New York 14302

Mr. James Brown  
Olin Corporation  
Lower River Road  
Charleston, Tennessee 37310

Re: Inspection Report - Gill Creek Sediment Removal - Area 1

Dear Dr. Masse and Mr. Brown:

On October 30 and 31, 1992, Woodward-Clyde Consultants (WCC) inspected the reach of Gill Creek from south of the Robert Moses Parkway (the south end of Area 1) to south of diversion structure number 4, as indicated on Figure 1. The purpose of this inspection was to verify that contaminated sediments had been removed from the creek in accordance with the plans and specifications. Specifically, the specifications (Gill Creek Remediation Plans and Specifications, WCC, April 1992) require that sediments in Area 1 be removed to bedrock. The specifications also establish the methods to be used for sediment removal. In Area 1, sediments are to be excavated, with final cleanup achieved by water spraying and vacuuming. The specifications do not establish absolute standards for removal of sediments; WCC's opinion regarding the adequacy of sediment removal is based on the level of removal practically achievable given the site-specific conditions, and technologies employed.

## Creek Sediment Removal Inspection

Based on our visual inspection of Area 1, sediments have been removed to the bedrock surface, which is characterized by rounded masses known as stromatolites. The only identifiable unconsolidated materials remaining in the area are present in small quantities in localized depressions in the bedrock surface. The depth of sediment or soil in these depressions rarely exceeds 1 inch. Based on our examination, it was apparent that the bedrock surfaces had been subjected to a pressure wash and vacuum, meeting the project specifications.

Gcinspec.let

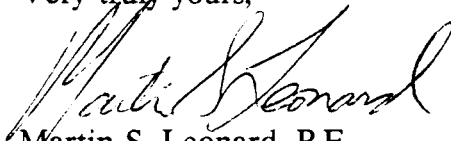


Dr. Ann Masse  
E.I. du Pont de Nemours & Company, Inc.  
Mr. James Brown  
Olin Corporation  
November 11, 1992  
Page 2

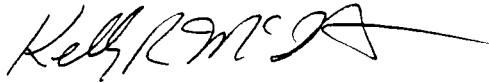
It is WCC's opinion that the sediments in Area 1 have been removed in accordance with the specifications.

If you have any questions or comments concerning this inspection report, please feel free to call.

Very truly yours,



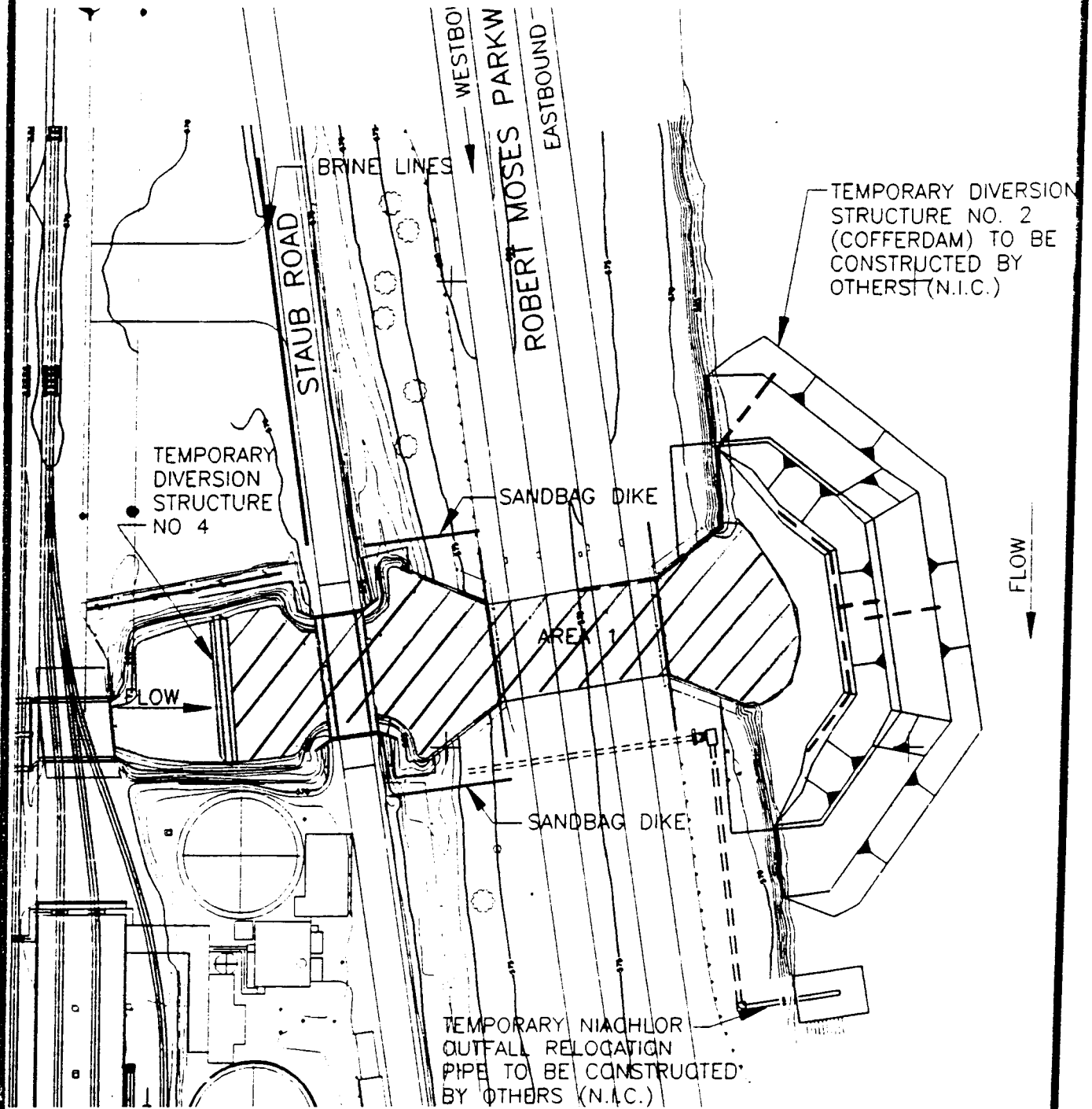
Martin S. Leonard, P.E.  
Senior Project Engineer



Kelly R. McIntosh, P.E.  
Associate

MSL/KRM:jee

cc: Mr. Jim McClincy (Du Pont - Niagara Falls)  
Mr. Tony Wolfskill (WCC - Houston)



**E. I. DuPONT de NEMOURS & COMPANY**  
**NIAGARA FALLS, NEW YORK**

**WOODWARD-CLYDE CONSULTANTS**  
 Consulting Engineers, Geologists and Environmental Scientists

**GILL CREEK INSPECTION AREA**

Job No.: 92C2255 | Drawing No. 22552001 | Date:

Checked by: | Rev. No.:

Scale: **NOT TO SCALE**

**FIGURE 1**



March 17, 1993  
92C2255

Mr. Michael J. Hinton, P.E.  
Environmental Engineer II  
NYS Department of Environmental Conservation  
Division of Hazardous Waste Remediation  
270 Michigan Avenue  
Buffalo, New York 14203-2999

Re: Du Pont/Olin Gill Creek Remediation - Final Engineering Drawings

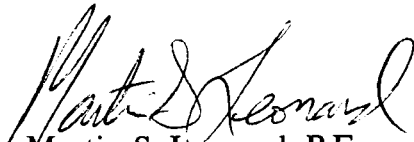
Dear Mr. Hinton:

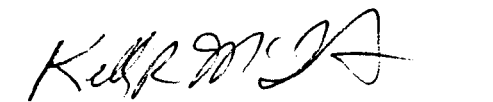
Section VII of the Order-on-Consent (Index #B9-0206-90-01) for the Gill Creek Remediation Project, requires that "final engineering drawings" be submitted to the New York State Department of Environmental Conservation (NYSDEC).

The attached table lists the titles and numbers of the drawings sent to you prior to commencement of the construction phase of this project. These drawings have been revised to incorporate all changes to the design which occurred subsequent to the earlier submittal. You will note that several drawing numbers have changed, as indicated on the attached table.

This revised drawing set constitutes the "final engineering drawings", and is hereby submitted in conformance with Section VII of the Order-On-Consent.

Very truly yours,

  
Martin S. Leonard, P.E.  
Senior Project Engineer  
Project Manager

  
Kelly R. McIntosh, P.E., P.HGW.  
Associate

MSL/KRM:jee



**ATTACHMENT**

**Letter to Michael J. Hinton (NYSDEC)  
from Martin S. Leonard and Kelly R. McIntosh (WCC)  
Dated March 17, 1993  
Regarding Gill Creek Remediation Project  
Final Engineering Drawings**

<b>Sheet Title (Final Submittal)</b>	<b>Drawing Numbers</b>	
	<b>Original Submittal</b>	<b>Final Submittal</b>
1. Title Sheet	This sheet	This sheet
2. Temporary Diversion Structure No. 1. Plan, Section, and Profile	01-02-002	04-02-002
3. Temporary Diversion Structure No. 4 and Cofferdam Plan	01-02-003	04-02-003
4. Cellular Cofferdam Sections and Details	01-02-005	04-02-005
5. Temporary Niachlor Outfall Details	01-02-006	04-02-007
6. Surface Water Runoff Pipe Extension Profile and Details	01-02-007	04-02-008
7. Water Treatment System Instrumentation Legend	02-04-001	02-04-001
8. Water Treatment System Process Flow Diagram	02-04-002	02-04-002
9. Water Treatment System P & ID Sheet 1 of 3	02-04-003	02-04-003

**ATTACHMENT (continued)**

**Letter to Michael J. Hinton (NYSDEC)  
from Martin S. Leonard and Kelly R. McIntosh (WCC)  
Dated March 17, 1993  
Regarding Gill Creek Remediation Project  
Final Engineering Drawings**

<b>Sheet Title</b>	<b>Drawing Numbers</b>	
	<b>Original Submittal</b>	<b>Final Submittal</b>
10. Water Treatment System P & ID Sheet 2 of 3	02-04-004	02-04-004
11. Water Treatment System P & ID Sheet 3 of 3	02-04-005	02-04-005
12. Water Treatment System Piping and Mechanical Legend	02-05-001	02-05-001
13. Sediment Removal Work Areas Sheet 1 of 2	03-02-002	03-02-002
14. Sediment Removal Work Areas Sheet 2 of 2	03-02-003	03-02-003
15. Area 1/Area 2D Sections A-A Through D-D	03-02-004	03-02-004
16. Area 1/Area 2D Sections E-E Through J-J	03-02-005	03-02-005
17. Area 2D/Area 3 Sections K-K Through R-R	03-02-006	03-02-006
18. Remediation Work Area Plan View	03-02-007	03-02-007