



March 10, 2014

Mr. Paul Gildersleeve, P.E.
NHDES-Waste Management Division
Permitting and Design Review Section
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

**RE: North Country Environmental Services, Inc.
Stage V Landfill (DES-SW-SP-03-002)
Type I-A Permit Modification, Standard Permit, & Waiver Applications
Supplemental Submittal
CMA #833**

Dear Mr. Gildersleeve:

On behalf of North Country Environmental Services, Inc. (NCES) we have enclosed three copies of revised pages and drawings for the Type I-A Permit Modification for Stage V of the North Country Environmental Services (NCES) Landfill in Bethlehem, New Hampshire. An electronic copy of the submittal is being uploaded concurrent with mailing of these documents. The application was uploaded electronically to the NHDES OneStop system on February 11, 2014, with paper copies of the application delivered to your office on February 13, 2014.

Most of this submittal reflects changes to final waste grading and landfill capacity associated with a revision to the maximum waste height. The proposed final closure grades are lowered to a maximum height of 1,483 feet mean sea level (msl) from 1,484 feet msl to conform with the agreement between the Town of Bethlehem and NCES that sets forth limiting parameters of the Stage V expansion. These revisions modify closure grading and reduce total disposal capacity from 1,924,000 cubic yards to 1,903,000 cubic yards. A summary of the enclosed revisions in order of appearance in the Application is presented below:

Part I – Type I-A Permit Application Form

1. Two pages of Appendix A, Standard Permit for Solid Waste Landfill Application Form, are replaced. The capacity listed in Section II (8) on Page 3 of 21 is reduced from 1,924,000 CY to 1,903,000 CY. The Facility Life Expectancy shown in Section XIII (2) (b) on Page 21 of 21 is reduced from 5.4 years to 5.3 years.
2. First page of Section III (1) (Brief Description of Proposed Modification), the total capacity of Stage V is reduced from 1,924,000 cubic yards to 1,903,000 cubic yards. Stage V disposal capacity, not including unused Stage IV capacity, is reduced from 1,702,000 cubic yards to 1,681,000 cubic yards.

3. Section VI (1), Stage V life expectancy is reduced from 5.4 years to 5.3 years.
4. Several pages of Section VII (Public Benefit Demonstration) several are replaced:
 - a. Part 3.4.1 (Page 7) - Total capacity of Stage V is reduced from 1,924,000 cubic yards to 1,903,000 cubic yards. Disposal capacity, not including unused Stage IV capacity, is reduced from 1,702,000 cubic yards to 1,681,000 cubic yards. The associated disposal tonnage capacity (assuming 1,620 pounds per cubic yard waste density) is reduced from 1,558,440 tons to 1,541,430 tons. At a fill rate of 290,000 tons per year, there is now projected 5.3 years of disposal capacity (previously 5.4 years). Additionally, the remaining Stage IV capacity listed in this section has been corrected from 179,820,000 tons to 179,820 tons.
 - b. Part 3.5.2.1 (Page 9) – Stage V disposal capacity has been reduced from 1,924,000 cubic yards to 1,903,000 cubic yards.
 - c. Part 5.1.4 (Page 19) – Stage V disposal capacity is reduced from 1,558,440 tons to 1,541,430 tons. The low range of the state’s capacity shortfall has been increased from 4,802,904 to 4,819,914 tons and the high range of the shortfall is increased from 27,854,314 to 27,871,324 tons.
5. Section IX (Legal Notices), the total capacity of Stage V is reduced from 1,924,000 cubic yards to 1,903,000 cubic yards. Additional notices describing this change were mailed via Certified Mail to all those previously notified of the filing. We also note that the NHDES decision making process flow chart for a standard permit application was not included with the original notices, but was included with this capacity modification notice. Copies of the certified letters are attached, and the return receipts will be forwarded to your attention upon return.

Part II – Design Drawings

1. Sheet 3 of the design drawings is modified to show revised final grades having a maximum elevation of 1483 feet msl.
2. Sheets 5, 6, 11 and 14 are being resubmitted for callout corrections and presentation modifications.
3. All 5 sheets of the Filling and Interim Closure Plan are included with this submittal to show the revised closure grading. Filling volumes have been adjusted accordingly.

Part IV – Revised Facility Operating Plan

1. The Leachate Breakout Repair Field Sketch, located in Appendix E, has been modified to show the currently proposed closure grades.

Part V – Stage V Closure Plan

1. Sheet C-2 of the Closure Plan Drawings has been updated to show the revised closure grades.
2. Sheets C-2 and C-3 are resubmitted for callout corrections and presentation modifications.

Part VI – Design Report

1. The capacity indicated on Page 1 has been reduced from 1,924,000 to 1,903,000 cubic yards.
2. Figure 1 has been modified to show the revised closure grades.

Part VIII – Application for Waiver – Leachate Collection and Removal System Design Standards

1. Section V, page 1 – the landfill acreage had been corrected from 8.03 acres to 8.06 acres.

Should you have any questions, please do not hesitate to call.

Very truly yours,

CMA ENGINEERS, INC.



Robert J. Grillo, P.E.

Project Manager

RJG:ams

Enclosures

cc w/enclosure: John Gay, NCES
Kevin Roy, NCES
Bryan Gould, Esquire, Cleveland, Waters and Bass, P.A.

cc w/o enclosure: Wayne Wheeler, P.E., NHDES



March 10, 2014

NH Fish and Game Department
Endangered Species Coordinator
11 Hazen Drive
Concord, NH 03301

**RE: North Country Environmental Services, Inc.
Stage V Landfill (DES-SW-SP-03-002)
Type I-A Permit Modification, Standard Permit, & Waiver Applications
Supplemental Submittal
CMA #833**

Dear Endangered Species Coordinator,

On behalf of North Country Environmental Services, Inc. (NCES) we have enclosed a copy of revised pages and drawings for the Type I-A Permit Modification for Stage V of the North Country Environmental Services (NCES) Landfill in Bethlehem, New Hampshire. An electronic copy of the submittal is being uploaded to the NHDES Website concurrent with mailing of these documents. The original application was uploaded electronically to the NHDES OneStop system on February 11, 2014, with paper copies of the application delivered to your office on February 13, 2014.

Most of this submittal reflects changes to final waste grading and landfill capacity associated with a revision to the maximum waste height. The proposed final closure grades are lowered to a maximum height of 1,483 feet mean sea level (msl) from 1,484 feet msl to conform with the agreement between the Town of Bethlehem and NCES that sets forth limiting parameters of the Stage V expansion. These revisions modify closure grading and reduce total disposal capacity from 1,924,000 cubic yards to 1,903,000 cubic yards. A summary of the enclosed revisions in order of appearance in the Application is presented below:

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1. Two pages of Appendix A, Standard Permit for Solid Waste Landfill Application Form, are replaced. The capacity listed in Section II (8) on Page 3 of 21 is reduced from 1,924,000 CY to 1,903,000 CY. The Facility Life Expectancy shown in Section XIII (2) (b) on Page 21 of 21 is reduced from 5.4 years to 5.3 years.
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3. Section VI (1), Stage V life expectancy is reduced from 5.4 years to 5.3 years.

4. Several pages of Section VII (Public Benefit Demonstration) several are replaced:
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5. Section IX (Legal Notices), the total capacity of Stage V is reduced from 1,924,000 cubic yards to 1,903,000 cubic yards. Additional notices describing this change were mailed via Certified Mail to you and to all those previously notified of the filing. We also note that the NHDES decision making process flow chart for a standard permit application was not included with the original notices, but was included with this capacity modification notice.

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1. Sheet 3 of the design drawings is modified to show revised final grades having a maximum elevation of 1483 feet msl.
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Part IV – Revised Facility Operating Plan

1. The Leachate Breakout Repair Field Sketch, located in Appendix E, has been modified to show the currently proposed closure grades.

Part V – Stage V Closure Plan

1. Sheet C-2 of the Closure Plan Drawings has been updated to show the revised closure grades.
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1. The capacity indicated on Page I has been reduced from 1,924,000 to 1,903,000 cubic yards.
2. Figure 1 has been modified to show the revised closure grades.

Part VIII – Application for Waiver – Leachate Collection and Removal System Design Standards

1. Section V, page 1 – the landfill acreage had been corrected from 8.03 acres to 8.06 acres.

Should you have any questions, please do not hesitate to call.

Very truly yours,

CMA ENGINEERS, INC.



Robert J. Grillo, P.E.

Project Manager

RJG:ams

Enclosures

cc w/enclosure: John Gay, NCES
Kevin Roy, NCES
Bryan Gould, Esquire, Cleveland, Waters and Bass, P.A.

cc w/o enclosure: Wayne Wheeler, P.E., NHDES



March 10, 2014

NH Department of Resources & Economic Development
Natural Heritage Inventory
172 Pembroke Road
P.O. Box 1856
Concord, NH 03302-1856

**RE: North Country Environmental Services, Inc.
Stage V Landfill (DES-SW-SP-03-002)
Type I-A Permit Modification, Standard Permit, & Waiver Applications
Supplemental Submittal
CMA #833**

Dear Natural Heritage Inventory,

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Very truly yours,

CMA ENGINEERS, INC.



Robert J. Grillo, P.E.

Project Manager

RJG:ams

Enclosures

cc w/enclosure: John Gay, NCES
Kevin Roy, NCES
Bryan Gould, Esquire, Cleveland, Waters and Bass, P.A.

cc w/o enclosure: Wayne Wheeler, P.E., NHDES



CMA ENGINEERS, INC.
CIVIL/ENVIRONMENTAL ENGINEERS

35 Bow Street
Portsmouth, New Hampshire
03801-3819

Phone: 603/431-6196
Fax: 603/431-5376

E-mail: info@cmaengineers.com
Web Site: www.cmaengineers.com

March 10, 2014

Town Clerk
Board of Selectmen
Town of Bethlehem, NH
2155 Main Street
Bethlehem, NH 03574

**RE: North Country Environmental Services, Inc.
Stage V Landfill (DES-SW-SP-03-002)
Type I-A Permit Modification, Standard Permit, & Waiver Applications
Supplemental Submittal
CMA #833**

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Should you have any questions, please do not hesitate to call.

Very truly yours,

CMA ENGINEERS, INC.



Robert J. Grillo, P.E.

Project Manager

RJG:ams

Enclosures

cc w/enclosure: John Gay, NCES
Kevin Roy, NCES
Bryan Gould, Esquire, Cleveland, Waters and Bass, P.A.

cc w/o enclosure: Wayne Wheeler, P.E., NHDES



CMA ENGINEERS, INC.
CIVIL/ENVIRONMENTAL ENGINEERS

35 Bow Street
Portsmouth, New Hampshire
03801-3819

Phone: 603/431-6196

Fax: 603/431-5376

E-mail: info@cmaengineers.com

Web Site: www.cmaengineers.com

March 10, 2014

Daniel Tucker
Anna Miner
29 Cottage Street
Bethlehem, NH 03574
Map 209 Lot #27 & Map 419 Lot #2,24-25

VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

**RE: North Country Environmental Services, Inc. Stage V Landfill (DES-SW-SP-03-002)
New Hampshire Department of Environmental Services
Waste Management Division, Permitting & Design Review Section
Type I-A Permit Modification, Standard Permit, & Waiver Applications
CMA #833**

Dear Daniel Tucker & Anna Miner,

This letter provides notice of a modification to information contained in the Notice of Filing for the Type I-A Permit Modification for Stage V of the North Country Environmental Services Landfill. The original Notice was mailed to your attention on February 11, 2014. The Application was submitted to the NHDES on February 13, 2014.

Please note that the disposal capacity estimate for Stage V has been revised from 1,924,000 cubic yards to 1,903,000 cubic yards.

Additionally, we have enclosed the NHDES decision making process flow chart for a standard permit application which was not included with the February 11th Notice. The New Hampshire Solid Waste Rules have specific procedures for the review and issuance or denial of applications such as NCES filing. The procedures involve a series of steps, which are substantively identical to those depicted on the enclosed flow chart for a standard permit application. We apologize for the omission. If you have any questions or comments please feel free to contact us.

Very truly yours,
CMA ENGINEERS, INC.

Robert J. Grillo, P.E.
Project Manager

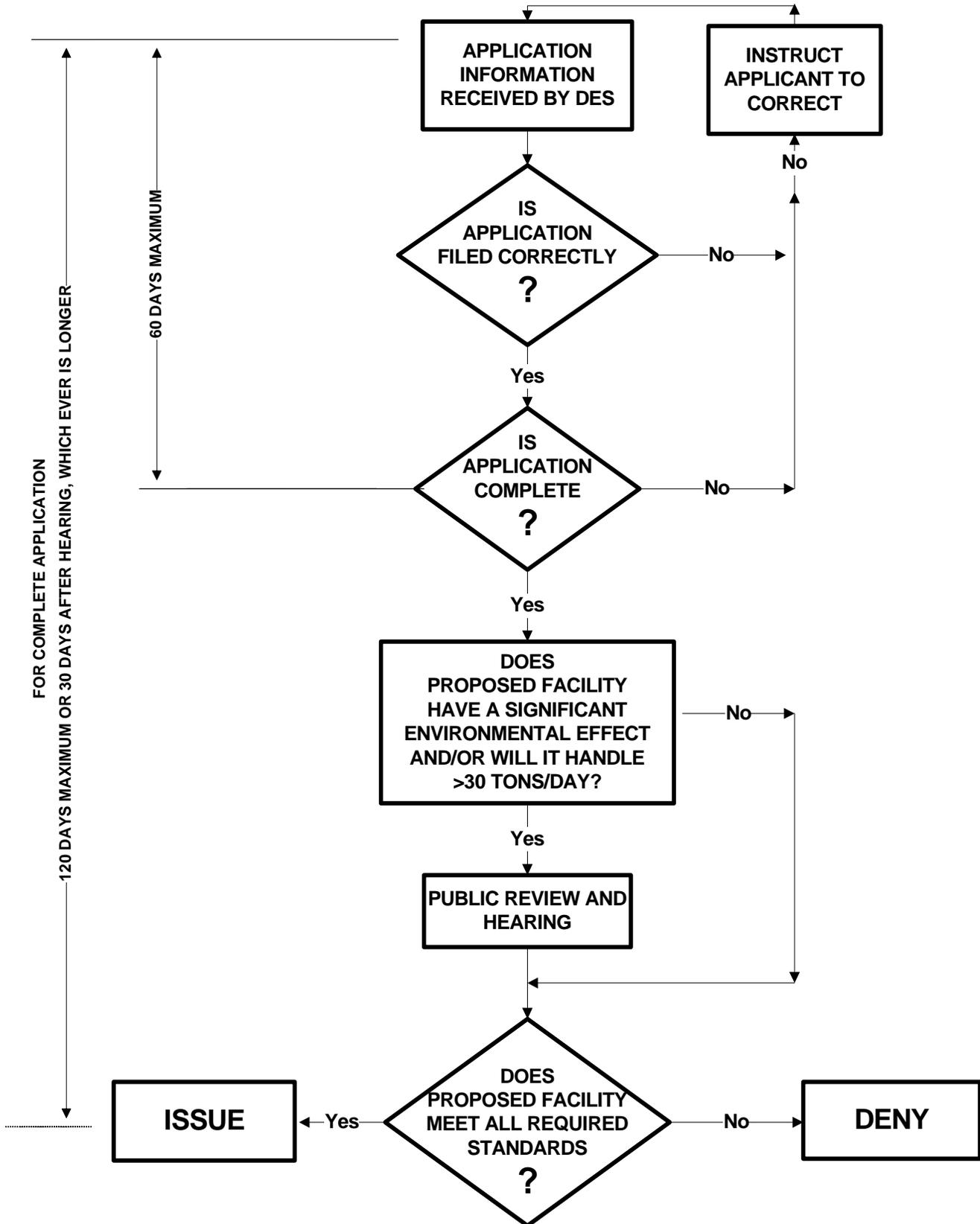
Enclosure

cc w/o enc: Wayne Wheeler, P.E., NHDES
John Gay, NCES
Kevin Roy, NCES
Bryan Gould, Esquire, Cleveland, Waters and Bass, P.A.

833-NCES Stage V-DT-140306- Notification Letter Resubmittal RJG-Tucker-Miner



**STANDARD PERMIT APPLICATION PROCESSING PROVISIONS
AS PROVIDED IN PARTS Env-Sw 303 - 305
OF THE NEW HAMPSHIRE SOLID WASTE RULES**





CMA ENGINEERS, INC.
CIVIL/ENVIRONMENTAL ENGINEERS

35 Bow Street
Portsmouth, New Hampshire
03801-3819

Phone: 603/431-6196

Fax: 603/431-5376

E-mail: info@cmaengineers.com

Web Site: www.cmaengineers.com

March 10, 2014

David Haskins
24 Duffy Street
Franklin, NH 03235
Map 417 Lot #27 Lot #7

VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

**RE: North Country Environmental Services, Inc. Stage V Landfill (DES-SW-SP-03-002)
New Hampshire Department of Environmental Services
Waste Management Division, Permitting & Design Review Section
Type I-A Permit Modification, Standard Permit, & Waiver Applications
CMA #833**

Dear David Haskins,

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CMA ENGINEERS, INC.


Robert J. Grillo, P.E.
Project Manager

Enclosure

cc w/o enc: Wayne Wheeler, P.E., NHDES
John Gay, NCES
Kevin Roy, NCES
Bryan Gould, Esquire, Cleveland, Waters and Bass, P.A.

833-NCES Stage V-DT-140306- Notification Letter Resubmittal RJG-Haskins

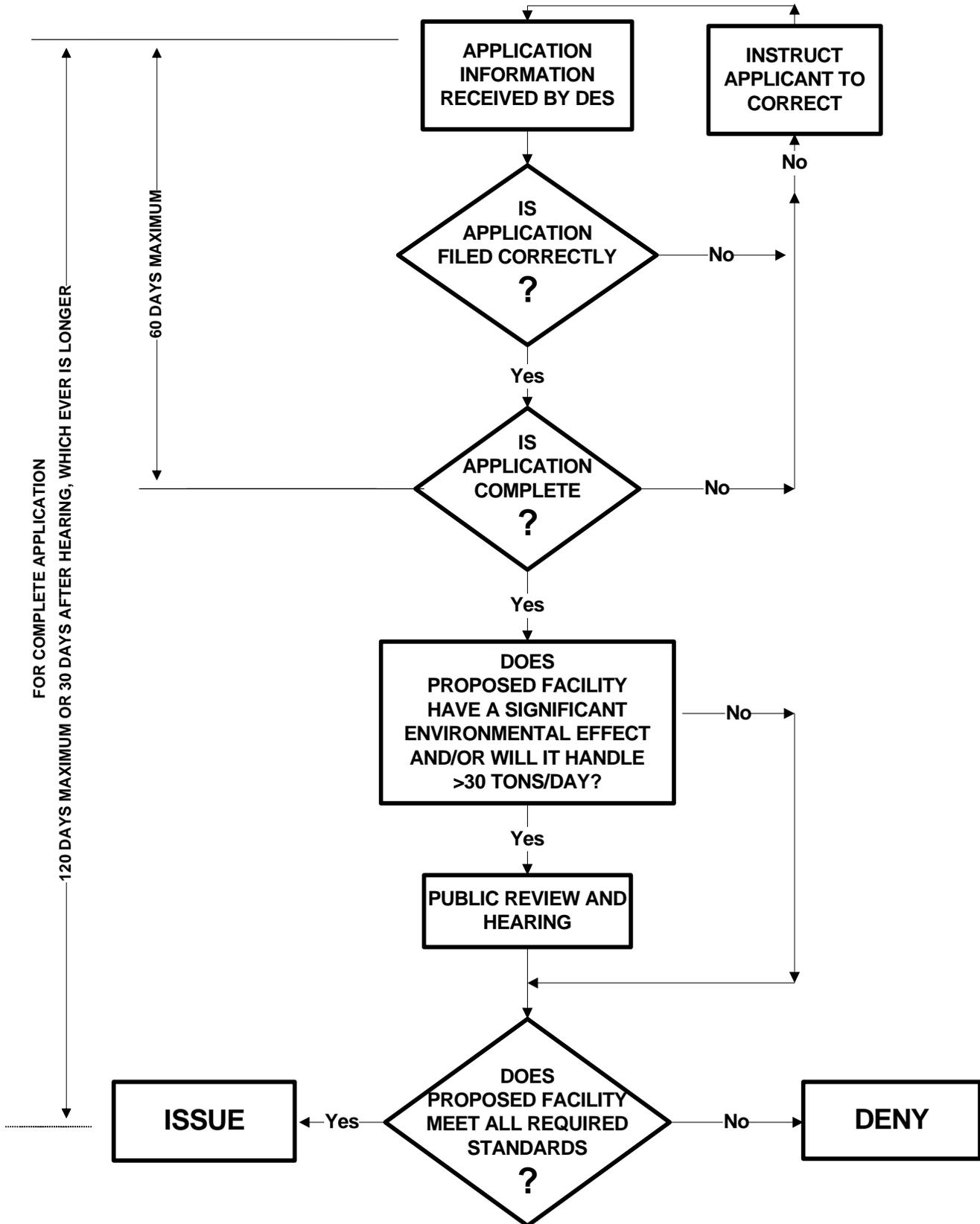
Manchester, New Hampshire

Portsmouth, New Hampshire

Portland, Maine



**STANDARD PERMIT APPLICATION PROCESSING PROVISIONS
AS PROVIDED IN PARTS Env-Sw 303 - 305
OF THE NEW HAMPSHIRE SOLID WASTE RULES**





CMA ENGINEERS, INC.
CIVIL/ENVIRONMENTAL ENGINEERS

35 Bow Street
Portsmouth, New Hampshire
03801-3819

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Web Site: www.cmaengineers.com

March 10, 2014

John & Patricia Anderson
52 Muchmore Road
Bethlehem, NH 03574
Map 209 Lot # 28&29

VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

**RE: North Country Environmental Services, Inc. Stage V Landfill (DES-SW-SP-03-002)
New Hampshire Department of Environmental Services
Waste Management Division, Permitting & Design Review Section
Type I-A Permit Modification, Standard Permit, & Waiver Applications
CMA #833**

Dear John & Patricia Anderson,

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CMA ENGINEERS, INC.

Robert J. Grillo, P.E.
Project Manager

Enclosure

cc w/o enc: Wayne Wheeler, P.E., NHDES
John Gay, NCES
Kevin Roy, NCES
Bryan Gould, Esquire, Cleveland, Waters and Bass, P.A.

833-NCES Stage V-DT-140306- Notification Letter Resubmittal RJG-Anderson

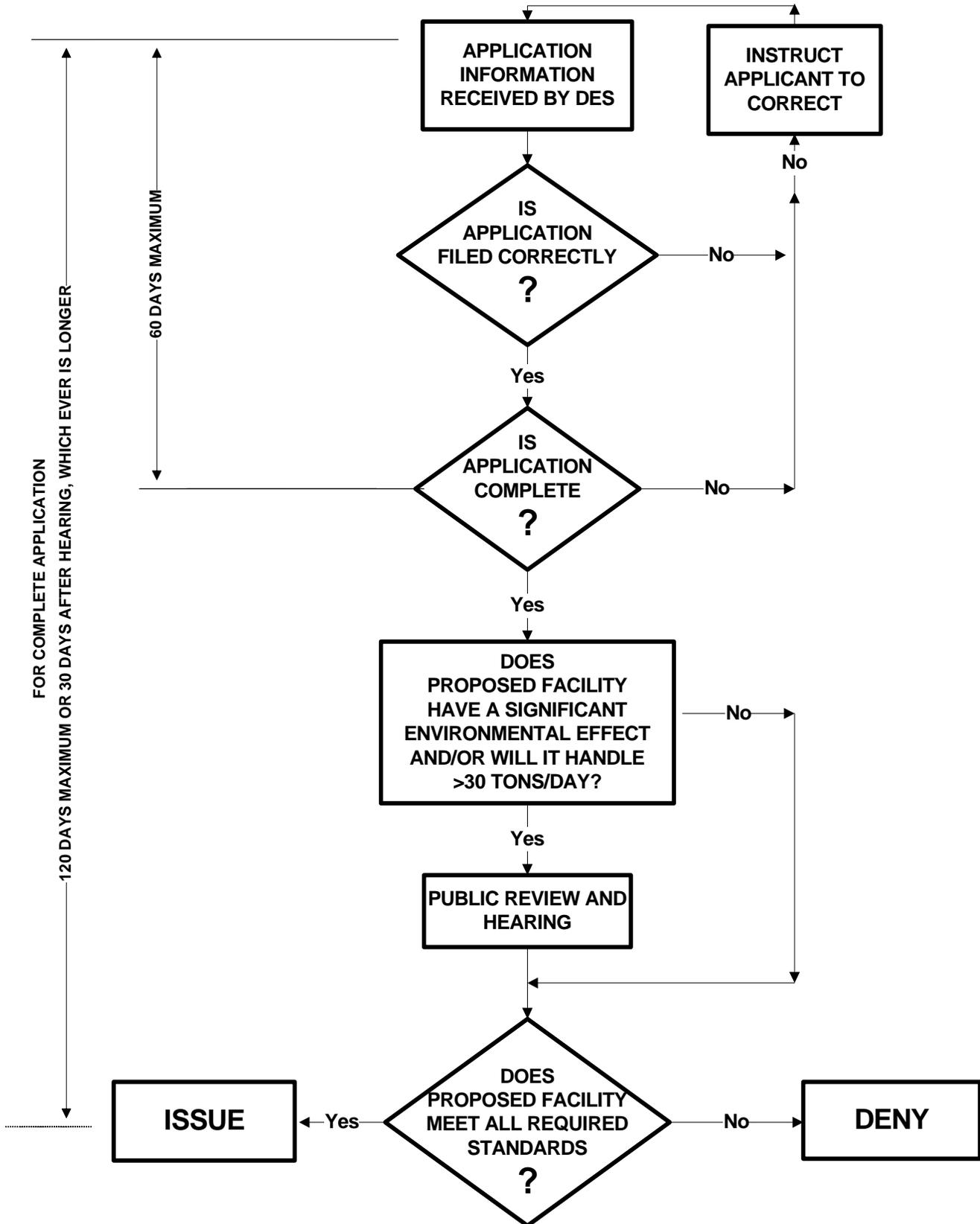
Manchester, New Hampshire

Portsmouth, New Hampshire

Portland, Maine



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03801-3819

Phone: 603/431-6196

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March 10, 2014

Nicholas D'Angelo
387 Prospect Street
Revere, MA 02151
Map 419 Lot # 3&4

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New Hampshire Department of Environmental Services
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Dear Nicholas D'Angelo,

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Additionally, we have enclosed the NHDES decision making process flow chart for a standard permit application which was not included with the February 11th Notice. The New Hampshire Solid Waste Rules have specific procedures for the review and issuance or denial of applications such as NCES is filing. The procedures involve a series of steps, which are substantively identical to those depicted on the enclosed flow chart for a standard permit application. We apologize for the omission. If you have any questions or comments please feel free to contact us.

Very truly yours,

CMA ENGINEERS, INC.

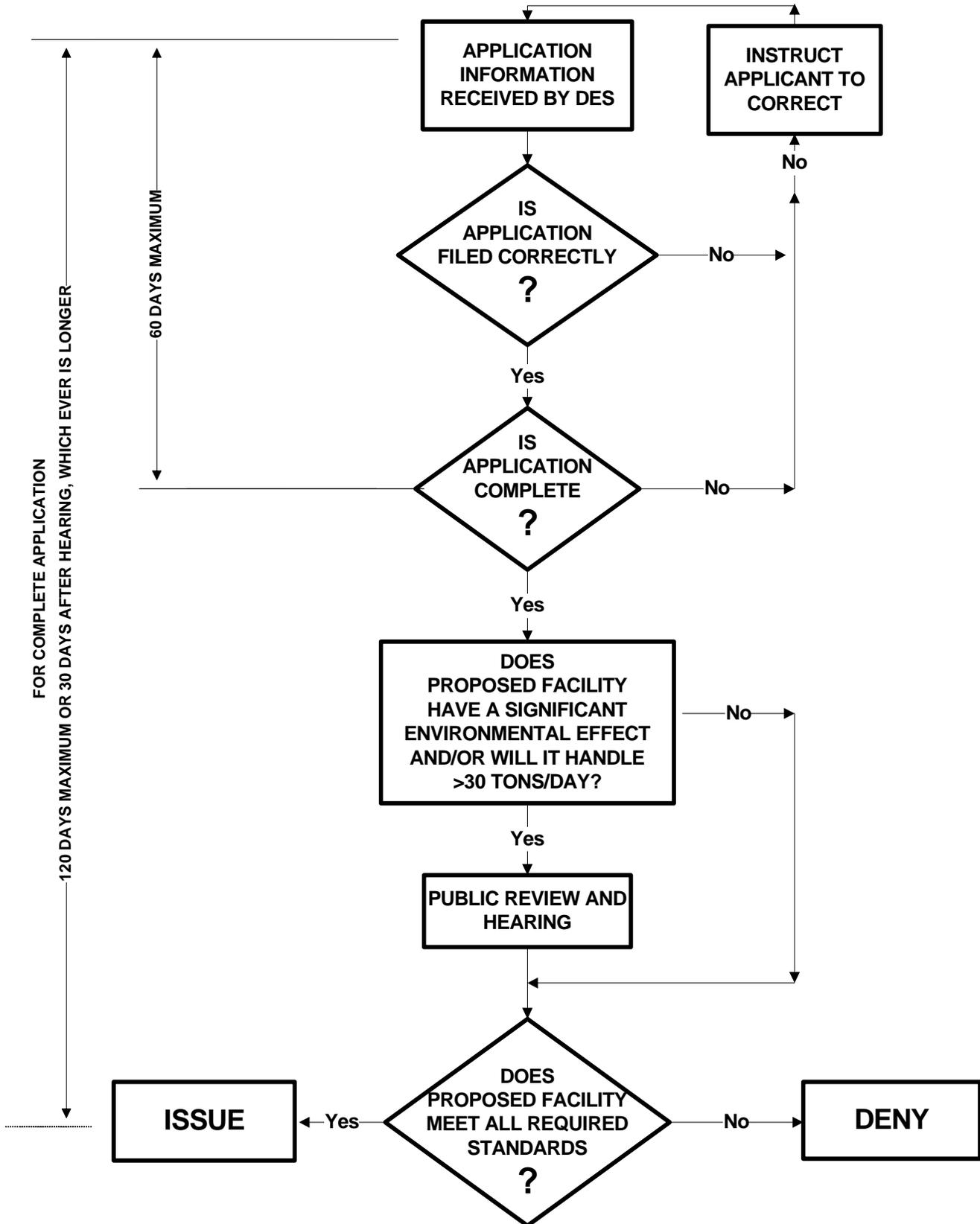
Robert J. Grillo, P.E.
Project Manager

Enclosure

cc w/o enc: Wayne Wheeler, P.E., NHDES
John Gay, NCES
Kevin Roy, NCES
Bryan Gould, Esquire, Cleveland, Waters and Bass, P.A.



**STANDARD PERMIT APPLICATION PROCESSING PROVISIONS
AS PROVIDED IN PARTS Env-Sw 303 - 305
OF THE NEW HAMPSHIRE SOLID WASTE RULES**





March 10, 2014

Jack Tyrrell
580 Trudeau Road
Bethlehem, NH 03574
Map 419 Lot # 8

CMA ENGINEERS, INC.
CIVIL/ENVIRONMENTAL ENGINEERS

35 Bow Street
Portsmouth, New Hampshire
03801-3819

Phone: 603/431-6196

Fax: 603/431-5376

E-mail: info@cmaengineers.com

Web Site: www.cmaengineers.com

VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

**RE: North Country Environmental Services, Inc. Stage V Landfill (DES-SW-SP-03-002)
New Hampshire Department of Environmental Services
Waste Management Division, Permitting & Design Review Section
Type I-A Permit Modification, Standard Permit, & Waiver Applications
CMA #833**

Dear Jack Tyrrell,

This letter provides notice of a modification to information contained in the Notice of Filing for the Type I-A Permit Modification for Stage V of the North Country Environmental Services Landfill. The original Notice was mailed to your attention on February 11, 2014. The Application was submitted to the NHDES on February 13, 2014.

Please note that the disposal capacity estimate for Stage V has been revised from 1,924,000 cubic yards to 1,903,000 cubic yards.

Additionally, we have enclosed the NHDES decision making process flow chart for a standard permit application which was not included with the February 11th Notice. The New Hampshire Solid Waste Rules have specific procedures for the review and issuance or denial of applications such as NCES is filing. The procedures involve a series of steps, which are substantively identical to those depicted on the enclosed flow chart for a standard permit application. We apologize for the omission. If you have any questions or comments please feel free to contact us.

Very truly yours,
CMA ENGINEERS, INC.

Robert J. Grillo, P.E.
Project Manager

Enclosure

cc w/o enc: Wayne Wheeler, P.E., NHDES
John Gay, NCES
Kevin Roy, NCES
Bryan Gould, Esquire, Cleveland, Waters and Bass, P.A.

833-NCES Stage V-DT-140306- Notification Letter Resubmittal RJG-Tyrrell

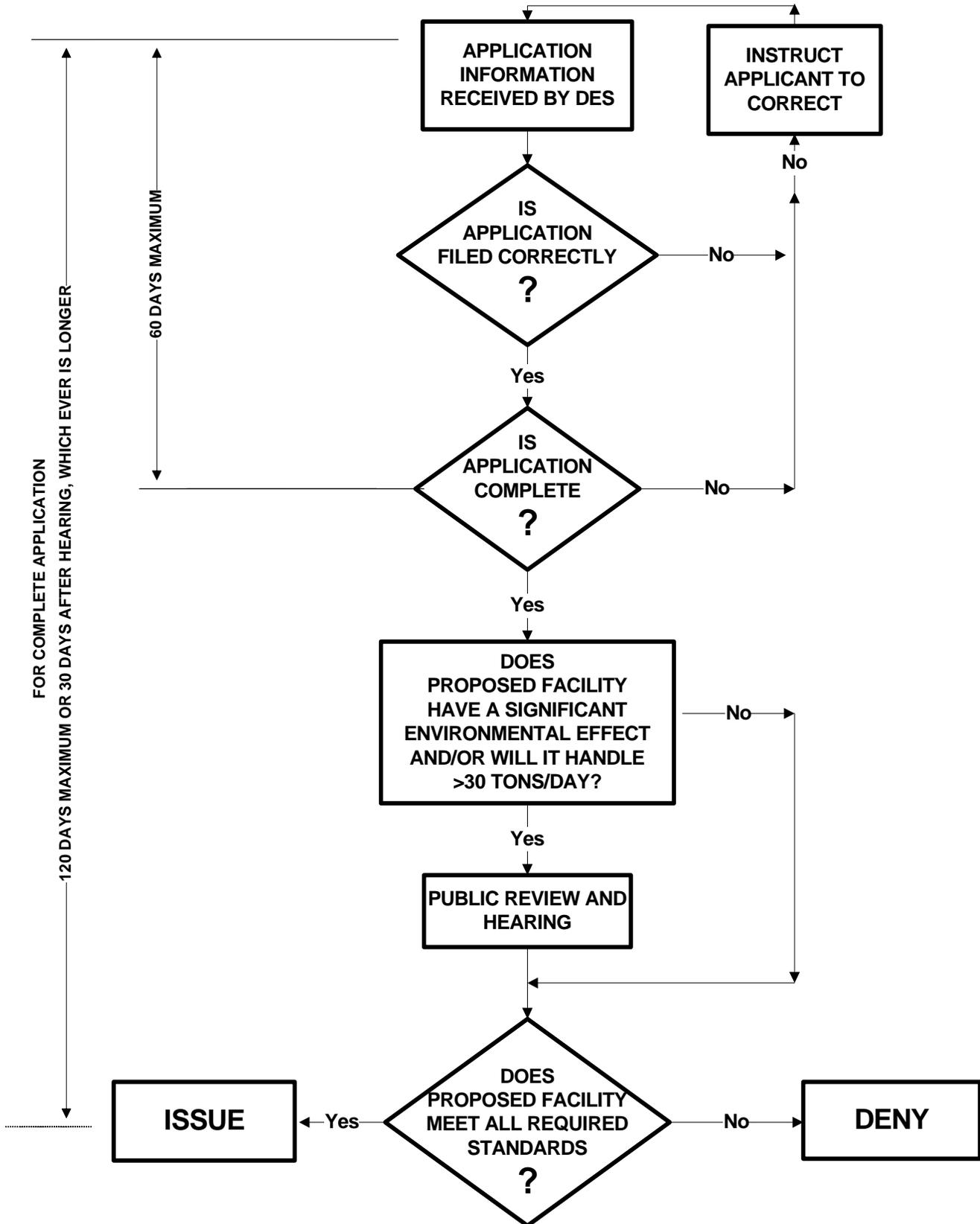
Manchester, New Hampshire

Portsmouth, New Hampshire

Portland, Maine



**STANDARD PERMIT APPLICATION PROCESSING PROVISIONS
AS PROVIDED IN PARTS Env-Sw 303 - 305
OF THE NEW HAMPSHIRE SOLID WASTE RULES**





March 10, 2014

Natalie Niles
Melissa Cox
36 Coburn Hill Road
Concord, MA 01742
Map 209 Lot # 31-33

CMA ENGINEERS, INC.
CIVIL/ENVIRONMENTAL ENGINEERS

35 Bow Street
Portsmouth, New Hampshire
03801-3819

Phone: 603/431-6196

Fax: 603/431-5376

E-mail: info@cmaengineers.com

Web Site: www.cmaengineers.com

VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

**RE: North Country Environmental Services, Inc. Stage V Landfill (DES-SW-SP-03-002)
New Hampshire Department of Environmental Services
Waste Management Division, Permitting & Design Review Section
Type I-A Permit Modification, Standard Permit, & Waiver Applications
CMA #833**

Dear Natalie Niles and Melissa Cox,

This letter provides notice of a modification to information contained in the Notice of Filing for the Type I-A Permit Modification for Stage V of the North Country Environmental Services Landfill. The original Notice was mailed to your attention on February 11, 2014. The Application was submitted to the NHDES on February 13, 2014.

Please note that the disposal capacity estimate for Stage V has been revised from 1,924,000 cubic yards to 1,903,000 cubic yards.

Additionally, we have enclosed the NHDES decision making process flow chart for a standard permit application which was not included with the February 11th Notice. The New Hampshire Solid Waste Rules have specific procedures for the review and issuance or denial of applications such as NCES is filing. The procedures involve a series of steps, which are substantively identical to those depicted on the enclosed flow chart for a standard permit application. We apologize for the omission. If you have any questions or comments please feel free to contact us.

Very truly yours,
CMA ENGINEERS, INC.

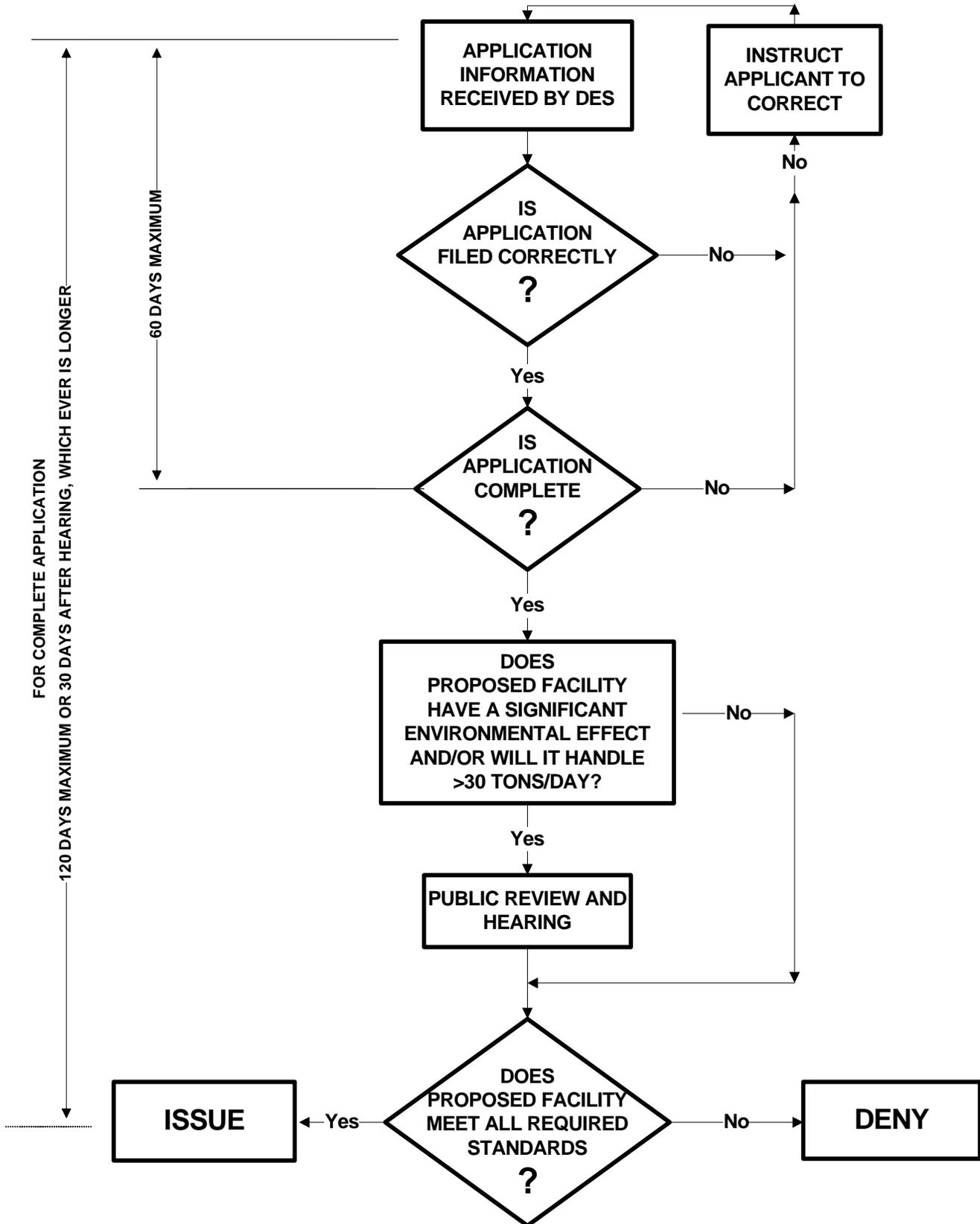
Robert J. Grillo, P.E.
Project Manager

Enclosure

cc w/o enc: Wayne Wheeler, P.E., NHDES
John Gay, NCES
Kevin Roy, NCES
Bryan Gould, Esquire, Cleveland, Waters and Bass, P.A.



**STANDARD PERMIT APPLICATION PROCESSING PROVISIONS
AS PROVIDED IN PARTS Env-Sw 303 - 305
OF THE NEW HAMPSHIRE SOLID WASTE RULES**





CMA ENGINEERS, INC.
CIVIL/ENVIRONMENTAL ENGINEERS

35 Bow Street
Portsmouth, New Hampshire
03801-3819

Phone: 603/431-6196

Fax: 603/431-5376

E-mail: info@cmaengineers.com

Web Site: www.cmaengineers.com

March 10, 2014

Forest Acquisitions, Inc.
3903 Bellaire Blvd.
Houston TX 77025
Map 419 Lot # 5, 6, 18, 26.1, 26.2, & 27

VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

**RE: North Country Environmental Services, Inc. Stage V Landfill (DES-SW-SP-03-002)
New Hampshire Department of Environmental Services
Waste Management Division, Permitting & Design Review Section
Type I-A Permit Modification, Standard Permit, & Waiver Applications
CMA #833**

To Whom It May Concern,

This letter provides notice of a modification to information contained in the Notice of Filing for the Type I-A Permit Modification for Stage V of the North Country Environmental Services Landfill. The original Notice was mailed to your attention on February 11, 2014. The Application was submitted to the NHDES on February 13, 2014.

Please note that the disposal capacity estimate for Stage V has been revised from 1,924,000 cubic yards to 1,903,000 cubic yards.

Additionally, we have enclosed the NHDES decision making process flow chart for a standard permit application which was not included with the February 11th Notice. The New Hampshire Solid Waste Rules have specific procedures for the review and issuance or denial of applications such as NCES is filing. The procedures involve a series of steps, which are substantively identical to those depicted on the enclosed flow chart for a standard permit application. We apologize for the omission. If you have any questions or comments please feel free to contact us.

Very truly yours,
CMA ENGINEERS, INC.

Robert J. Grillo, P.E.
Project Manager

Enclosure

cc w/o enc: Wayne Wheeler, P.E., NHDES
John Gay, NCES
Kevin Roy, NCES
Bryan Gould, Esquire, Cleveland, Waters and Bass, P.A.

833-NCES Stage V-DT-140306- Notification Letter Resubmittal RJG-FA

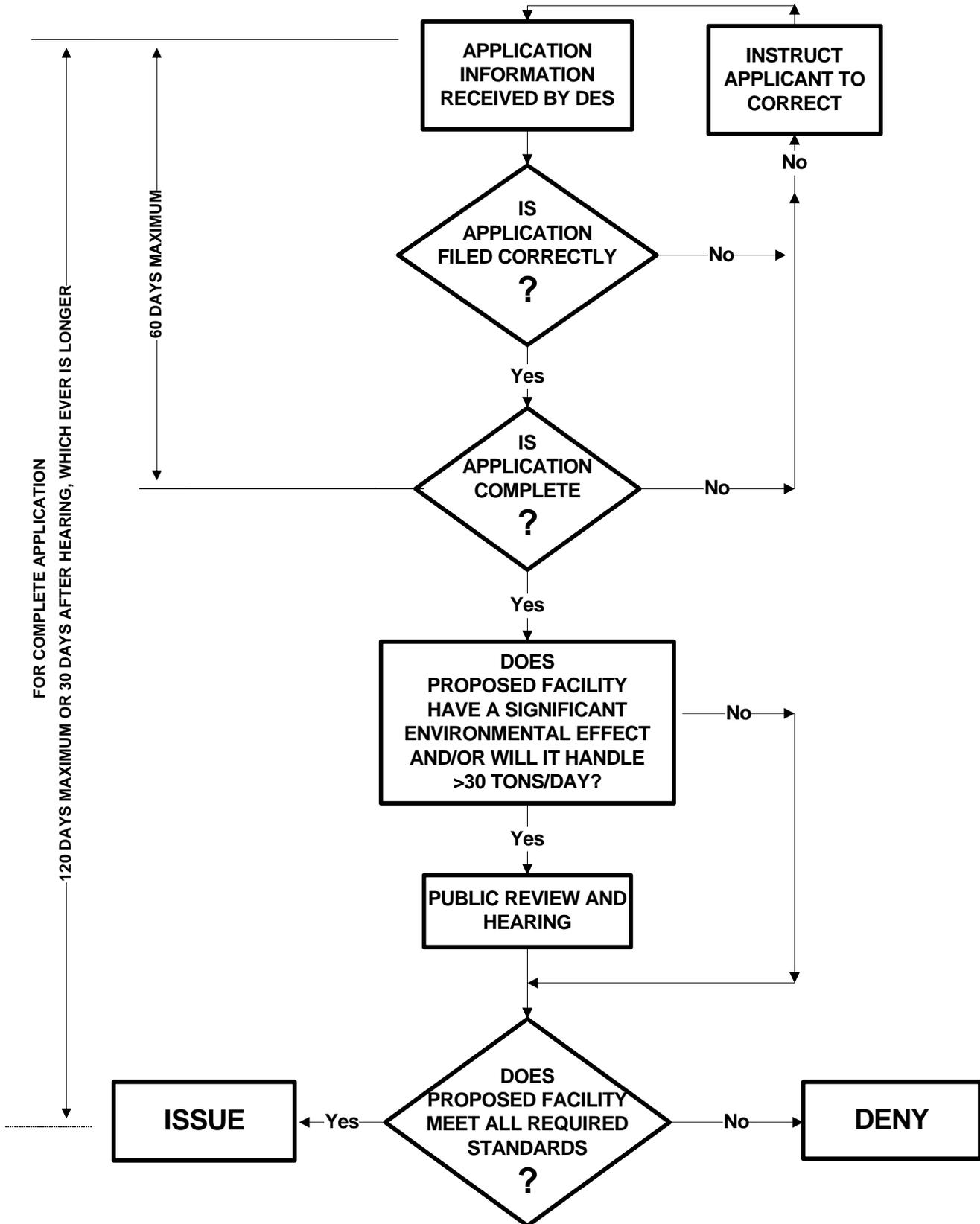
Manchester, New Hampshire

Portsmouth, New Hampshire

Portland, Maine



**STANDARD PERMIT APPLICATION PROCESSING PROVISIONS
AS PROVIDED IN PARTS Env-Sw 303 - 305
OF THE NEW HAMPSHIRE SOLID WASTE RULES**





March 10, 2014

Wendall & Nancy Young
51 Muchmore Road
Bethlehem, NH 03574
Map 209 Lot # 64

CMA ENGINEERS, INC.
CIVIL/ENVIRONMENTAL ENGINEERS

35 Bow Street
Portsmouth, New Hampshire
03801-3819

Phone: 603/431-6196

Fax: 603/431-5376

E-mail: info@cmaengineers.com

Web Site: www.cmaengineers.com

VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

**RE: North Country Environmental Services, Inc. Stage V Landfill (DES-SW-SP-03-002)
New Hampshire Department of Environmental Services
Waste Management Division, Permitting & Design Review Section
Type I-A Permit Modification, Standard Permit, & Waiver Applications
CMA #833**

Dear Wendall and Nancy Young,

This letter provides notice of a modification to information contained in the Notice of Filing for the Type I-A Permit Modification for Stage V of the North Country Environmental Services Landfill. The original Notice was mailed to your attention on February 11, 2014. The Application was submitted to the NHDES on February 13, 2014.

Please note that the disposal capacity estimate for Stage V has been revised from 1,924,000 cubic yards to 1,903,000 cubic yards.

Additionally, we have enclosed the NHDES decision making process flow chart for a standard permit application which was not included with the February 11th Notice. The New Hampshire Solid Waste Rules have specific procedures for the review and issuance or denial of applications such as NCES is filing. The procedures involve a series of steps, which are substantively identical to those depicted on the enclosed flow chart for a standard permit application. We apologize for the omission. If you have any questions or comments please feel free to contact us.

Very truly yours,
CMA ENGINEERS, INC.

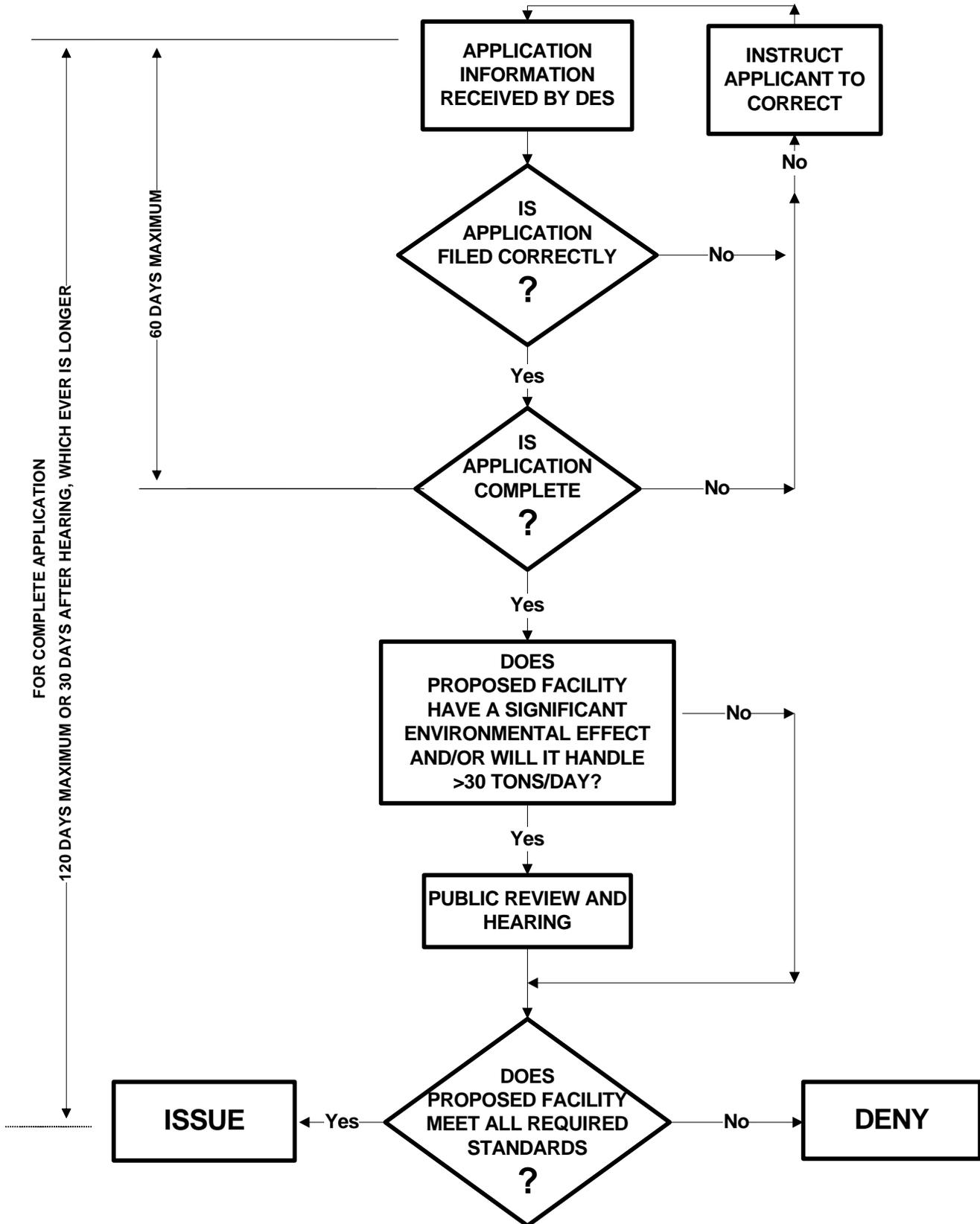
Robert J. Grillo, P.E.
Project Manager

Enclosure

cc w/o enc: Wayne Wheeler, P.E., NHDES
John Gay, NCES
Kevin Roy, NCES
Bryan Gould, Esquire, Cleveland, Waters and Bass, P.A.



**STANDARD PERMIT APPLICATION PROCESSING PROVISIONS
AS PROVIDED IN PARTS Env-Sw 303 - 305
OF THE NEW HAMPSHIRE SOLID WASTE RULES**





March 10, 2014

Town Clerk
Board of Selectmen
Town of Bethlehem, NH
2155 Main Street
Bethlehem, NH 03574

CMA ENGINEERS, INC.
CIVIL/ENVIRONMENTAL ENGINEERS

35 Bow Street
Portsmouth, New Hampshire
03801-3819

Phone: 603/431-6196

Fax: 603/431-5376

E-mail: info@cmaengineers.com

Web Site: www.cmaengineers.com

VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

**RE: North Country Environmental Services, Inc. Stage V Landfill (DES-SW-SP-03-002)
New Hampshire Department of Environmental Services
Waste Management Division, Permitting & Design Review Section
Type I-A Permit Modification, Standard Permit, & Waiver Applications
CMA #833**

Dear Town Clerk and Board of Selectmen,

This letter provides notice of a modification to information contained in the Notice of Filing for the Type I-A Permit Modification for Stage V of the North Country Environmental Services Landfill. The original Notice was mailed on February 11, 2014, but was misdelivered. We therefore resubmitted the Notice to you on March 4, 2014, by certified mail. The Application was submitted to the NHDES on February 13, 2014.

Please note that the disposal capacity estimate has been revised from 1,924,000 cubic yards to 1,903,000 cubic yards.

Additionally, we have enclosed the NHDES decision making process flow chart for a standard permit application which was not included with the February 11th Notice. The New Hampshire Solid Waste Rules have specific procedures for the review and issuance or denial of applications such as NCES has filed. The procedures involve a series of steps, which are substantively identical to those depicted on the enclosed flow chart for a standard permit application. We apologize for the omission. If you have any questions or comments please feel free to contact us.

Very truly yours,
CMA ENGINEERS, INC.

Robert J. Gfillo, P.E.
Project Manager

Enclosure

cc w/o enc: Wayne Wheeler, P.E., NHDES
John Gay, NCES
Kevin Roy, NCES
Bryan Gould, Esquire, Cleveland, Waters and Bass, P.A.

833-NCES Stage V-DT-140306- Notification Letter Resubmittal RJG BOS

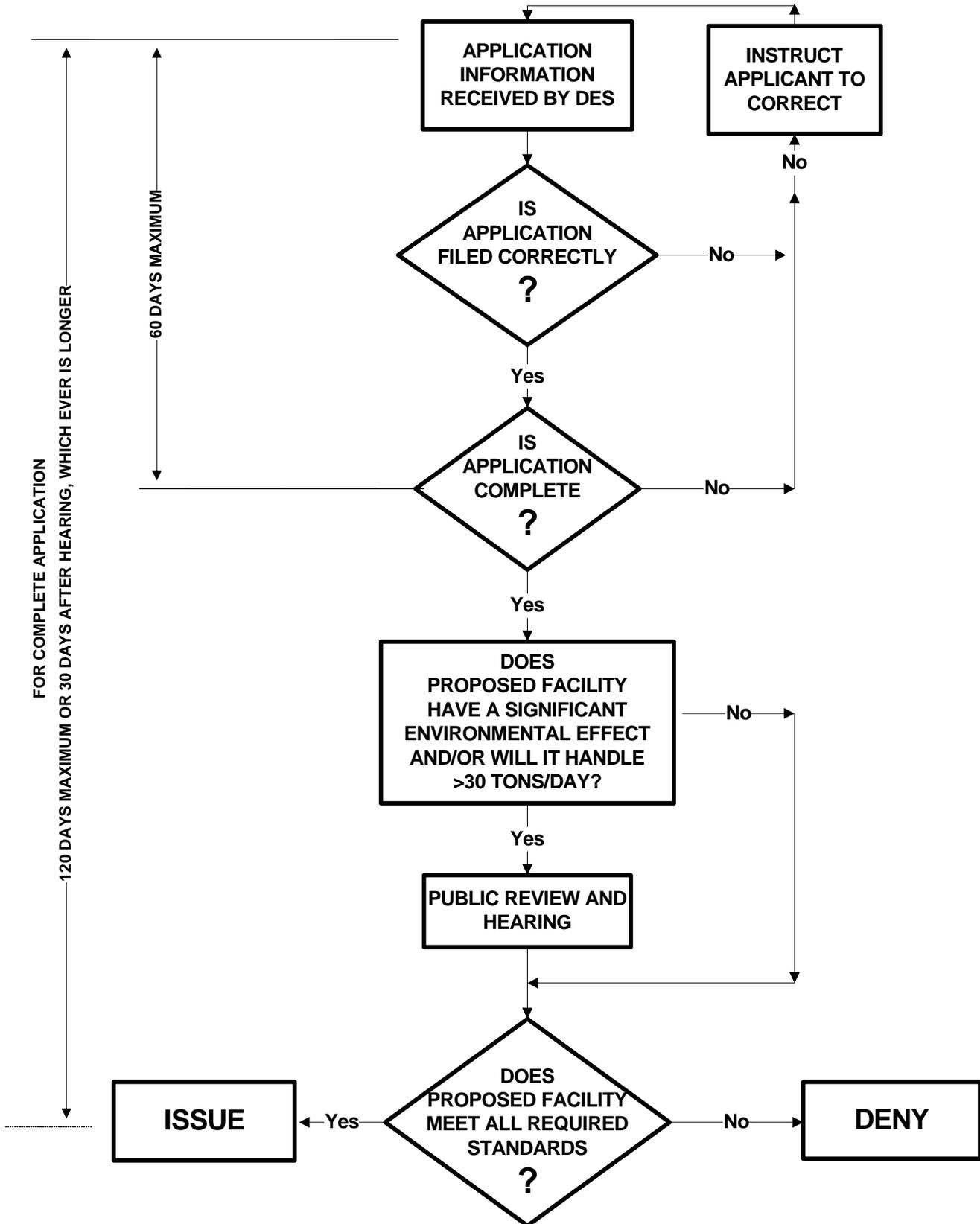
Manchester, New Hampshire

Portsmouth, New Hampshire

Portland, Maine



**STANDARD PERMIT APPLICATION PROCESSING PROVISIONS
AS PROVIDED IN PARTS Env-Sw 303 - 305
OF THE NEW HAMPSHIRE SOLID WASTE RULES**





March 10, 2014

NH Fish and Game Department
Endangered Species Coordinator
11 Hazen Drive
Concord, NH 03301

CMA ENGINEERS, INC.
CIVIL/ENVIRONMENTAL ENGINEERS

35 Bow Street
Portsmouth, New Hampshire
03801-3819

Phone: 603/431-6196

Fax: 603/431-5376

E-mail: info@cmaengineers.com

Web Site: www.cmaengineers.com

VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

**RE: North Country Environmental Services, Inc. Stage V Landfill (DES-SW-SP-03-002)
New Hampshire Department of Environmental Services
Waste Management Division, Permitting & Design Review Section
Type I-A Permit Modification, Standard Permit, & Waiver Applications
CMA #833**

Dear Endangered Species Coordinator,

This letter provides notice of a modification to information contained in the Notice of Filing for the Type I-A Permit Modification for Stage V of the North Country Environmental Services Landfill. The original Notice was mailed to your attention on February 11, 2014. The Application was submitted to the NHDES on February 13, 2014.

Please note that the disposal capacity estimate has been revised from 1,924,000 cubic yards to 1,903,000 cubic yards.

Additionally, we have enclosed the NHDES decision making process flow chart for a standard permit application which was not included with the February 11th Notice. The New Hampshire Solid Waste Rules have specific procedures for the review and issuance or denial of applications such as NCES is filing. The procedures involve a series of steps, which are substantively identical to those depicted on the enclosed flow chart for a standard permit application. We apologize for the omission. If you have any questions or comments please feel free to contact us.

Very truly yours,
CMA ENGINEERS, INC.

Robert J. Grillo, P.E.
Project Manager

Enclosure

cc w/o enc: Wayne Wheeler, P.E., NHDES
John Gay, NCES
Kevin Roy, NCES
Bryan Gould, Esquire, Cleveland, Waters and Bass, P.A.

833-NCES Stage V-DT-140306- Notification Letter Resubmittal RJG NHFish&Game

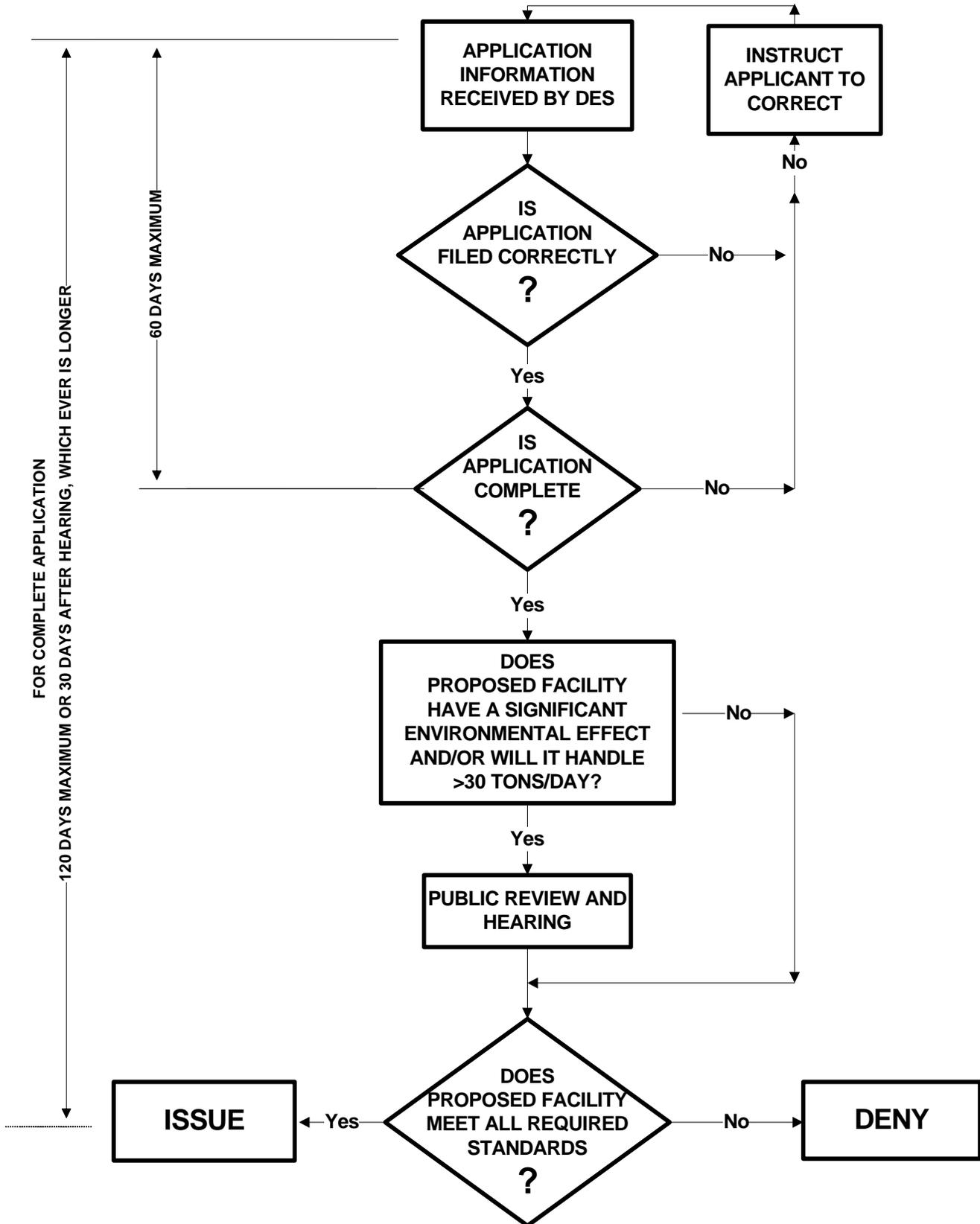
Manchester, New Hampshire

Portsmouth, New Hampshire

Portland, Maine



**STANDARD PERMIT APPLICATION PROCESSING PROVISIONS
AS PROVIDED IN PARTS Env-Sw 303 - 305
OF THE NEW HAMPSHIRE SOLID WASTE RULES**





March 10, 2014

NH Department of Resources & Economic Development
Natural Heritage Inventory
172 Pembroke Road
P.O. Box 1856
Concord, NH 03302-1856

VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

**RE: North Country Environmental Services, Inc. Stage V Landfill (DES-SW-SP-03-002)
New Hampshire Department of Environmental Services
Waste Management Division, Permitting & Design Review Section
Type I-A Permit Modification, Standard Permit, & Waiver Applications
CMA #833**

Dear Natural Heritage Inventory,

This letter provides notice of a modification to information contained in the Notice of Filing for the Type I-A Permit Modification for Stage V of the North Country Environmental Services Landfill. The original Notice was mailed to your attention on February 11, 2014. The Application was submitted to the NHDES on February 13, 2014.

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Very truly yours,
CMA ENGINEERS, INC.

Robert J. Grillo, P.E.
Project Manager

Enclosure

cc w/o enc: Wayne Wheeler, P.E., NHDES
John Gay, NCES
Kevin Roy, NCES
Bryan Gould, Esquire, Cleveland, Waters and Bass, P.A.

CMA ENGINEERS, INC.
CIVIL/ENVIRONMENTAL ENGINEERS

35 Bow Street
Portsmouth, New Hampshire
03801-3819

Phone: 603/431-6196
Fax: 603/431-5376

E-mail: info@cmaengineers.com
Web Site: www.cmaengineers.com

833-NCES Stage V-DT-140306- Notification Letter Resubmittal RJG-NHDEPT RED

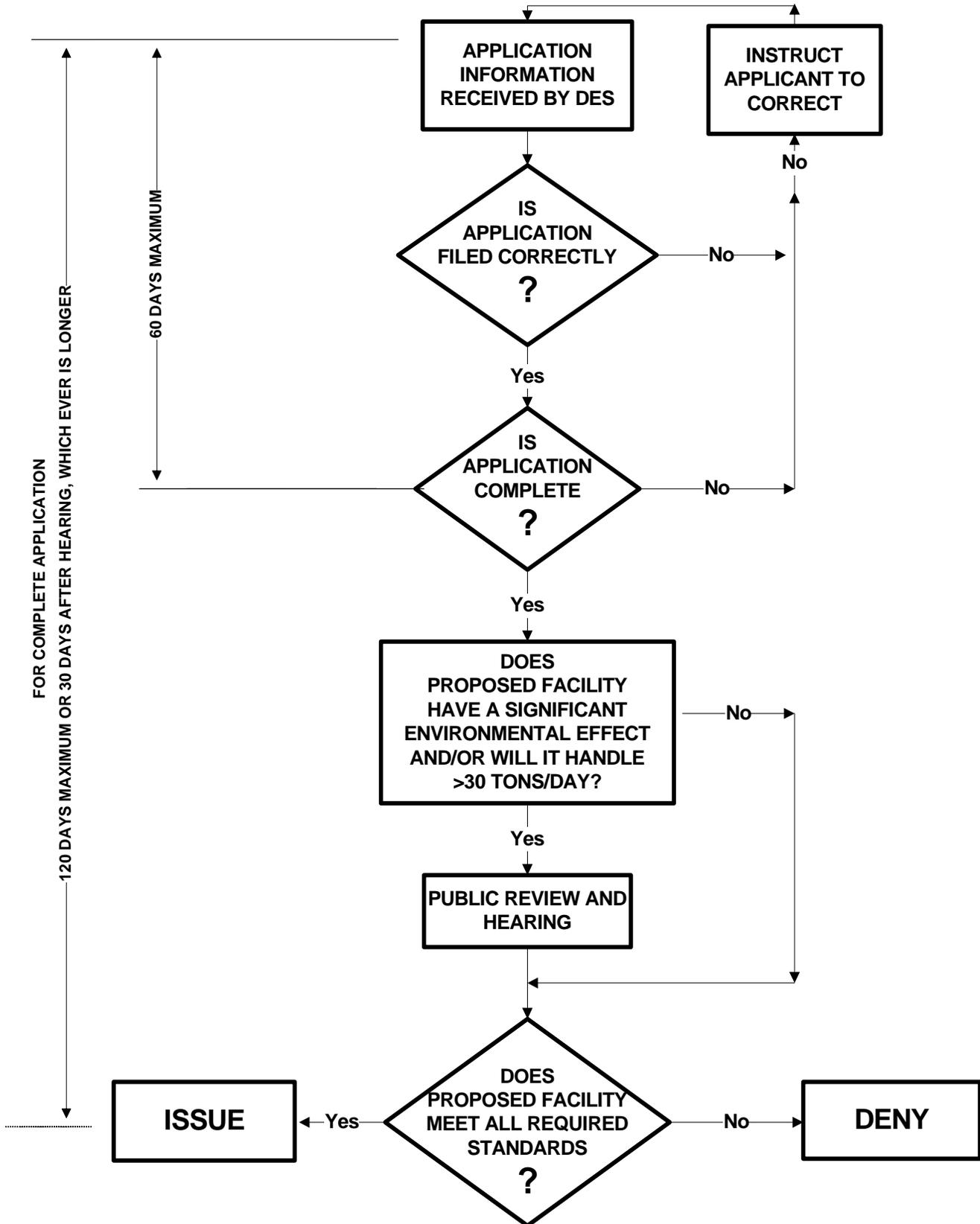
Manchester, New Hampshire

Portsmouth, New Hampshire

Portland, Maine



**STANDARD PERMIT APPLICATION PROCESSING PROVISIONS
AS PROVIDED IN PARTS Env-Sw 303 - 305
OF THE NEW HAMPSHIRE SOLID WASTE RULES**





CMA ENGINEERS, INC.
CIVIL/ENVIRONMENTAL ENGINEERS

35 Bow Street
Portsmouth, New Hampshire
03801-3819

Phone: 603/431-6196
Fax: 603/431-5376

E-mail: info@cmaengineers.com
Web Site: www.cmaengineers.com

March 10, 2014

Mr. Paul Gildersleeve, P.E.
NHDES-Waste Management Division
Solid Waste Management Bureau
PO Box 95, 29 Hazen Drive
Concord, NH 03302-0095

**RE: North Country Environmental Services, Inc.
Stage V Landfill – Type IA Permit Modification and Waiver Applications
Certified Mail Receipts
CMA #833**

Dear Mr. Gildersleeve:

Please find enclosed copies of all the signed certified mail receipts for the notice of filing to the Town of Bethlehem, NH Natural Heritage Inventory, NH Fish & Game, and the site abutters for the above referenced permit modification and waiver applications. Please note that the receipt for the Haskins parcel is an electronic copy of Ms. Haskins signature from the USPS web-based tracking system since the return card was apparently lost.

Should you have any questions, please do not hesitate to contact me.

Very truly yours,
CMA ENGINEERS, INC.

Robert J. Grillo, P.E.
Project Manager

RJG:kao

Enclosure

Certified Mail Receipts

cc w/ enc:

John Gay NCES
Kevin Roy, NCES
Bryan Gould, Olson & Gould
Wayne Wheeler, NHDES

833-NCES-DL-140310-Type IA Certified Mail Receipts to DES-RJG

7008 3230 0002 9082 5087

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

BE THELEHEM NH 03574

Postage	\$ 0.49	0801
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.49	02/11/2014

Postmark Here
 PORTSMOUTH NH FEB 11 2014

Sent To
Jack Tyrrell
 Street, Apt. No.; or PO Box No. **580 Trudeau Road**
 City, State, ZIP+4 **Bethlehem, NH 03574**

PS Form 3800, August 2006 See Reverse for Instructions

7008 3230 0002 9082 5070

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

CONCORD MA 01742

Postage	\$ 0.49	0801
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.49	02/11/2014

Postmark Here
 PORTSMOUTH NH FEB 11 2014

Sent To
Natalie Niles
Melissa Cox
 Street, Apt. No.; or PO Box No. **36 Coburn Hill Road**
 City, State, ZIP+4 **Concord, MA 01742**

PS Form 3800, August 2006 See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Natalie Niles
Melissa Cox
36 Coburn Hill Road
Concord, MA 01742

2. Article Number (Transfer from service label) **7008 3230 0002 9082 5070**

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-154C

COMPLETE THIS SECTION ON DELIVERY

A. Signature
 Natalie K. Niles Agent Addressee

B. Received by (Printed Name) *N. Niles* C. Date of Delivery *2/13/14*

D. Is delivery address different from item 1? Yes No
 If YES, enter delivery address below:

3. Service Type
 Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee) Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Jack Tyrrell
580 Trudeau Road
Bethlehem, NH 03574

2. Article Number (Transfer from service label) **7008 3230 0002 9082 5087**

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-154C

COMPLETE THIS SECTION ON DELIVERY

A. Signature
 Jack Tyrrell Agent Addressee

B. Received by (Printed Name) *JACK TYRRELL* C. Date of Delivery *2/14*

D. Is delivery address different from item 1? Yes No
 If YES, enter delivery address below:

3. Service Type
 Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee) Yes

7008 3230 0002 9082 5131

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

BETHLEHEM NH 03574 **OFFICIAL USE**

Postage	\$ 0.49	0801
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	02/11/2014
Total Postage & Fees	\$ 6.49	

Sent To: **Daniel Tucker**
 Anna Miner
 29 Cottage Street
 Bethlehem, NH 03574

PS Form 3800, August 2006 See Reverse for Instructions



7008 3230 0002 9082 5063

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

HOUSTON TX 77025 **OFFICIAL USE**

Postage	\$ 0.49	0801
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	02/11/2014
Total Postage & Fees	\$ 6.49	

Sent To: **Forest Acquisitions, Inc.**
 3903 Bellaire Blvd.
 Houston, TX 77025

PS Form 3800, August 2006 See Reverse for Instructions



SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Forest Acquisitions, Inc.
3903 Bellaire Blvd.
Houston, TX 77025

2. Article Number (Transfer from service label) **7008 3230 0002 9082 5063**

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-154

COMPLETE THIS SECTION ON DELIVERY

A. Signature Agent Addressee
 X *Lexi Delouche*

B. Received by (Printed Name) **LEXI DELOUCHE** C. Date of Delivery

D. Is delivery address different from item 1? Yes No
 If YES, enter delivery address below:

3. Service Type
 Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee) Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Daniel Tucker
Anna Miner
29 Cottage Street
Bethlehem, NH 03574

2. Article Number (Transfer from service label) **7008 3230 0002 9082 5131**

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-154

COMPLETE THIS SECTION ON DELIVERY

A. Signature Agent Addressee
 X *Daniel Tucker*

B. Received by (Printed Name) **DANIEL TUCKER** C. Date of Delivery **2-13-14**

D. Is delivery address different from item 1? Yes No
 If YES, enter delivery address below:

3. Service Type
 Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee) Yes

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

REVERE MA 02151		
Postage	\$ 0.49	0801
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.49	02/11/2014

Sent To
Nicholas D'Angelo
 Street, Apt. No., or PO Box No. **387 Prospect St.**
 City, State, ZIP+4 **Revere MA 02151**

PS Form 3800, August 2006 See Reverse for Instructions

7008 3230 0002 9082 5094

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

BETHLEHEM NH 03574		
Postage	\$ 0.49	0801
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.49	02/11/2014

Sent To
Wendall & Nancy Young
 Street, Apt. No., or PO Box No. **51 Muchmore Road**
 City, State, ZIP+4 **Bethlehem, NH 03574**

PS Form 3800, August 2006 See Reverse for Instructions

7008 3230 0002 9082 5056

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Wendall & Nancy Young
51 Muchmore Road
Bethlehem, NH 03574

2. Article Number (Transfer from service label) **7008 3230 0002 9082 5056**

PS Form 3811, February 2004 Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

A. Signature Agent
 Wendall Young Addressee
 B. Received by (Printed Name) **Wendall Young** C. Date of Delivery **2/13**
 D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type
 Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.
 4. Restricted Delivery? (Extra Fee) Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Nicholas D'Angelo
387 Prospect St.
Revere MA 02151

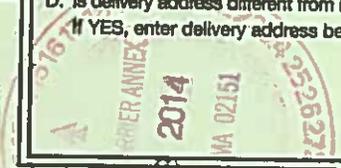
2. Article Number (Transfer from service label) **7008 3230 0002 9082 5094**

PS Form 3811, February 2004 Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

A. Signature Agent
 Nicholas D'Angelo Addressee
 B. Received by (Printed Name) C. Date of Delivery
 D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type
 Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.
 4. Restricted Delivery? (Extra Fee) Yes



7008 3230 0002 9082 5100

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Return Receipt Fee (Endorsement Required)	\$2.70	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.49	



Sent To
David Haskins
 Street, Apt. No., or PO Box No. **24 Duffy Street**
 City, State, ZIP+4 **Franklin, NH 03235**

7008 3230 0002 9082 5100

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
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For delivery information visit our website at www.usps.com

BETHLEHEM, NH 03574 **OFFICIAL USE**

Postage	\$ 0.49	0801
Certified Fee	\$3.30	04
Return Receipt Fee (Endorsement Required)	\$2.70	
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 6.49	



Sent To
John & Patricia Anderson
 Street, Apt. No., or PO Box No. **52 Muchmore Road**
 City, State, ZIP+4 **Bethlehem, NH 03574**

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

John & Patricia Anderson
52 Muchmore Road
Bethlehem, NH 03574

2. Article Number
(Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature Agent Addressee
[Signature]
 B. Received by (Printed Name) _____ C. Date of Delivery **2-18-14**
 D. Is delivery address different from item 1? Yes No
 If YES, enter delivery address below: _____

3. Service Type
 Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.
 4. Restricted Delivery? (Extra Fee) Yes

7008 3230 0002 9082 5100

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March 07, 2014

Track & Confirm Intranet

Delivery Signature and Address

Tracking Number: 7008 3230 0002 9082 5117

This item was delivered on 02/14/2014 at 12:51:00

[< Return to Tracking Number View](#)

Delivery Section	
Signature	<i>Nancy E Haskins</i>
Typed Name	NANCY E HASKINS
Address	24 Duffy

Enter up to 10 items separated by commas.

Select Search Type:

Product Tracking System, All Rights Reserved
Version: 1.7.0.17

Tracking Number: 70083230000290825117



DELIVERED

Expected Delivery Day: Wednesday, February 12, 2014

Product & Tracking Information

Postal Product:
First-Class Mail®

Features:
Certified Mail™

Return Receipt

Email Updates

DATE & TIME	STATUS OF ITEM	LOCATION
February 14, 2014 , 12:51 pm	Delivered	FRANKLIN, NH 03235
February 12, 2014 , 1:43 pm	Notice Left (No Authorized Recipient Available)	FRANKLIN, NH 03235
February 12, 2014 , 8:20 am	Out for Delivery	FRANKLIN, NH 03235
February 12, 2014 , 8:10 am	Sorting Complete	FRANKLIN, NH 03235
February 12, 2014 , 7:41 am	Arrival at Unit	FRANKLIN, NH 03235
February 12, 2014	Depart USPS Sort Facility	MANCHESTER, NH 03103
February 12, 2014 , 1:32 am	Processed at USPS Origin Sort Facility	MANCHESTER, NH 03103
February 11, 2014 , 8:54 pm	Processed at USPS Origin Sort Facility	MANCHESTER, NH 03103
February 11, 2014 , 6:29 pm	Dispatched to Sort Facility	PORTSMOUTH, NH 03801
February 11, 2014 , 1:33 pm	Acceptance	PORTSMOUTH, NH 03801

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> Complete Items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	A. Signature X <i>Nicole McGrath</i> <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee	
1. Article Addressed to: Town Clerk / Board of Selectmen Town of Bethlehem, NH 2155 Main Street Bethlehem, NH 03574	B. Received by (Printed Name) <i>Nicole McGrath</i>	C. Date of Delivery <i>3/6/14</i>
	D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
2. Article Number (Transfer from service label)	7008 3230 0002 9082 5155	
	PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540	
3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.		
4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes		

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> Complete Items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	A. Signature X <i>Emccarty</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee	
1. Article Addressed to: NH Department of Resources & Economic Development Natural Heritage Inventory 172 Pembroke Road P.O. Box 1856 Concord, NH 03302-1856	B. Received by (Printed Name) <i>MARJO</i>	Date of Delivery <i>3 2014</i>
	D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
2. Article Number (Transfer from service label)	7008 3230 0002 9082 5148	
	PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540	
3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.		
4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes		

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	A. Signature X <i>Howley</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee	
1. Article Addressed to: NH Fish and Game Department Endangered Species Coordinator 11 Hazen Drive Concord, NH 03301	B. Received by (Printed Name) <i>MARJO</i>	Date of Delivery <i>3 2014</i>
	D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
2. Article Number (Transfer from service label)	7008 1830 0003 6208 0093	
	PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540	
3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.		
4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes		

(8)	Area of landfill footprint (acres) and capacity of landfill (cubic yards):					
		FOOTPRINT AREA	CAPACITY			
	Phase 1	8.06 Acres	1,903,000 CY			
	Phase 2					
	Phase 3					
	Phase 4					
	Phase 5					
	Phase 6					
	Phase 7					
	Phase 8					
	Total					
(9)	Identify other waste management activities at the site. Check all of the below which apply. If none apply, check here <input type="checkbox"/> and go to Section III.					
	<p>You must respond to this question to fulfill the reporting requirements in Env-Sw 1105.07(d) and (f). However, the information provided by your response shall not become part of any permit issued pursuant to this application; it is merely intended to identify whether other types of waste management activities, not covered by the requested permit, are or will be conducted at the subject site.</p> <p>Therefore, if any of the below listed activities are or will be occurring at this site, place a check mark in the corresponding box and show the location of each such activity on the site plans prepared pursuant to Section VI of this form. Also, be certain the activities do not adversely affect the ability to properly manage the facility for which a permit is being sought.</p> <p>Also note: Although the below listed activities do not require issuance of a solid waste management facility permit, other local, state or federal permits or approvals may apply. Contact the DES Public Information & Permitting Office [(603) 271-2975], if necessary, for assistance in determining permitting requirements.</p>					
	(a)	ACTIVITIES INVOLVING WASTES THAT ARE NOT REGULATED AS SOLID WASTE (Ref. Env-Sw 101.03):				
	<input type="checkbox"/>	Management of yard waste (leaves, grass clippings, garden debris, and small or chipped branches)				
	<input type="checkbox"/>	Burial of stumps at the waste generation site, which have been cut or uprooted from the site, at least 75 feet from any drinking water supply				
	<input checked="" type="checkbox"/>	Operation of a "swap shop," collecting and distributing salvaged materials/items for reuse in-kind, pursuant to Env-Sw 1500, including:				
	<input type="checkbox"/>	Collection and distribution of non-hazardous paint for use as paint				
	<input checked="" type="checkbox"/>	Collection and distribution of other used furniture, equipment, clothing, etc. for reuse in-kind				
	<input type="checkbox"/>	Other (specify):				
	<input type="checkbox"/>	Management of septage, as defined in RSA 485-A:2,IX-a, by a method not involving disposal with a solid waste				
	<input type="checkbox"/>	Management of sludge as defined in RSA 485-A:2,XI-a, by a method not involving disposal with a solid waste				
	<input checked="" type="checkbox"/>	Management of hazardous waste, as defined in RSA 147-A:2, as follows:				
	<input checked="" type="checkbox"/>	Collection of used oil for recycling				
	<input type="checkbox"/>	Collection of household hazardous waste				
	<input checked="" type="checkbox"/>	Collection of universal waste, as follows:				
	<input checked="" type="checkbox"/>	Batteries	<input type="checkbox"/>	Antifreeze	<input checked="" type="checkbox"/>	Mercury containing lamps
	<input type="checkbox"/>	Pesticides	<input type="checkbox"/>	Thermostats	<input checked="" type="checkbox"/>	Mercury containing devices
	<input type="checkbox"/>	Other (specify):				
	<input type="checkbox"/>	Operation of a permitted hazardous waste transfer facility (Provide permit #):				
	<input type="checkbox"/>	Operation of a permitted hazardous waste treatment, storage or disposal (TSD) facility (Provide permit #):				
<input type="checkbox"/>	Other (specify):					
<input type="checkbox"/>	Management of solid or dissolved materials in irrigation return flows					
<input type="checkbox"/>	Management of municipal and industrial discharges which are point sources subject to permits under Section 402 of the Federal Water Pollution Control Act, as amended					
<input type="checkbox"/>	Management of radioactive materials as defined and regulated by the New Hampshire Rules for the Control of Radiation, He-P 2000 and He-P 4000					
(b)	SOLID WASTE MANAGEMENT ACTIVITIES WHICH ARE PERMIT-EXEMPT, AS FOLLOWS:					
<input type="checkbox"/>	Management of stumps by above-ground methods, not including composting, pursuant to Env-Sw 302.03(b)(6), as follows:					
<input type="checkbox"/>	Temporary stockpiling until transfer off-site for further management					
<input type="checkbox"/>	Chipping/shredding and use of resulting chips as fuel, mulch, animal bedding and/or composting bulking agent					
<input type="checkbox"/>	Collection, storage and transfer of the following:					
<input type="checkbox"/>	Solid waste collected from highway rights-of-way by a local or state highway agency (note: permit exemption applies only if the collection site is owned/operated by the highway agency); [Ref. Env-Sw 408.07]					
<input type="checkbox"/>	Concrete, brick, other inert masonry debris or asphalt [Ref. Env-Sw 302.03(b)(9)]					

<input type="checkbox"/>	Processed (i.e., market ready, baled/packaged) select recyclables; (note: permit exemption applies only to select recyclables (i.e., paper, cardboard, glass, plastic, metals, textiles) which are received in a market ready condition); [Ref. Env-Sw 408.04]																		
<input type="checkbox"/>	Open burning of clean wood, limited to brush and slash measuring < 5 inches in diameter and clean, untreated wood with a cross-sectional area < 24 square inches; (note: permit exemption applies only when a permit to stockpile the wood for burning is issued by the DES Air Resources Division and the district forest ranger/local fire authorities have issued a permit to kindle the wood, and when stockpiling conforms to Env-Sw 404.05); [Ref. Env-Sw 508.05]																		
<input type="checkbox"/>	Collection and use of a processed select recyclable material to produce a waste-derived product certified pursuant to Env-Sw 1500; (Identify the type of processed select recyclable: _____ and the type of certified waste-derived product: _____); [Ref. Env-Sw 508.06]																		
<input type="checkbox"/>	Collection and use of a processed non-select recyclable material to produce a waste-derived product certified pursuant to Env-Sw 1503.04, Env-Sw 1503.05 or Env-Sw 1503.07; (Identify the type of processed non-select recyclable: _____ and the type of certified waste-derived product: _____); [Ref. Env-Sw 508.07]																		
<input type="checkbox"/>	Burial of animal carcasses pursuant to Env-Sw 810.07 or Env-Sw 810.08																		
<input type="checkbox"/>	Landspreading wood ash pursuant to Env-Sw 1704																		
<input type="checkbox"/>	Conducting bench scale research and development projects pursuant to Env-Sw 302.03(b)(7)																		
<input type="checkbox"/>	Management of boiler slag from the combustion of coal, pursuant to Env-Sw 302.03(b)(8)																		
<input type="checkbox"/>	Burial of concrete, brick, other inert masonry debris or asphalt, as follows:																		
<input type="checkbox"/>	At the waste generation site pursuant to Env-Sw 810.04																		
<input type="checkbox"/>	From off-site locations pursuant to Env-Sw 302.03(b)(9)																		
<input type="checkbox"/>	Collection, storage and processing of wooden pallets and crates into wood chips, pursuant to Env-Sw 302.03(b)(10)																		
<input type="checkbox"/>	Management of a solid waste that has been formally declared by the generator, in accordance with Hazardous Waste Rule Env-Wm 502 to be a hazardous waste, pursuant to Env-Sw 302.03(b)(5)																		
<input type="checkbox"/>	Other (specify: _____ and provide rule cite: Env-Sw _____)																		
(c)	IDENTIFY ALL OTHER SOLID WASTE MANAGEMENT PERMITS ISSUED FOR THIS SITE:																		
	<table border="1"> <thead> <tr> <th>PERMIT NUMBER</th> <th>DATE ISSUED</th> <th>FACILITY TYPE/ACTIVITY TYPE</th> </tr> </thead> <tbody> <tr> <td>DES-SW-SP-87-022 (Stage I)</td> <td>1987</td> <td>Solid Waste Permit</td> </tr> <tr> <td>DES-SW-SP-89-009 (Stage II)</td> <td>1989</td> <td>Solid Waste Permit</td> </tr> <tr> <td>DES-SW-SP-00-003 (Stage III)</td> <td>2000</td> <td>Solid Waste Permit</td> </tr> <tr> <td>DES-SW-SP-03-002 (Stage IV)</td> <td>March 13, 2003</td> <td>Solid Waste Permit</td> </tr> <tr> <td>GWP-198704033-B-006</td> <td>April 2, 2013</td> <td>Groundwater Management Permit</td> </tr> </tbody> </table>	PERMIT NUMBER	DATE ISSUED	FACILITY TYPE/ACTIVITY TYPE	DES-SW-SP-87-022 (Stage I)	1987	Solid Waste Permit	DES-SW-SP-89-009 (Stage II)	1989	Solid Waste Permit	DES-SW-SP-00-003 (Stage III)	2000	Solid Waste Permit	DES-SW-SP-03-002 (Stage IV)	March 13, 2003	Solid Waste Permit	GWP-198704033-B-006	April 2, 2013	Groundwater Management Permit
PERMIT NUMBER	DATE ISSUED	FACILITY TYPE/ACTIVITY TYPE																	
DES-SW-SP-87-022 (Stage I)	1987	Solid Waste Permit																	
DES-SW-SP-89-009 (Stage II)	1989	Solid Waste Permit																	
DES-SW-SP-00-003 (Stage III)	2000	Solid Waste Permit																	
DES-SW-SP-03-002 (Stage IV)	March 13, 2003	Solid Waste Permit																	
GWP-198704033-B-006	April 2, 2013	Groundwater Management Permit																	

SECTION XIII. FEE CALCULATION FORM

Pursuant to Part Env-Sw 310 of the New Hampshire Solid Waste Rules, a fee calculated in accordance with the following formula shall be remitted to TREASURER, STATE OF NEW HAMPSHIRE at the time this application is filed.

(1)	The fee for an existing facility that does NOT hold a temporary permit and which is scheduled to close, is zero. Check here <input type="checkbox"/> if applicable.			
(2)	The fee for all other facilities is as determined by (a) - (e) below:			
(a)	FACILITY CAPACITY: How many tons per day of solid waste is this facility designed to receive? 1,100 tons per day (TPD)			
(b)	FACILITY LIFE EXPECTANCY: What is the designed life expectancy of this facility (the anticipated period of time between commencing operations and closing the facility)? 5.3 (Years)			
(c)	Using the numbers you have provided in (a) and (b) above, circle the related dollar amount in the chart below.			
		FACILITY LIFE EXPECTANCY		
	FACILITY CAPACITY	0-1 YR.	1-5 YRS.	5-10 YRS.
	30 or fewer TPD	\$100.00	\$400.00	\$800.00
	31 to 120 TPD	\$200.00	\$800.00	\$1,600.00
	121 to 300 TPD	\$500.00	\$2,000.00	\$4,000.00
	301 to 600 TPD	\$1,000.00	\$4,000.00	\$8,000.00
	601 or more TPD	\$2,000.00	\$8,000.00	\$16,000.00
(d)	Check which of the following applies: <input checked="" type="checkbox"/> This facility is a lined landfill (MBF= \$15,000) <input type="checkbox"/> This facility is an unlined landfill (MBF= \$5,000)			
(e)	Calculate the required fee, using the formula below.			
	MBF SHOWN IN ITEM (d) ABOVE	=		\$15,000
	AMOUNT CIRCLED IN ITEM (c) ABOVE	=	+	\$16,000
	TOTAL FEE	=		\$31,000

Section III (1). Brief Description of Proposed Modification

This Type I-A permit modification is sought for the proposed North Country Environmental Services, Inc. (NCES) Stage V landfill expansion. The proposed expansion includes a new 8.06 acre landfill cell located north of the existing landfill. The expansion will be connected to the existing landfill. The proposed development includes earthwork, site development, and ancillary structures including leachate, drainage, landfill gas, and other structures. NCES is seeking the Stage V permit modification for continued landfill operations and capacity beyond Stage IV, Phase II completed in 2013. The Stage V landfill expansion will provide approximately 1,903,000 cubic yards of total capacity. Of this total capacity, approximately 222,000 cubic yards is unused Stage IV capacity and 1,681,000 cubic yards is new capacity.

Included with this permit modification application is:

- The Public Benefit Demonstration;
- The Design Report;
- Supporting design calculations;
- Stage V Design Drawings & Technical Specifications;
- Revised Operating Plan
- Stage V Closure Plan
- Hydrogeologic Report
- The Closure Construction and Post Closure Cost Estimates; and
- An alternative application for a standard permit for Stage V.

In addition, an Application for Waiver of rules applying to the design of leak detection systems, Env-Sw 805.07(a)(1) and (b)(1), is included with this permit modification application. A second Application for Waiver of rules is included for the business concern and personal history disclosure requirement for the applicant under the Standard Permit Application.

The Stage V landfill expansion will include the construction of a double-lined landfill system comprised of 60-mil high density polyethylene (HDPE) geomembrane, drainage geocomposite, drainage sand, and perforated leachate collection piping, similar to the recently constructed Stage IV, Phase II expansion and consistent with current conventional design practices and DES Rules.

The Stage V expansion primary leachate collection system will be connected to and managed by the existing Stage IV, Phase I sump and pump station. The Stage V secondary leachate will be managed and monitored separately by an independent sump and pump station, which ultimately will be combined with the leachate in the Stage IV, Phase I pump station. The existing leachate storage capacity is adequate for the Stage V expansion as presented in the Design Report.

The Stage V landfill expansion and new ancillary structures will be constructed within a 61-acre landfill district zone established on the NCES site by the Town of Bethlehem in 2012. The proposed Stage V footprint largely occupies an area originally permitted for Stage IV that has remained undeveloped. Most of the Stage IV capacity originally designated for this portion of the site has been reallocated to other areas.

The Design Report included as Part VI of this permit application describes the facility background and proposed modification in greater detail.

Section VI. Impact Evaluation

Per the Type I Permit Modification form, the following responses are given to the five enumerated considerations. As an overview, this Type I-A permit modification will provide additional disposal capacity in an area designated Stage V. Most of the new disposal capacity requires a Public Benefit Determination as it exceeds the approved capacity of Stage IV as set forth in the standard permit issued by the Department in 2003 and subsequently modified.

(1) The effect the modification will have on facility function, capacity, life expectancy, service type, and service area.

The modification request proposes no change to the facility function, service type, and service area. With this modification, the total capacity and life expectancy of Stage V will about 5.3 years of capacity to the site.

(2) The effect the modification will have on the environment, public health, and public safety.

The proposed modification will have no change in effect on the environment, public health, and public safety.

(3) The effect the modification will have on the state's ability to achieve the goals and objectives specified in RSA 149-M:2, namely achieving a 40% minimum weight reduction in the solid waste stream on a per capita basis by the year 2000 and avoiding the disposal of recyclable materials in a lined landfill with a leachate collection system.

The effect the modification will have on the state's ability to achieve the goals and objectives specified in RSA 149-M:2 are addressed in Part 4.0 of Section VII, the Public Benefit Determination.

(4) The effect the modification will have on establishing and maintaining integrated waste management systems consistent with the hierarchy of waste management methods in RSA 149:M (the methods, in descending order of preference as specified in RSA 149-M:3, are: source reduction; recycling and reusing; composting; waste-to-energy (including incineration), incineration without energy recovery; and landfilling.

The effect the modification will have on establishing and maintaining integrated waste management systems are addressed in Part 4.0 of Section VII, the Public Benefit Determination.

(5) Consistency with the state solid waste management plan and the applicable district plan, pursuant to RSA 149-M12 I(b).

Consistency with the state and municipal solid waste management plans is addressed in Part 5.0 of Section VII, the Public Benefit Determination.

The permitted nominal disposal capacity of the Concord waste-to-energy facility is 575 tons per day (TPD) (209,875 TPY). Its actual annual acceptance rate, over the past three years, however, has averaged 193,873 TPY and has not exceeded 196,335 TPY. Incineration, again, does not “dispose” of waste; rather, it reduces its weight by two-thirds. As a result, the actual disposal capacity of the Concord facility is 138,518 TPY. The Concord facility’s capacity and electricity sales contract expires in 2019. This will likely affect the economics of the facility adversely and could result in the unavailability of this resource. Table 3 therefore depicts available capacity both with and without the Concord facility operating after its existing contracts expire.

The Franklin Ashfill will close at the end of 2014, and it will not provide disposal capacity for the planning period. The Franklin Ashfill has been used solely as the disposal facility for the combustion residuals from the Wheelabrator Concord WTE facility since that operation began in 1988. After 2014, these residuals will be disposed of at an as yet undetermined site. Because Wheelabrator Concord Company, Limited Partnership, is a subsidiary of Waste Management, Inc., it is likely that the ash from the Concord WTE facility will be disposed of at the TLR-III facility.

3.4 Range of Capacity Shortfall (RSA 149-M:11, V(d))

The waste disposal capacity through the planning period is the sum of projected landfill capacity (4,210,800 to 12,710,000 tons) and the capacity of the Concord waste-to-energy facility (see Table 3). Accordingly, the total statewide permitted waste disposal capacity as of January 1, 2014, for the planning period is estimated to be 4,903,390 to 15,480,360 tons depending on whether the Concord facility closes in 2019 and whether permitted landfill capacity comprises capacity for which design approval or operating approval has been granted. Deducting this range of capacity from the state’s projected waste generation less diversion (Table 2) produces an estimated 20-year shortfall of 6,361,344 to 16,938,314 tons.

3.4.1 Capacity Provided by Stage V

The estimated disposal capacity provided by Stage V is 1,903,000 cubic yards. At an estimated waste density of 1,620 pounds per cubic yard, Stage V provides capacity for about 1,541,430 tons of waste. Of this total, approximately 222,000 cubic yards will be used for disposal of about 179,820 tons of Stage IV permitted capacity that will remain once Stage IV, Phase 2 is full. As a result, this application seeks approval of 1,681,000 cubic yards (or about 1,361,610 tons) of “new” capacity. NCES expects to begin using this new capacity in 2016 when all of the Stage IV capacity has been consumed.

The estimated total of 1,541,430 tons of Stage V capacity would provide about 5.3 years of capacity at the projected fill rate of 290,000 TPY.

3.5 Need for the Stage V Facility (RSA 149-M:11, III(a))

While “capacity need” is to be determined in accordance with RSA 149-M:11, V, the law identifies other factors DES is to consider in deciding the need for a proposed facility. These factors include the short-term and long-term impact of the facility on the state’s management of its solid waste as well as the proposed type, size, and location of the facility. RSA 149-M:11, III(a). These factors also militate in favor of a finding that Stage V will provide a substantial public benefit.

3.5.1 Short-Term and Long-Term Impact

RSA 149-M:11, III(a) requires DES to consider the “short- and long-term need” for a proposed facility as part of the public benefit analysis. This requirement serves the purpose of enabling DES to take into account the sufficiency of the state’s disposal capacity in more comprehensive terms.

For example, RSA 149-M:11, V is designed to ensure that there is – at least notionally – adequate disposal capacity in the state over the 20-year planning period for waste generated in the state. RSA 149-M:11, III(a), however, gives DES the authority to account for the effect of New Hampshire’s net importation of solid waste for disposal. DES can only assess the short-term and long-term need for new capacity if it considers how much New Hampshire capacity will actually be consumed by imported waste.

Data produced by NHDES-P&DRS for 2007 through 2009 – the latest available from that source – establish average net imports of solid waste of about 400,000 tons per year over that period. The annual facility reports on file with DES, however, show a substantial increase in imported tonnage for 2010 (601,184 tons), 2011 (660,390 tons), and 2012 (609,592 tons).¹⁰ Even assuming that net imports remain at the 2007-2009 average of 400,000 tons per year over the 20-year planning period, however, imported waste will consume 8,000,000 tons of New Hampshire capacity over that period. This increases the capacity shortfall calculated under RSA 149-M:11, V, for the planning period from a range of 6,361,344 to 16,938,314 tons to a range of 14,361,344 to 24,938,314 tons. If waste imports remain at the average volume the state saw from 2010 through 2012 (623,722 TPY), however, imported waste *alone* will consume 12,474,440 tons¹¹ of New Hampshire capacity over the 20-year planning period. This would increase the range of the capacity shortfall to 18,835,784 to 29,412,754 tons over the 20-year period.

Another shortcoming of the analysis performed under RSA 149-M:11, V, is that it assumes implicitly that all disposal capacity in the state is fungible and, consequently, if a disposal facility ceases operations the remaining facilities will accept the volume of New Hampshire waste previously accepted at the closed facility. Each permitted facility, however, has a limit on the average tonnage of waste it can accept each year. WTE facilities have finite

¹⁰ NCES was unable to locate annual facility reports for the Lebanon landfill for 2010 or for LL&S or ERRCO for 2012. The tonnages given for those years, then, are conservative.

¹¹ This total does not deduct exported waste for 2010-2012.

throughput capacities, municipal landfills have limited service territories, and commercial landfills have permit conditions setting average annual acceptance rates. The Concord WTE facility has historically operated at or near capacity, the municipal landfills cannot accept waste generated outside their boundaries, and the commercial landfills ordinarily accept *at least* their annual permitted average. As a consequence, closure of a WTE or commercial landfill facility could conceivably result in a situation in which waste generated in New Hampshire cannot be disposed of in the state. Even if the remaining facilities could accommodate the volume of waste previously accepted at the closed facility, moreover, the consumption of their remaining capacity would obviously be accelerated, hastening a statewide capacity shortfall.

RSA 149-M:11, III(a), authorizes DES to consider the overall impact upon the state's waste management and disposal resources of any decision on an application for new capacity in the state. Continued operation of the NCES facility through approximately 2021 will help the state to defer the effects of net waste imports on its long-range capacity planning and will avoid the stepped-up depletion of the state's disposal capacity if NCES were to cease operations in 2015. These considerations support the conclusion that Stage V will meet both a short-term and long-term need for waste disposal in New Hampshire.

3.5.2 Type, Size, and Location of Stage V

3.5.2.1 Type and Size of the Facility

Stage V will provide 1,903,000 cubic yards of landfill capacity.

3.5.2.2 Location of the Facility

3.5.2.2.1 NCES "Wasteshed"

The NCES landfill is located in the north central portion of the state. The landfill is accessed through nearby U.S. Routes 2, 3, and 302, and Interstate Routes 93 and 91. These major roadways provide efficient transportation of waste generated in the region and state to NCES. Table 7 presents a list of the 35 New Hampshire municipalities that have contracted *directly* with NCES over the prior 10 years for waste disposal. On average, NCES has had such first-party contracts with 23 New Hampshire towns per year over this period. Figure 1 shows the locations of these towns, many of which are in northern or central portions of the state.

NCES is a subsidiary of Casella Waste Systems, Inc. (CWS) and is one component of an integrated waste management company. Among the other CWS subsidiaries operating in New Hampshire are Gobin Disposal Systems in Newport, Bestway Disposal Services in Belmont and Raymond, and the CWS Allenstown Transfer Station. NCES also operates a transfer station to serve its host community, Bethlehem, and surrounding towns on the NCES site.

Through its hauling operation and transfer station, Gobin collected and transferred municipal solid waste and construction and demolition debris from 19 New Hampshire towns in 2012. Gobin services an additional 19 New Hampshire towns for disposal of C&D only. Approximately two-thirds of the waste collected and transferred by Gobin was disposed of at

NCES. The New Hampshire towns served by Gobin in 2012 are shown in Table 4 and on the state map presented in Figure 2.

CWS acquired Blow Bros., a Maine corporation, doing business as Bestway Disposal Services in New Hampshire, in December 2012. Bestway Disposal Services includes the Bestway hauling operations and transfer stations located in Belmont and Raymond, New Hampshire. After the purchase, approximately 80 percent of the waste collected and transferred by Bestway was internalized into CWS for disposal. The Raymond facility primarily focuses on individual residential and commercial C&D collection, whereas the Belmont facility serves both municipalities and private C&D customers. The Belmont facility served 17 New Hampshire towns and the Raymond facility an additional 36 New Hampshire towns for the disposal of C&D in 2012. The towns serviced by Bestway Belmont and Raymond in this fashion are shown on Figure 2 and are listed in Table 5.

The CWS Allenstown Transfer Station serves the Towns of Allenstown and Wolfeboro. Prior to 2013, the MSW collected at Allenstown was disposed of at the CWS-owned Maine Energy Recovery Corp. (MERC) waste-to-energy facility in Biddeford, Maine, and the C&D waste was primarily processed at the CWS-owned KTI facility in Lewiston, Maine. The MERC facility was closed in 2013, and CWS has recently sold the KTI facility. New Hampshire towns including Derry, Allenstown, Wolfeboro, Freedom, Goffstown, and Greenland that disposed of their MSW at MERC before the closure are now disposing of their waste at NCES. Several communities formerly disposing of their waste at Wheelabrator Claremont are now using NCES since that facility closed in August 2013. All of these municipalities are shown in Figure 2.

NCES also has business relationships with private haulers and transfer stations not affiliated with CWS. Although a complete town by town breakdown of the sources of this waste is not available to NCES, the following companies rely upon NCES for disposal of some or all of the MSW they collect at their facilities. The municipalities they serve are shown on Figure 3 and are listed in Table 6.

- The C.M. Witcher Transfer Station in Warren serves 31 communities primarily in north-central and eastern New Hampshire. NCES serves as the primary disposal facility for the transfer station.
- The Monadnock Disposal Services (MDS) transfer station in Jaffrey serves 49 communities in the south-central portion of the state. NCES is one of four disposal facilities used by MDS. MDS disposed of over 7,000 tons of municipal solid waste at NCES for the first ten months of 2013.

The NCES service area therefore encompasses large areas of the state. A total of 156 towns and cities out of a total of 234 New Hampshire municipalities use the disposal services of NCES, either directly or through affiliated or unaffiliated intermediaries. The locations of these towns are shown on Figure 5.

CWS operates a series of six transfer stations serving broad regions of New Hampshire. These facilities recycle about 15,000 tons of other solid wastes per year. A summary of recycling tonnages and types at the transfer stations is included in Table 10.

5.1.4 Goal 4: Assure Disposal Capacity for New Hampshire

The capacity analysis presented in Section 3.0 of this public benefit demonstration identifies a shortfall in disposal capacity for New Hampshire waste. For the 20-year planning period, permitted disposal capacity totals from about 15,500,000 to as little as 5,000,000 tons. Table 3. Projected quantities of New Hampshire waste total nearly 22,000,000 tons over the same period. Table 2. Permitting NCES Stage V will add about 1,541,430 tons of capacity during the planning period and assist the state in ensuring adequate disposal capacity for New Hampshire waste. Indeed, even with the Stage V capacity approved, New Hampshire is facing a shortfall of *at least* 4,819,914 tons over the 20-year planning period.¹⁴ If DES takes into account only the capacity for which operating approval has been granted and assumes waste imports at the average rate in the state for 2010-2012 and closure of the Wheelabrator facility in Concord at the end of 2019, the shortfall over the 20-year period, even *with* the Stage V capacity, would be about 27,871,324 tons.¹⁵ Given that the state will confront a shortfall over the next twenty years of modest to massive proportions, DES should approve Stage V because it mitigates the shortfall and therefore contributes to ensuring disposal capacity for New Hampshire waste.

5.1.5 Goal 5: Assure that Solid Waste Management Activities are Conducted in a Manner Protective of Human Health and the Environment

The proposed Stage V Landfill is designed to meet or exceed regulatory requirements, to be operated responsibly by trained personnel, and to be monitored in accordance with relevant regulations. Moreover, Casella's commitment to operating all of its facilities in a safe and environmentally sound manner was recently recognized by the EPA.

In 2012, Casella received the EPA's Climate Leadership Award for Excellence in Greenhouse Gas Management – the only resource management company in the country to receive this distinction. CWS's ongoing commitment to greenhouse gas reduction is integral to a broader vision of sustainable waste management.¹⁶ CWS reduced its carbon footprint by 45% in just five years by installing landfill gas collection and capping systems, installing three landfill gas-to-energy power plants, and investing in improved fleet routing.

5.2.1 District Solid Waste Plans

¹⁴ 4,819,914 tons is the remainder after Stage V capacity (1,541,430 tons) is deducted from the low end of the range of capacity shortfall (6,361,344 tons). See section 3.4 *ante*.

¹⁵ 27,871,324 tons is the remainder after Stage V capacity (1,541,430 tons) is deducted from the high end of the range of capacity shortfall (29,412,754 tons). See Section 3.5.1 *ante*.

¹⁶ EPA 2012 Climate Leadership Award Winners (Feb. 5, 2014, 11:14AM), <http://www.epa.gov/climateleadership/awards/2012winners.html#casella>

The formation of solid waste districts in New Hampshire was prompted by the federal Resource Conservation and Recovery Act (RCRA). Among other things, RCRA required states to encourage regional efforts to manage solid waste.¹⁷ One of the ways New Hampshire responded to this requirement was by enacting what is now RSA 149-M:24 and :25. Those sections of the solid waste act provide for the formation of single- or multi-member solid waste districts, and require each town or district to adopt a solid waste management plan approved by the department.

While numerous solid waste districts were formed in the 1980s, strict adherence to RSA 149-M:24 and :25 has waned. In fact, there are currently no approved district solid waste plans on file with NHDES.¹⁸ Notwithstanding the lack of approved plans, municipalities are nonetheless making careful planning decisions about solid waste issues. These plans are sometimes reduced to writing and contained in, for example, municipal master plans.¹⁹ Whether contained in a formal document or not, however, the conduct of many municipalities evidences that they are planning ahead for the solid waste disposal needs of their citizens with an emphasis on recycling and on the economical disposal of waste that is not recycled. For example, nineteen municipalities now belong to one of the largest and most active solid waste districts, the Pemi-Baker Solid Waste District (P-BSWD), the principal purpose of which has been to take advantage of economies of scale to provide cost-effective waste management for its member municipalities, including negotiation of contracts for long-term services. Whether through a multi-member solid waste district or as individual municipalities, however, many New Hampshire cities and towns have entered into long-term contracts for disposal of their solid waste, evidencing that they have planned how to manage their solid waste disposal needs.

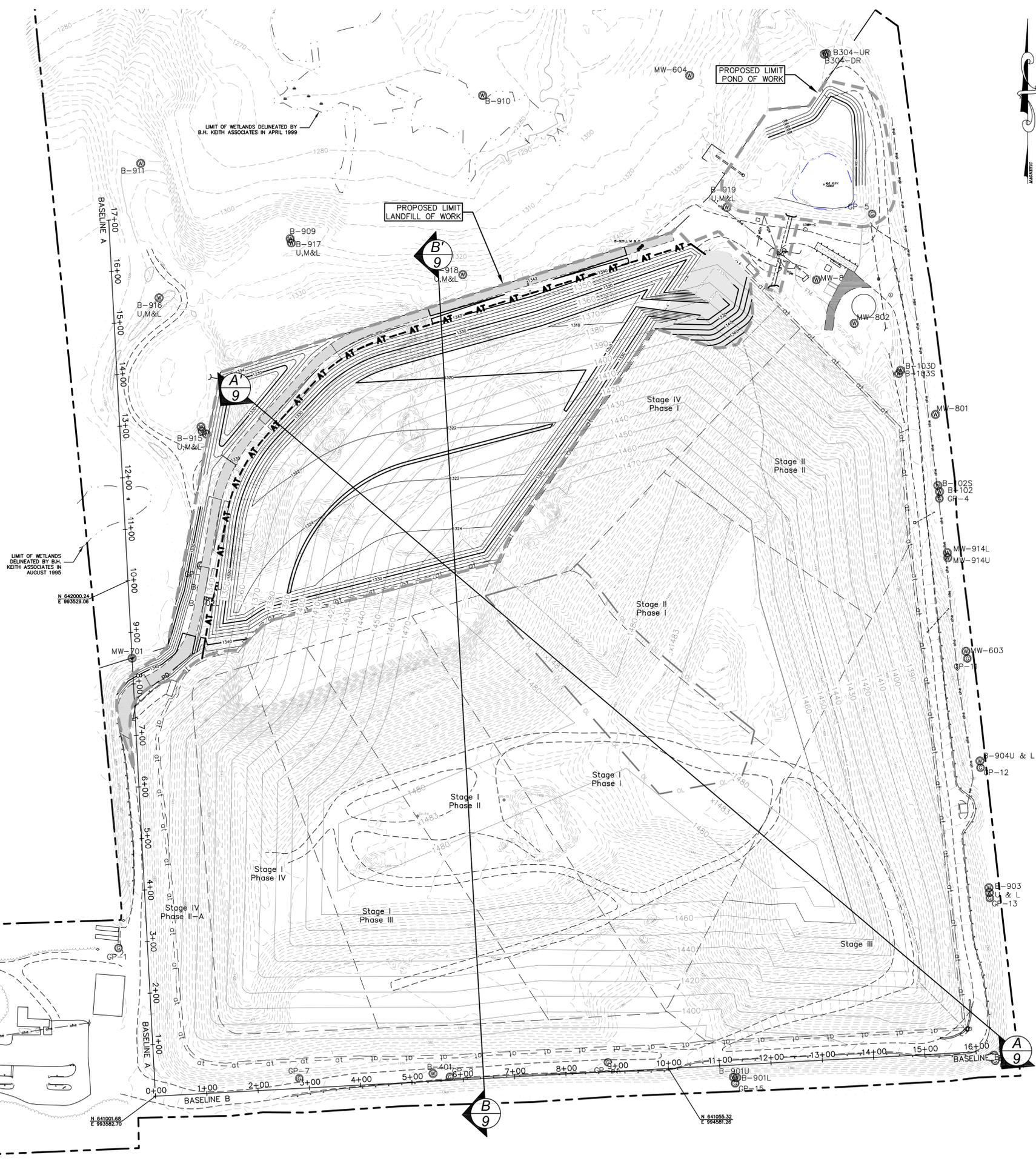
The importance of NCES's landfill in Bethlehem to the solid waste management planning of New Hampshire municipalities and solid waste districts is evidenced in at least two ways. First, whether pursuant to a long-term contract or not, NCES receives solid waste originating in a large majority of New Hampshire's municipalities, showing that the facility is important to the management of solid waste statewide. Some of the waste is transported directly by municipal sanitation departments (See Table 7 and Figure 1), some through the waste-hauling and transfer station operations of NCES's affiliates (see Tables 4 and 5 and Figure 3), and some through unaffiliated third parties (see Table 6 and Figure 4). The full geographic breadth of the New Hampshire wasteland served by NCES is shown on Figure 5.

Many New Hampshire municipalities, moreover, have entered into long-term contracts, either directly or through a multi-member solid waste district to provide for the disposal of their

¹⁷ 42 U.S.C.A. § 6946

¹⁸ NCES contacted NHDES to obtain waste management plans submitted to and approved by the department, but the department reported that no approved plans could be found on file. E-mail from W. Wheeler (1/17/14). NCES contacted nearly fifty cities and towns in an effort to obtain solid waste management plans of multiple or single town districts. None of the municipalities NCES contacted were able to provide a solid waste plan adopted in compliance with RSA ch. 149-M.

¹⁹ See, e.g., Rumney Master Plan (2012) at 48 and Monroe Master Plan (2011) at 35, both of which provide for the disposal of solid waste at NCES's landfill in Bethlehem.



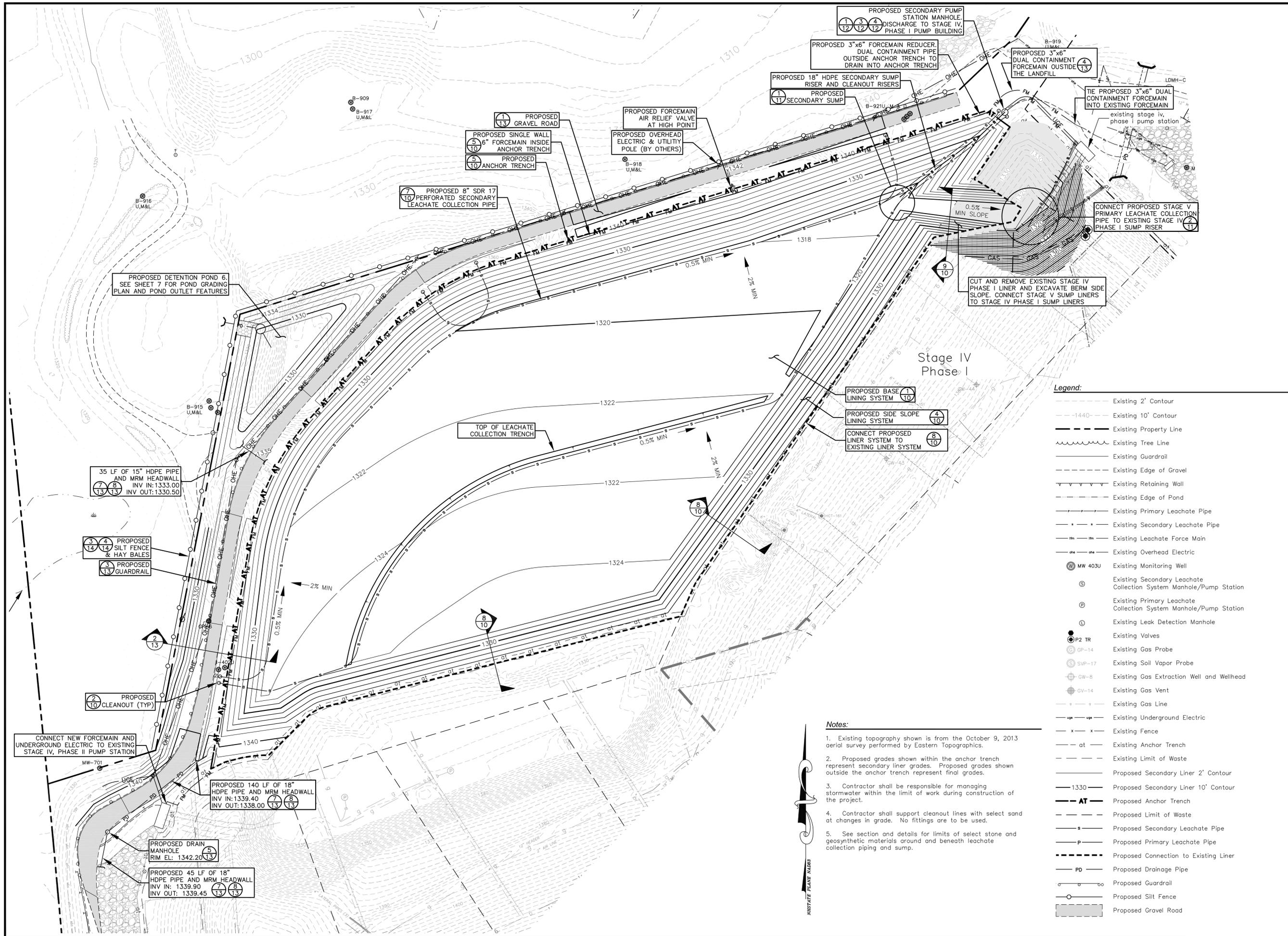
- Notes:**
- Existing topography shown within the treeline is developed from the October 9, 2013 aerial photogrammetry performed by Eastern Topographics. Topography north of the treeline is taken from the Stage IV Design Drawings prepared by SHA and dated March 2002.
 - Proposed features on this plan are for reference purposes only. See following sheets for additional detail.
 - Proposed topography shown within the proposed Stage V landfill expansion on this plan are top of secondary liner.
 - Closure grades shown are top of cap. Top of waste is approximately 3.83' below top of cap grades. See the Closure Plan for additional detail.
 - Construction baselines and section alignments shown on this sheet are used for landfill cross sections on Sheets 8 & 9.

- Legend:**
- Existing 2' Contour
 - Existing 10' Contour
 - Existing Property Line
 - Town of Bethlehem Zoning Line
 - Existing Tree Line
 - Existing Guardrail
 - Existing Edge of Gravel
 - Existing Retaining Wall
 - Existing Edge of Pond
 - Existing Primary Leachate Pipe
 - Existing Secondary Leachate Pipe
 - Existing Leachate Force Main
 - Existing Overhead Electric
 - ⊙ MW 403U Existing Monitoring Well
 - ⊙ Existing Secondary Leachate Collection System Manhole/Pump Station
 - ⊙ Existing Primary Leachate Collection System Manhole/Pump Station
 - ⊙ Existing Leak Detection Manhole
 - ⊙ P2 TR Existing Valves
 - ⊙ GP-14 Existing Gas Probe
 - ⊙ SWP-17 Existing Soil Vapor Probe
 - ⊙ GW-8 Existing Gas Extraction Well and Wellhead
 - ⊙ GV-14 Existing Gas Vent
 - Existing Gas Line
 - Existing Underground Electric
 - Existing Fence
 - at Existing Anchor Trench
 - Existing Limit of Waste
 - AT Proposed Anchor Trench
 - Proposed Limit of Work
 - 1440 Proposed 10' Contour
 - Proposed 2' Contour
 - PD Proposed Drainage Pipe
 - Proposed Waste Excavation
 - 1440 Proposed Stage V Top of Cap 10' Contour

by	R/JG		
	R/JG		
date	2/7/14		
	3/7/14		
revision	Issued for NHDES Review		
	Issued for NHDES Review - Supplemental Submittal		
no.	1		
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designed by: R/JG/BWS drawn by: BWS approved by: R/JG date: February 2014 project no.: 833 file name: 833-OVSP-1403.dwg			
		scale: 1" = 100' (in feet)	
North Country Environmental Services Bethlehem, NH Stage V Landfill Expansion Type I-A Permit Modification Proposed Overall Site Plan			
drawing no. 3			
sheet: 3 of 15			

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- Notes:**
- Existing topography shown is from the October 9, 2013 aerial survey performed by Eastern Topographics.
 - Proposed grades shown within the anchor trench represent secondary liner grades. Proposed grades shown outside the anchor trench represent final grades.
 - Contractor shall be responsible for managing stormwater within the limit of work during construction of the project.
 - Contractor shall support cleanout lines with select sand at changes in grade. No fittings are to be used.
 - See section and details for limits of select stone and geosynthetic materials around and beneath leachate collection piping and sump.

Legend:

- Existing 2' Contour
- Existing 10' Contour
- Existing Property Line
- Existing Tree Line
- Existing Guardrail
- Existing Edge of Gravel
- Existing Retaining Wall
- Existing Edge of Pond
- Existing Primary Leachate Pipe
- Existing Secondary Leachate Pipe
- Existing Leachate Force Main
- Existing Overhead Electric
- ⊙ MW 403U Existing Monitoring Well
- ⊙ Existing Secondary Leachate Collection System Manhole/Pump Station
- ⊙ Existing Primary Leachate Collection System Manhole/Pump Station
- ⊙ Existing Leak Detection Manhole
- ⊙ P2 TR Existing Valves
- ⊙ GP-14 Existing Gas Probe
- ⊙ SVP-17 Existing Soil Vapor Probe
- ⊙ GW-8 Existing Gas Extraction Well and Wellhead
- ⊙ GV-14 Existing Gas Vent
- Existing Gas Line
- Existing Underground Electric
- x x Existing Fence
- at --- Existing Anchor Trench
- Existing Limit of Waste
- Proposed Secondary Liner 2' Contour
- Proposed Secondary Liner 10' Contour
- AT --- Proposed Anchor Trench
- Proposed Limit of Waste
- Proposed Secondary Leachate Pipe
- Proposed Primary Leachate Pipe
- Proposed Connection to Existing Liner
- PD --- Proposed Drainage Pipe
- Proposed Guardrail
- Proposed Silt Fence
- Proposed Gravel Road

no.	1	Issued for MDEES Review	revision	2/7/14	by	R/J
	2	Issued for MDEES Review - Supplemental Submittal	revision	3/7/14	by	R/J
<p>North Country Environmental Services Bethlehem, NH</p> <p>Stage V Landfill Expansion Type I-A Permit Modification</p> <p>Proposed Secondary Liner Grading Plan</p>						
<p>drawing no. 5</p> <p>sheet: 5 of 15</p>						

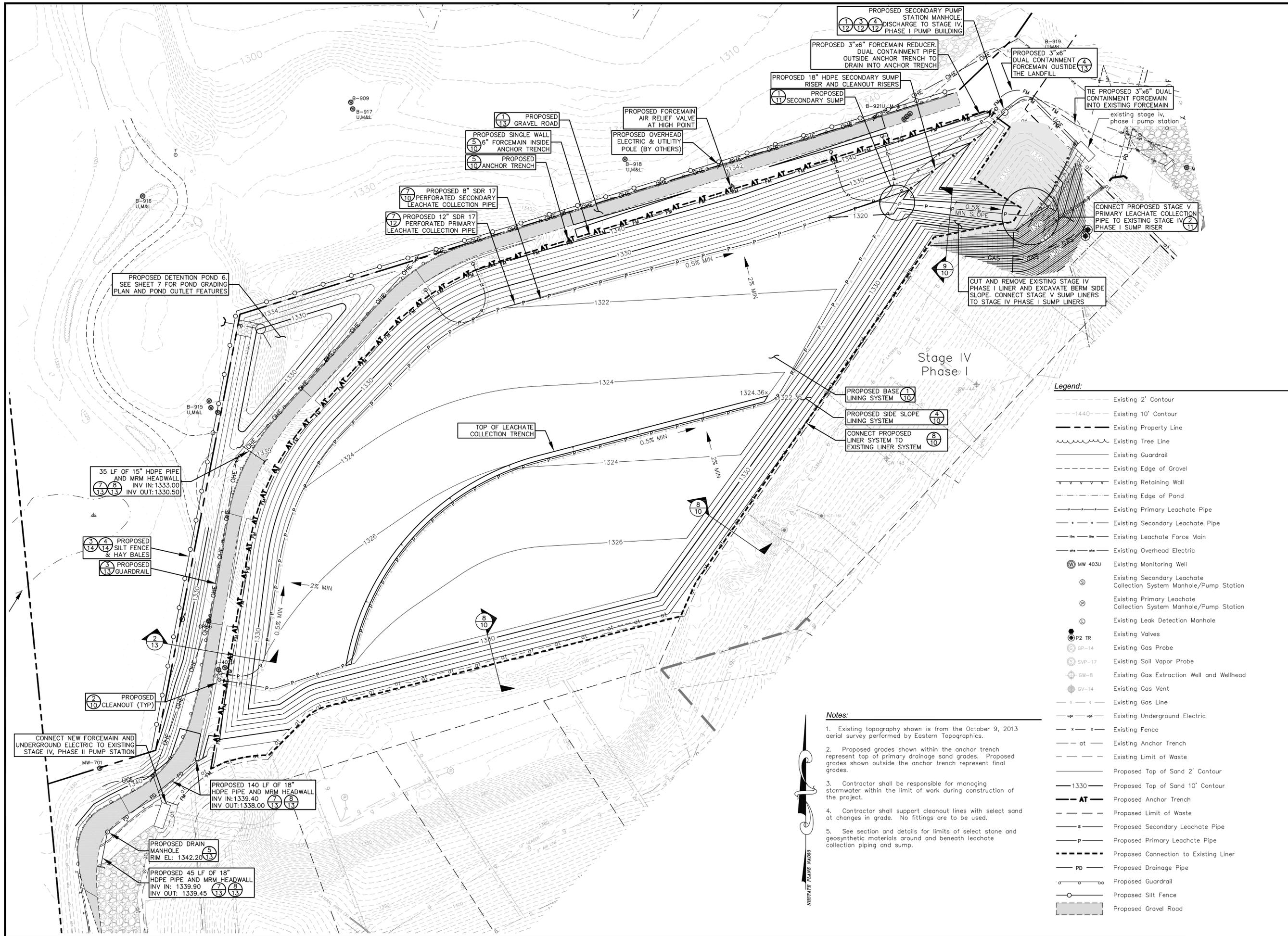
designed by: R/J/BWS
 drawn by: BWS
 approved by: R/J
 date: February 2014
 project no: 833
 file name: 833-PSF1403.dwg

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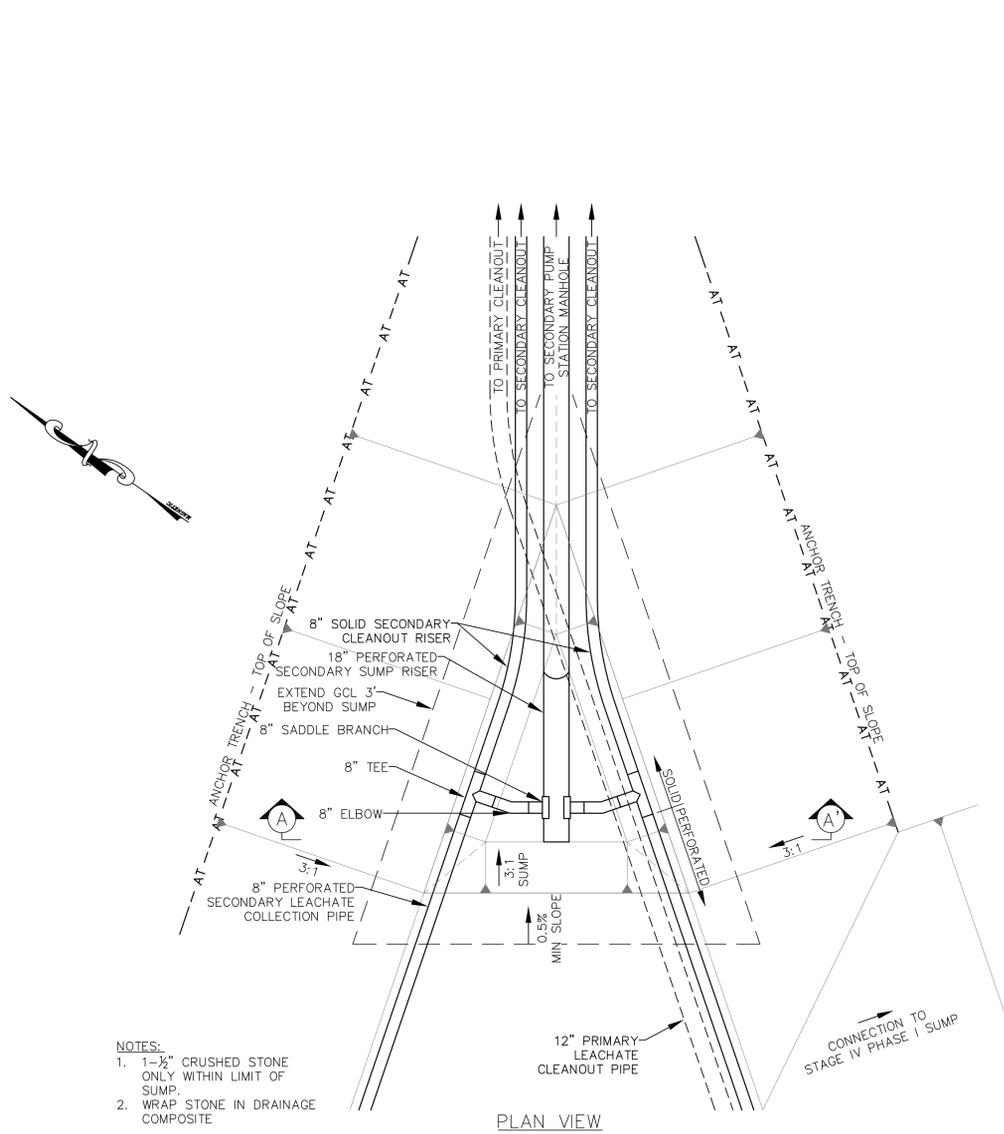
State of New Hampshire
 Professional Seal
 Robert J. Gagnier
 License No. 10000

scale: 1" = 50'
 50' 25' 0'

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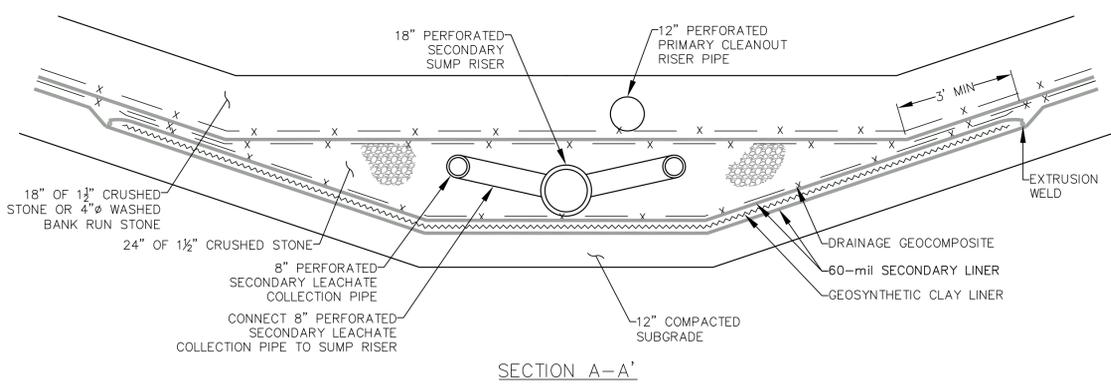


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revision			Issued for NHDES Review	Issued for NHDES Review - Supplemental Submittal					
date	2/7/14	3/7/14							
by	R/JG	R/JG							
<p>North Country Environmental Services Bethlehem, NH</p> <p>Stage V Landfill Expansion Type I-A Permit Modification</p> <p>Proposed Primary Drainage Sand Grading Plan</p> <p>drawing no. 6</p> <p>sheet: 6 of 15</p>									
<p>CMAA ENGINEERS CIVIL/ENVIRONMENTAL ENGINEERS</p> <p>55 So. Commercial Street Manchester, NH 06103 603.627.0708</p> <p>info@cmaainc.com www.cmaainc.com</p>									
<p>designed by: JSM/BWS drawn by: BWS approved by: R/JG</p> <p>date: February 2014 project no: 833 file name: 833-PSF1403.dwg</p> <p>scale: 1" = 50'</p>									
<p>Professional Seal: State of New Hampshire, Civil Engineer, No. 10000, J. Scott Mearns</p>									



- NOTES:
- 1-1/2" CRUSHED STONE ONLY WITHIN LIMIT OF SUMP
 - WRAP STONE IN DRAINAGE COMPOSITE

PLAN VIEW

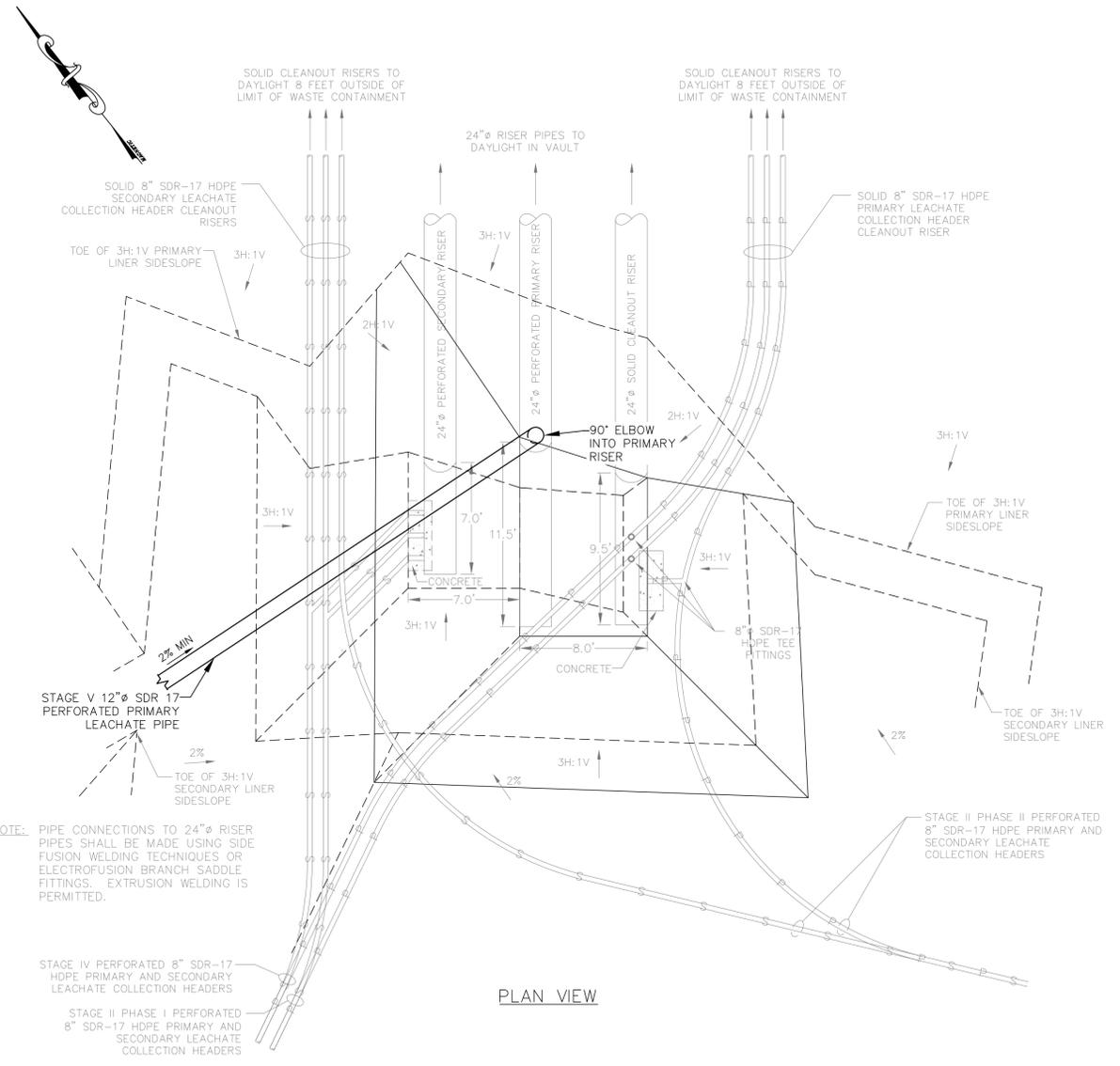


SECTION A-A'

Stage V Secondary Sump

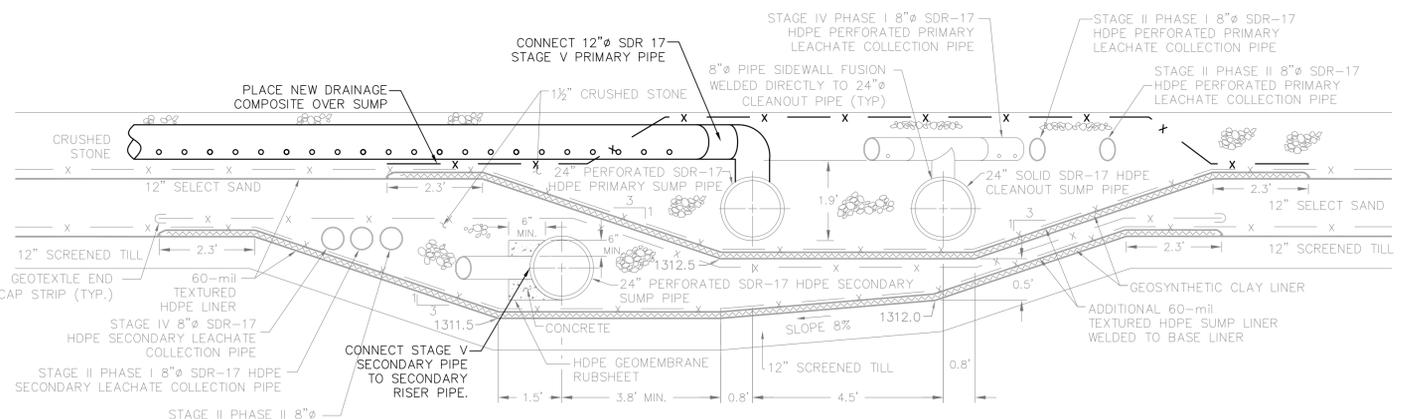
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1



NOTE: PIPE CONNECTIONS TO 24\"/>

PLAN VIEW



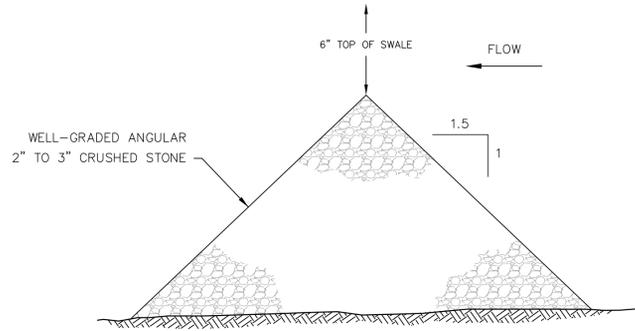
SECTION VIEW

Connection to Stage IV, Phase I Sump

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2

by	R/JG
date	2/7/14
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North Country Environmental Services Bethlehem, NH	Lafayette Center Storer Street Building Suite 208 Manchester, NH 603/627-0708 www.cmaengineers.com
Stage V Landfill Expansion Type I-A Permit Modification	Civil/Environmental Engineers 55 So. Commercial Street Manchester, NH 603/431-6196 info@cmaengineers.com
Details Sump Modification & Construction	
drawing no.	11
sheet:	11 of 15



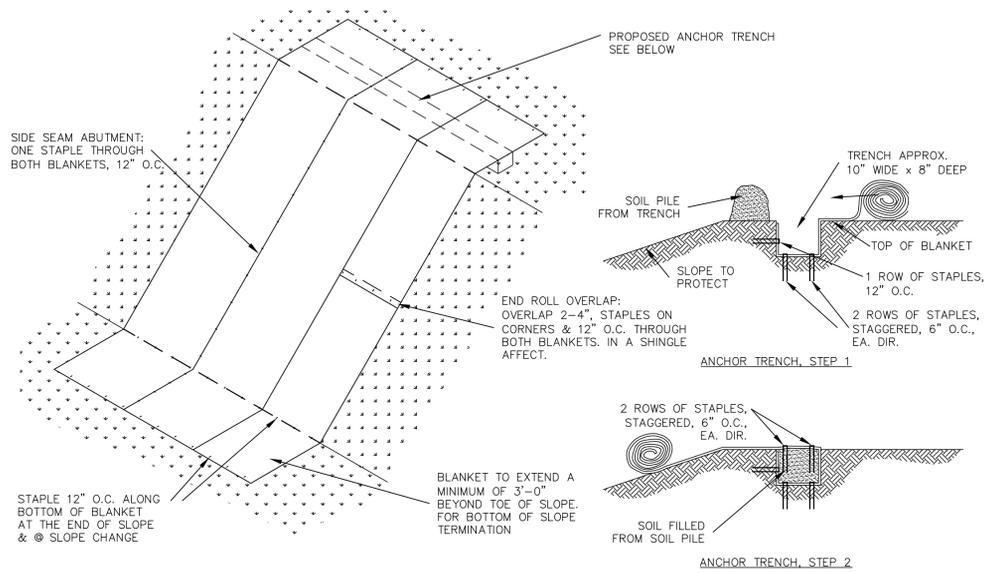
NOTES:

1. PLACE CRUSHED STONE TO WITHIN 6" OF TOP OF DRAINAGE WAY.
2. FOR ACTIVE DRAINAGE OUTFLOW CHECK DAMS SHALL BE PLACED IN SERIES ALONG FLOW LINE TO RETAIN SEDIMENTS.

Stone Check Dam

Not to Scale

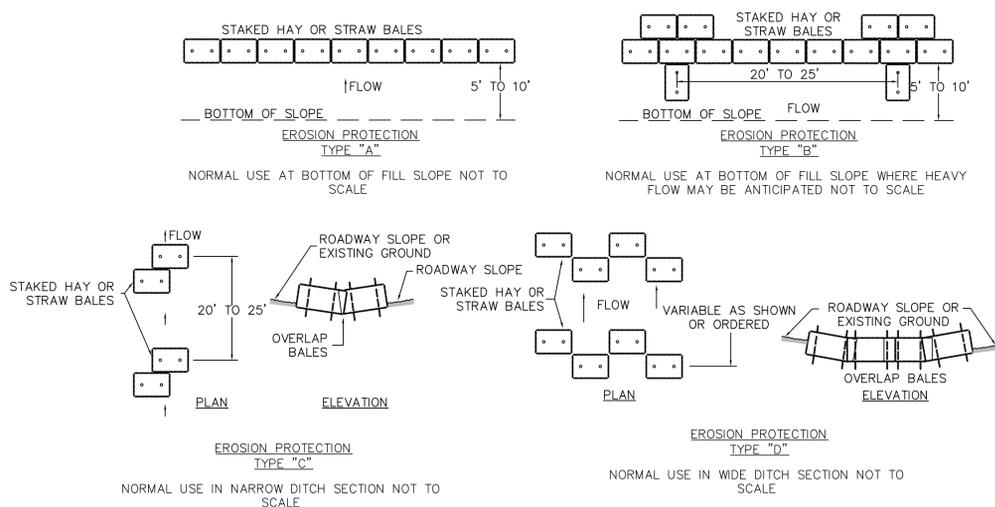
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Erosion Control Blanket Slope Detail

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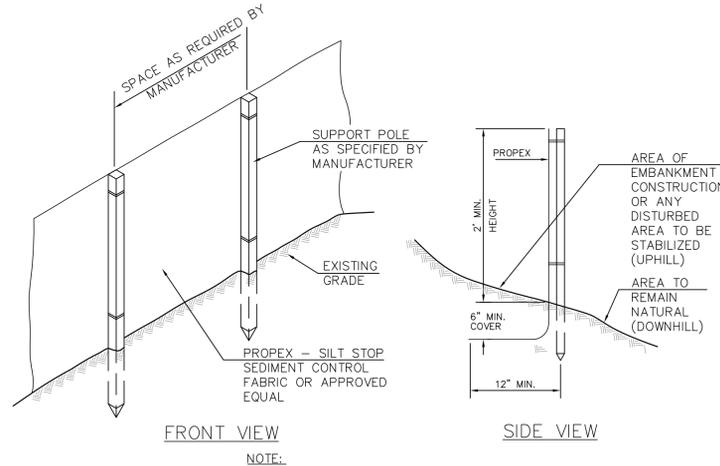
2



Hay Bales

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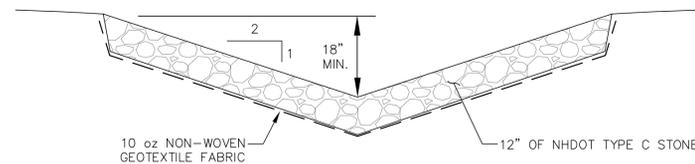
3



Silt Fence

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4



Stone-Lined Swale

Not to Scale

5

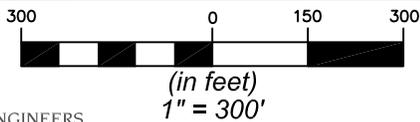
Erosion Control Notes

1. Prior to construction and thereafter erosion control measures are to be implemented as noted. The smallest practical area of land should be exposed at any one time during development. When land is exposed during development, the exposure should be kept to the shortest practical period of time. Land should not be left exposed during the winter months.
2. Hay bale barriers shall be installed and maintained along limits of work where shown. Additional hay bales shall be added as required by the Engineer. Hay bales will be staked and maintained prior to and during construction until disturbed areas are covered with crushed gravel or have a healthy stand of grass.
3. All disturbed areas and side slopes which are finish graded with no further construction to take place shall be seeded and mulched within 72 hours. All seed, lime and fertilizer programs shall conform to all applicable sections of the specifications.
4. Any disturbed areas which are to be left temporarily, or longer than two weeks and which will be regraded later during construction, shall be machine hay mulched and seeded at the rate of 2 tons per acre. The smallest practical area shall be disturbed during construction, but in no case shall exceed 5-acres at any one time before disturbed areas are stabilized.
5. Avoid use of undisturbed areas whenever possible during construction. Construction traffic shall travel the roadbeds of existing and future roads.
6. Silt fence shall be installed & maintained where shown and additional silt fence added as required by the Engineer prior to any on-site grading or disturbance of existing surface material. It should be maintained during and after development to remove sediment from runoff water and from land undergoing development. Where possible natural drainage ways should be utilized and left open to remove clean excess surface water. The silt fence is to be maintained and cleaned until all slopes have a healthy stand of grass.
7. Erosion control devices shall be inspected weekly and after every 0.5-in of rainfall.
8. All disturbed areas shall have a minimum of 4 inches of loam placed, before being seeded and mulched unless otherwise shown. Erosion control matting shall be placed on all slopes steeper than 3:1 and within grass lined swales as shown.
9. After all disturbed areas have been stabilized, the temporary erosion control measures are to be removed and accumulated sediment disposed of in an on site location designated by the Owner.
10. Baled hay and mulch shall be mowings of acceptable herbaceous growth, free from noxious weeds or woody stems, and shall be dry.
11. Silt fences shall be minimum of 36 inches high with the bottom of the fabric keyed into the ground (see detail). Posts shall be of wood or steel.
12. The erosion control devices shown on the Drawings and as specified in the specifications represent the minimum required for erosion control. The Contractor shall add to these devices any and all measures as required by the Engineer to effectively prevent migration of sediment from the work area.
13. All slopes and disturbed areas to be seeded shall comply with the NHDOS Section 644 WF Seed Type 45.
14. Lime shall conform to NHDOT specifications, Div. 600, sec. 642 "Limestone". Limestone shall be applied by either the dry or hydraulic method as described in NHDOT Div 600, sec. 644.2.5. The amount of limestone applied should be based on evaluation of soil tests conducted by the contractor. The minimum rate of 2 tons per acre or 100 lbs per sq. ft. shall be applied if required.
15. Fertilizer to be used must be the equivalent of a 15-15-15 mixture and shall be reviewed by the Engineer. Fertilizer shall conform to NHDOT specifications Div. 600, Sec. 643 "Fertilizer for Grasses." Kinds and amounts of fertilizer should be based on evaluation of soil tests conducted by the contractor. The minimum amounts applied shall be as follows:
Nitrogen (N) 150 lbs per acre or 1.1 lbs per 1000 s.f.
Phosphate (P O) 100 lbs per acre or 2.2 lbs per 1000 s.f.
Potash (K O) 100 lbs per acre or 2.2 lbs per 1000 s.f.
(Note: This is the equivalent of 500 lbs per acre of 10-20-20 fertilizer or 1000 lbs per acre of 5-10-10)
16. All proposed swales must be stabilized prior to directing runoff to them.
17. All roadways to be stabilized within 72 hours of achieving finished grade.
18. All areas shall be stabilized within 45 days of initial disturbance. An area shall be considered stable if one of the following has occurred:
-Base course gravels have been installed in areas to be paved;
-A minimum of 85% vegetated growth has been established;
-A minimum of 3-in of non-erosive material such as stone or rip rap has been installed; or
-Erosion control blankets have been properly installed.

by	RJG	date	2/7/14
revision	RJG	3/7/14	
no.	1	Issued for NHDOS Review	
no.	2	Issued for NHDOS Review - Supplemental Submittal	
designed by:	RJG/BWS	drawn by:	BWS/LBK
approved by:	RJG	scale:	
date:	February 2014	project no.:	833
file name:	603-Detail-140.dwg		
North Country Environmental Services Bethlehem, NH Stage V Landfill Expansion Type I-A Permit Modification Details - Erosion Control			
drawing no. 14			
sheet: 14 of 15			



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North Country Environmental Services
Bethlehem, NH
Type 1-A Permit Modification
Appendix E

Leachate Breakout Repair Logs & Field Sketch

Field Sketch

Revised March 7, 2014

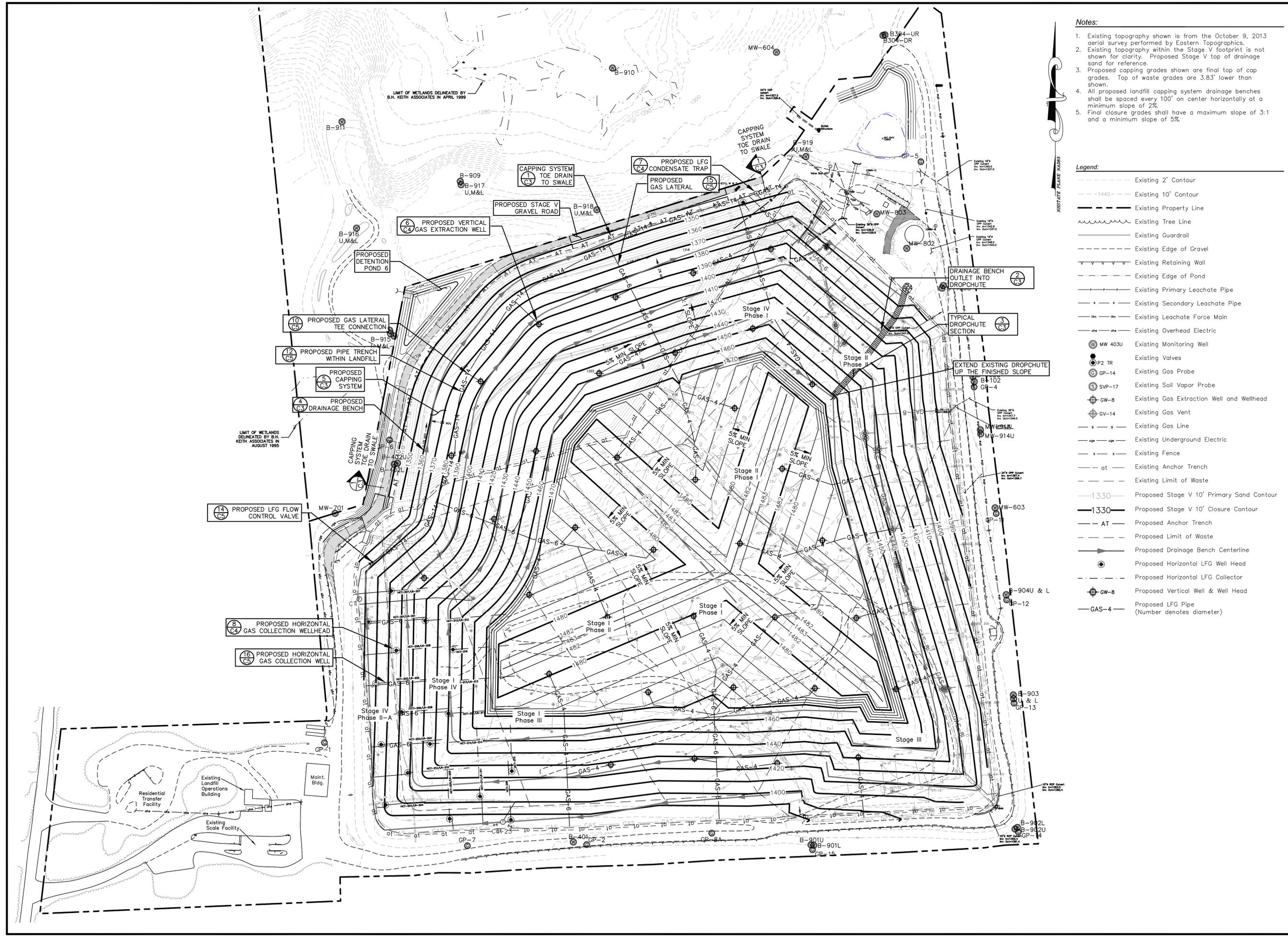
BREAKOUT REPAIR LOG
North Country Environmental Services, Inc.
Bethlehem, New Hampshire

Date: _____

Description of Breakout (Site and Location):

Steps to Repair Breakout:

North Country Environmental Services Representative: _____
Signature



- Notes:**
- Existing topography shown is from the October 9, 2013 aerial survey performed by Eastern Topographics.
 - Existing topography within the Stage V footprint is not shown for clarity. Proposed Stage V top of drainage sand for reference.
 - Proposed capping grades shown are final top of cap grades. Top of waste grades are 3.83' lower than shown.
 - All proposed landfill capping system drainage benches shall be spaced every 100' on center horizontally at a minimum slope of 2%.
 - Final closure grades shall have a maximum slope of 3:1 and a minimum slope of 5%.

- Legend:**
- Existing 2' Contour
 - Existing 10' Contour
 - Existing Property Line
 - Existing Tree Line
 - Existing Guardrail
 - Existing Edge of Gravel
 - Existing Retaining Wall
 - Existing Edge of Pond
 - Existing Primary Leachate Pipe
 - Existing Secondary Leachate Pipe
 - Existing Leachate Force Main
 - Existing Overhead Electric
 - Existing Monitoring Well
 - Existing Valves
 - Existing Gas Probe
 - Existing Soil Vapor Probe
 - Existing Gas Extraction Well and Wellhead
 - Existing Gas Vent
 - Existing Gas Line
 - Existing Underground Electric
 - Existing Fence
 - Existing Anchor Trench
 - Existing Limit of Waste
 - Proposed Stage V 10' Primary Sand Contour
 - Proposed Stage V 10' Closure Contour
 - Proposed Anchor Trench
 - Proposed Limit of Waste
 - Proposed Drainage Bench Centerline
 - Proposed Horizontal LFG Well Head
 - Proposed Horizontal LFG Collector
 - Proposed Vertical Well & Well Head
 - Proposed LFG Pipe (Number denotes diameter)

revision	date	by
1	FEB 2014	R/JG
2	3/7/14	R/JG

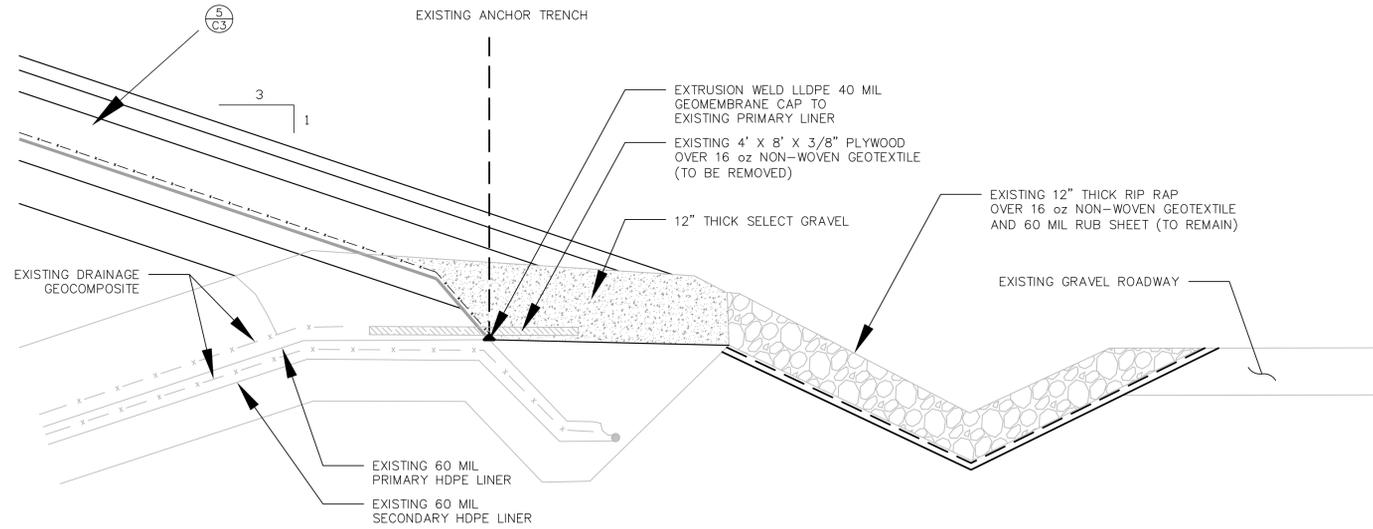
no.	revision	description
1	Issued for NHDES with Type 1-A Permit Modification	
2	Issued for NHDES Review - Supplemental Submittal	

designed by:	February 2014	North Country Environmental Services
drawn by:	February 2014	Bethlehem, NH
checked by:	February 2014	
approved by:	February 2014	
file name:	833-Closure Plan1403.dwg	Stage V Landfill Expansion
scale:	1" = 100'	Type I-A Permit Modification
		Final Grading Plan

drawing no.	C2
sheet:	2 of 5

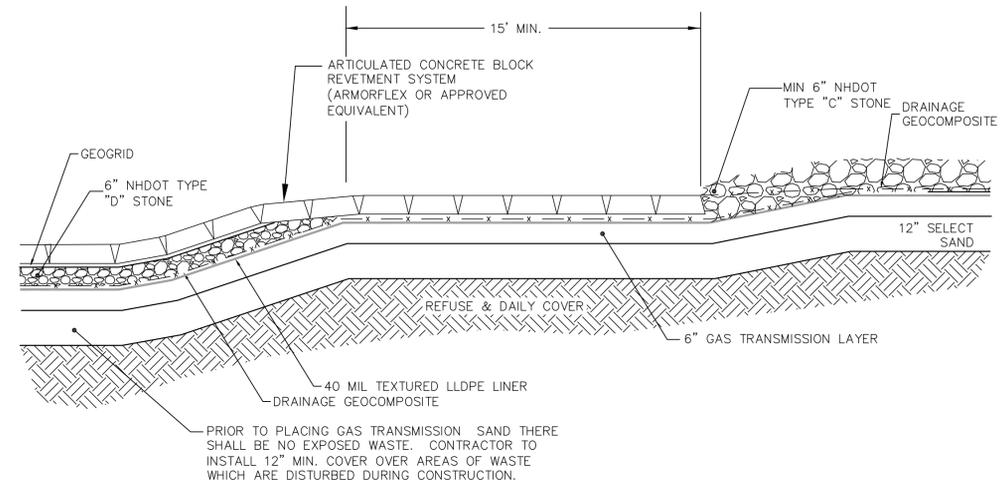
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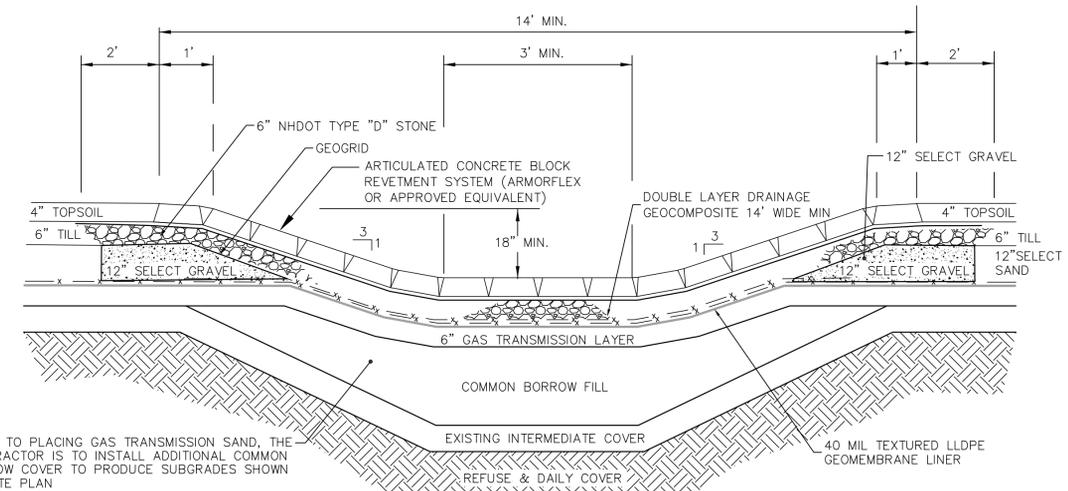
Capping System Toe Drain to Swale
Not to Scale

1
C2



Drainage Bench Outlet Into Dropchute
Not to Scale

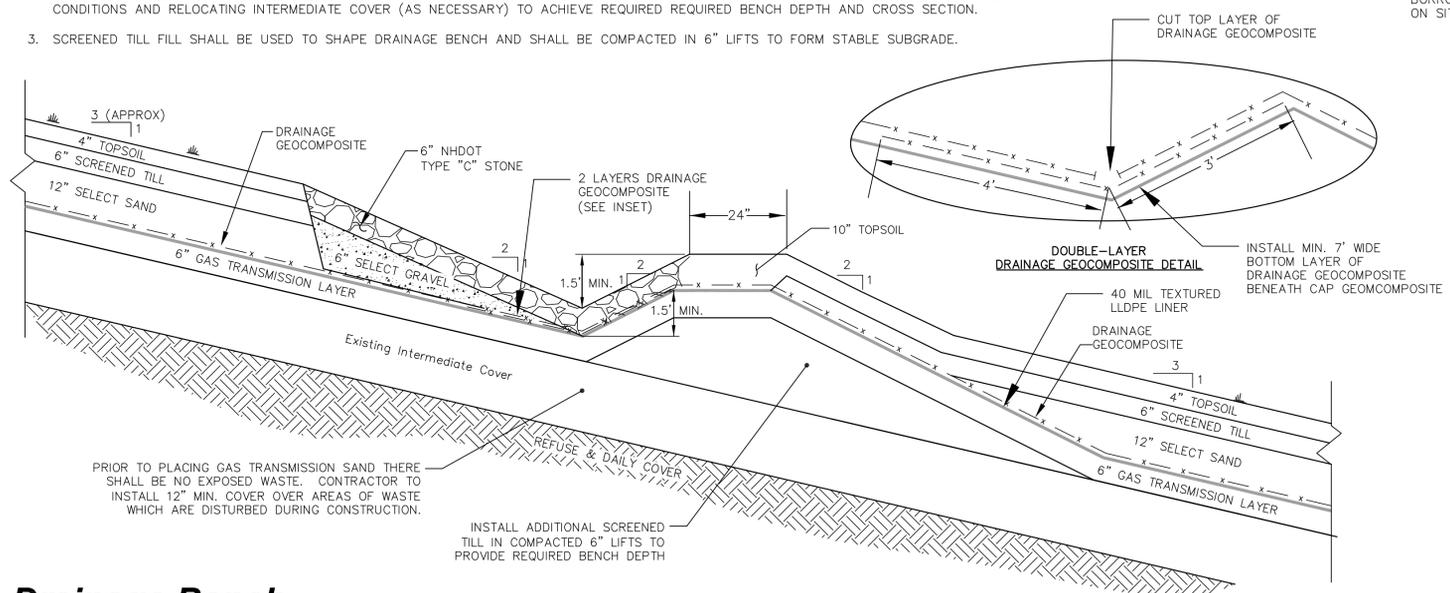
2
C2



Typical Dropchute Section
Not to Scale

3
C2

- NOTES:
1. DRAINAGE BENCHES SHALL BE NEWLY CONSTRUCTED AT THE SPACING SHOWN ON THE PLANS AT A MINIMUM 2% SLOPE.
 2. EXISTING INTERMEDIATE COVER THICKNESS AT SWALES ARE APPROXIMATE AND NOT VERIFIED. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS AND RELOCATING INTERMEDIATE COVER (AS NECESSARY) TO ACHIEVE REQUIRED BENCH DEPTH AND CROSS SECTION.
 3. SCREENED TILL FILL SHALL BE USED TO SHAPE DRAINAGE BENCH AND SHALL BE COMPACTED IN 6" LIFTS TO FORM STABLE SUBGRADE.

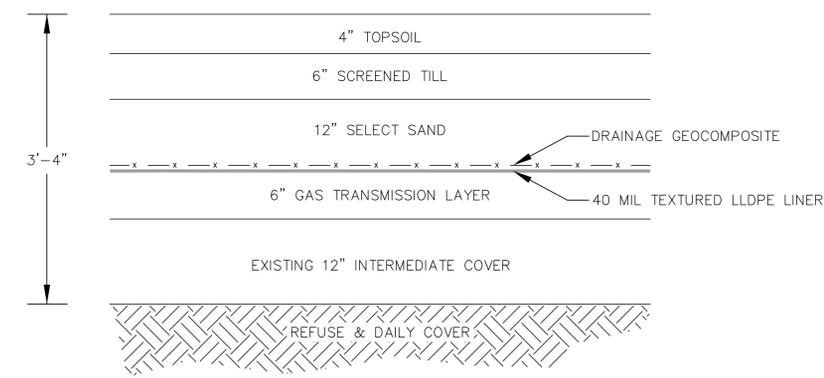


Drainage Bench
Not to Scale

4
C2

Capping System Section
Not to Scale

5
C2



by	R/J				
date	2/7/13	3/7/14			
revision	Issued for NHDES Comments	Issued for NHDES Review - Supplemental Submittal			
no.	1	2			
designed by:	R/J/BWS	BWS			
drawn by:	BWS				
approved by:	R/J				
date:	February 2014				
project no.:	833				
file name:	833-Closure Details 403.dwg				
scale:					
North Country Environmental Services Bethlehem, NH	Stage V Landfill Expansion Type I-A Permit Modification	Closure Details			
drawing no.:	C3				
sheet:	3	of	5		

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PART VI: DESIGN REPORT

Description of Modification

The proposed Stage V expansion will be a new 8.06-acre landfill cell located north of and contiguous with Stage IV. The proposed development includes earthwork and site development; ancillary features to manage leachate, drainage, and landfill gas; and other structures. The Stage V landfill expansion provides approximately 1,903,000 cubic yards of disposal capacity. At the time of this permit application NCES is operating Stage IV Phase II, which has an expected operating life extending into 2016 assuming current filling rates and waste densities.

Design drawings and technical specifications are included with this application, along with supporting design calculations. Final grades are depicted on the landfill final grading plan contained in the accompanying Closure Plan. The Closure Plan also includes closure details and a Closure Construction and Post Closure Care Cost Estimates.

Capacity

Figure 1 reflects the results of a volume calculation comparing proposed Stage V final grades to proposed base grades and previously approved Stage IV grades. The calculation results indicate the proposed modification provides 1,903,000 cubic yards of disposal capacity. Stage V capacity is gained through a new landfill horizontal base expansion and also from filling above portions of the Stage IV landfill. Figure 1 depicts the Stage V airspace and depth of waste fill.

Construction

Phase V construction involves an 8.06 acre landfill liner expansion to the north of Stage IV. The proposed new landfill footprint is currently used for soil borrow, staging and processing; site access; and storm water control. Work required for constructing Stage V includes:

- Demolition of existing stormwater pond #3 and its appurtenant structures, Stage IV Phase II leachate forcemain, overhead and underground electric, groundwater monitoring wells, and the backup flare station;
- Construction of perimeter berms and access roadway;

- Waste excavation to expose the Stage IV, Phase I primary sump piping;
- New Stage V landfill cell construction and connection of lining systems to Stage IV Phase I and II;
- Connection of proposed primary leachate collection piping to the existing Stage IV, Phase I primary sump;
- New Stage V secondary leachate pump station;
- New perimeter access road;
- Relocated landfill gas header pipe,
- New Stage IV, Phase II forcemain;
- New stormwater management structures; and
- New underground electric.

The Stage V primary leachate collection system will flow by gravity into the Stage IV Phase I leachate collection sump. The leachate header piping connections from Stage V will be made to the top sides of the Stage IV Phase I leachate riser pipes, so that the lining systems in the deeper portions of the sump will not be exposed, and the Stage IV Phase I sump will remain operable throughout the construction project. If approved, the Stage V primary leachate will be pumped to the existing leachate storage tanks.

Stage V will have an independent sump for the secondary liner system, allowing separate leak detection for the new Stage V cell(s). The Stage V secondary sump will be similar to the other secondary sumps on site and consist of a depressed collection point and sump riser for a leachate pump. A manhole structure adjacent to the Stage IV, Phase I riser building will provide access to the Stage V secondary sump and riser. Metering of the secondary flows will take place in the Stage IV Phase I pump house.

NCES will excavate waste to expose the liner connections to the Stage IV, Phase I sump, and to expose the leachate riser piping. A notch will be cut in the lined Stage IV Phase I berm to allow for the gravity flow connection from Stage V. A total of approximately 16,500 cubic yards of Stage IV waste will be excavated and relocated to operating areas of the landfill for the Stage V connection work. Asbestos is not expected to be encountered during the waste excavation as known historic asbestos disposal locations are limited to Stage I and possibly Stages II and III.

SECTION V

REASON FOR REQUESTING WAIVER

Introduction

NCES does not believe that it requires a waiver for the construction of Stage V. NCES understands, however, that DES may read Env-Sw 805.07 to require NCES to construct a double “overlay liner” over Stage I, Phases I-III, before it may begin Stage V operations over those cells. Env-Sw 805.07 requires that geonet be “incorporated throughout the leachate collection and removal system or the bottom most liner.” The secondary liners in Stage I, Phases I-III, may not meet this requirement in DES’s view because roughly forty percent of the surface of these liners is not covered in geonet. As a result, DES may conclude that before any further lifts of waste may be placed over Stage I, Phases I-III, NCES must install a new double liner system that complies with Env-Sw 805.07 over those cells. Consequently, NCES has sought a waiver of Env-Sw 805.07 out of an abundance of caution.

NCES questions whether a waiver is necessary for several reasons. To begin with, the Stage I liner system was fully compliant with the applicable rules when it was constructed. Nothing in Env-Sw 805.07 purports to apply to lifts over landfill cells that were in compliance when constructed.

Section VIII

Env-Sw 805.07 was adopted in July of 1991. Nine years later, in July of 2000, DES approved the Stage III standard permit. The design of Stage III included a lift over Stage I, Phase I, yet DES did not require NCES to install an overlay liner before depositing Stage III waste over Stage I, Phase I. In NCES’s view, this approval was consistent with the solid waste rules because the rules do not require a second double liner when there is a state-approved double liner already in place.

In addition, given the typical progression of landfill development (i.e., each successive stage is tied into abutting cells using lifts), DES must have contemplated when it approved the Stage I design that those stages constructed after Stage I would include lifts over Stage I. If DES had intended that the Stage I liners would have to be brought into compliance with after-enacted rules before those lifts could be constructed, NCES would expect that the rules would explicitly say so. Requiring an overlay liner is substantively the same as requiring NCES to bring the Stage I, Phases I-III, liners into compliance with after-enacted rules.

Notwithstanding these questions, NCES seeks a waiver of Env-Sw 805.07 to remove any doubt about the lawfulness of constructing and operating Stage V over the footprint of Stage I, Phases I-III.

Discussion

The proposed Stage V landfill includes a new 8.06-acre landfill cell located north of the existing

Stage IV landfill. The new cell lining systems will be connected to the Stage IV lining systems to form a single, contiguous lined landfill. The accompanying Type I-A Modification for the Stage V landfill expansion describes the nature and extent of the proposed modifications. The preliminary design for Stage IV, Phase II, as approved in 2010, included an overlay liner system over Stage I, Phases I-III. NHDES originally required construction of the overlay liner as a condition of the Stage IV permit because lifts of Stage IV waste were proposed over portions of Stage I, Phases I-III that do not comply with after-enacted regulations for leachate collection system design. In August 2012 NCES applied for a waiver of the subject regulations. On March 1, 2013, NHDES issued the waiver, and Stage IV was constructed without the overlay liner. The Stage V development also includes placing lifts of waste over Stage I, Phases I-III. NCES is therefore applying for a waiver of the same rules as the department waived with respect to Stage IV, Phase II.

Stage I, Phases I-III, were constructed in accordance with the NH Solid Waste Rules (Rules) in effect at the time of construction (prior to 1991). These cells were constructed as a double lined system with leachate collection and leak detection. Since 1991, the Rules have provided that geonet or composite geonet may be used in new secondary liner systems as an alternative to a leak detection system for the secondary liner and that the response time for leakage from the primary liner shall be no more than 24 hours. The express purpose of the incorporation of geonet on the secondary liner is “to rapidly convey leachate off the liner and thereby limit the potential for hydraulic head to develop on the liner.” Env-Sw 805.07(a)(1). The express purpose of the 24-hour response time is to “isolate the location of leaks through a liner.” Env-Sw 805.07 (a); *see also* Env-Sw 805.07(b)(2).

Portions of the Stage I, Phases I-III secondary liners include geonet. Over the remaining areas, flow is transmitted through free draining select sand, without geonet. The location and extent of the geonet and select sand secondary drainage layers subject to this waiver application is shown on Figure 1. Under Env-Sw 805.07(a) the use of geonet in the construction of new secondary liner systems is explicitly a precaution designed to reduce “the potential for leakage through the secondary liner” by limiting head buildup on the liner.

Conditions that can increase the risk of leakage through the secondary liner include hydraulic head on the liner which acts as a driving force for flow through a possible defect; a ready supply of free leachate available to flow through a defect; and a permeable subgrade.

Hydraulic Head is Well Within Performance Standards

The attached calculations yield a maximum 0.6” hydraulic head on the liner in sand-covered areas, using flow values equal to the action leakage rate (ALR) of 25 gallons per acre per day (gpac).¹ (The ALR is the flow value established for the site below which liner performance is considered acceptable. Flows above the ALR can require location and repair of any defect or

¹ Using the ALR presents a very conservative case. The attached calculations show that a hypothetical one square foot hole in the liner at the low end of the landfill floor (subject to drainage from upslope areas) has the potential to leak only a small fraction of a gallon per day. This a trivial amount of flow when compared to the 25 gpac ALR.