



Alcoa Remediation Management

Massena Operations
Park Avenue East
PO Box 150
Massena, NY 13662-0150 USA

RECEIVED

SEP - 4 2015

Pesticides & Toxic Substances Branch

September 1, 2015

John W. Gorman, Chief of Pesticides & Toxic Substance Branch
US EPA Region 2
DECA-PTSB
2890 Woodbridge Avenue
Building 010
Edison, NJ 08837

Subject: Alcoa Inc. – Massena West Plant
Secure Landfill
Cell 3 Operating Permit Renewal Request

Dear Mr. Gorman:

Alcoa Inc. (Alcoa) is requesting the Agency's approval to operate Cell 3 of the Secure Landfill (SLF) at Alcoa's Massena operations. The operation of Cell 3 requires authorization from the New York State Department of Environmental Conservation (NYSDEC) and the United States Environmental Protection Agency (USEPA). The NYSDEC granted authorization to operate Cell 3 on August 25, 2015 in response to a request submitted by Alcoa on July 10, 2015 (see attached letter).

Background

On July 6, 2005, the New York State Department of Environmental Conservation (NYSDEC) issued a letter approving Alcoa to operate Cell 3 for placement of PCB waste associated with the Alcoa Massena facility and sediment/debris from the Remedial Options Pilot Study (ROPS) from the lower Grasse River site. On July 29, 2005, the United States Environmental Protection Agency (USEPA) issued a permit to operate Cell 3 based on the NYSDEC's approval and EPA's conditions. These approvals allowed for placement of PCB impacted materials within Cell 3 for a period of five years from the date of the USEPA permit approval.



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Approximately 21,700 cubic yards of dredged Grasse River sediment from the ROPS was placed within Cell 3 in 2005. On October 18, 2005, NYSDEC approved Design Change Order (DCO) 30. DCO 30 provided design details for the placement of an interim cap. Subsequently an interim cap was placed as documented in the Certification Report for Operation and Interim Capping of Cell (CDM, February 3, 2006). The approvals to operate Cell 3 expired on July 29, 2010.

Request to Operate Cell 3 in 2016 and Cell 3 Expansion

Alcoa intends to re-open and operate Cell 3 for placement of additional dredged sediment from the remediation of the Grasse River site and other miscellaneous PCB waste from the west plant (disposal of ROPS pad material, preliminary excavation of impacted material from the construction of the staging area, etc.).

In parallel Alcoa has submitted to the NYSDEC under separate cover, DCO 31 that includes design details associated with constructing a lateral expansion of cell 3 for full scale Grasse River remediation expected to begin in 2017. Preliminary construction activities for the remediation project including construction of the sediment processing and staging area are planned to begin in 2016 in order to meet the planned dredging, capping and backfilling schedule in the Grasse River. Copies of the documents were provided to EPA on a secure file transfer site provided by CDM Smith. Comments were received from NYSDEC on August 26, 2015 on Cell 3 expansion (copy attached).

NYSDEC Authorization to Operate Cell 3

The NYSDEC authorization to operate Cell 3, dated August 25, 2015 expires on August 31, 2020. The authorization approves disposal of sediment (including stabilization and bulking agents) and miscellaneous contaminated debris, (e.g. ROPS and staging area waste) associated with dredging the Grasse River in the current Cell 3. In addition to the conditions stipulated in the authorization, the permit to operate Cell 3 is contingent upon Alcoa's compliance with the operations and closure requirements outlined in Appendix A of EPA's July 29, 2005 authorization or any revision thereto, 6 NYCRR Part 360 revised November 24, 1999, and any subsequent revision to the landfill provisions and Alcoa's July 10, 2015 request to renew the Cell 3 operating permit. A copy of the NYSDEC authorization to operate Cell 3 is provided as an attachment with this letter.

Alcoa requests the USEPA approval to operate Cell 3 under the conditions stipulated by the NYSDEC. Alcoa understands and acknowledges that approval from EPA will require Alcoa's adherence to all prior permit requirements and all design specifications and operating procedures in the application and supporting documents dated June 22, 2005 and the operating conditions stipulated in USEPA's July 29, 2005 approval letter and



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any subsequent requirements to operate the landfill during construction of the cell 3 expansion. An Operations and Maintenance Manual for Cell 3 operations prepared by the selected landfill operations contractor will be submitted to the NYSDEC and USEPA prior to start of any operations. This will be in the form of an amendment to the previously submitted Operations and Maintenance Manual under DCO 29, dated March 2, 2005. Copies of DCO 29 and other supporting documents can be provided upon request to facilitate review and approval of this request.

If you have any questions, please feel free to contact me.

Sincerely,

Alcoa Massena Operations

A handwritten signature in black ink, appearing to read "M. J. Elsner".

Michael Elsner
Remediation Location Manager
Alcoa Inc.

Attachments:

NYSDEC Letter, 645001, SLF, Renewal of Operating Authority, dated August 25, 2015
NYSDEC Letter, 645001, SLF, Proposed Cell 3 Expansion, dated August 26, 2015

cc:

Y. Chang, EPA (plus Hard Copy)
J Haklar, EPA
D. Tromp, NYSDEC Albany
L. McShea, Alcoa
B. Cook, Alcoa
M. Schultz, CDM Smith (Boston)
J. Jathal, CDM Smith (Boston)
R. Kingsley, CDM Smith (Massena)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 6

Dulles State Office Building, 317 Washington Street, Watertown, NY 13601-3787

P: (315) 785-2513 | F: (315) 785-2422

www.dec.ny.gov

August 25, 2015

Mr. Michael Elsner
Alcoa Technical Center
100 Technical Drive
Alcoa Center, PA 15069-0001

**Re: 645001, Alcoa Secure Landfill, Renewal of Operating Authority
Massena (T), St. Lawrence County**

Dear Mr. Elsner:

I have reviewed your July 10, 2015, request to renew the operating authority for Cell 3 of Alcoa's secure landfill. That request included the Department's July 6, 2005, approval to operate the Cell; EPA's July 29, 2005 final approval to operate the Cell, which included several operating requirements in Appendix A; and the March 2, 2005, Design Change Order 29, (i.e., the March 2, 2005, revised Operations and Maintenance Manual). Based on our review of those documents your request to operate the landfill is approved subject to the following conditions:

1. This operating authorization shall expire on August 31, 2020, unless Alcoa submits a written request to extend the expiration date and the Department approves it in writing. If authorization is not extended beyond August 31, 2020, Alcoa shall immediately submit plans to permanently close the facility by August 31, 2021.
2. Filling is limited to the current Cell 3 and no waste shall be placed in or on any expansion area until separate authorization to operate that area is received from the Department.
3. This authorization does not relieve Alcoa from the need to obtain any additional authorizations, (e.g., approval from EPA).
4. At least 90 days prior to construction of any final cover, Alcoa shall submit to the Department for its review and approval, an engineering report, detailed construction plans, a QA/QC plan and contract technical specifications.
5. There shall be no removal of any leachate collection or liner components until written authorization to construct the Cell 3 expansion is received.



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6. Alcoa shall comply with the operations and closure requirements outlined in Appendix A of EPA's July 29, 2005, authorization or any revision thereto, 6NYCRR Part 360 revised November 24, 1999, and any subsequent revisions to the landfill provisions, Alcoa's July 10, 2015, request to renew the authorization to operate including any documents reference or contained within, and the conditions of this authorization. If at any time conflicting requirements are encountered the more stringent shall apply.
7. Waste disposed in the landfill shall be limited to sediments (including stabilization and bulking agents) and miscellaneous contaminated debris, (e.g., ROPS and staging area waste) associated with dredging the Grasse River only. No other waste will be placed in the landfill unless written authorization is received from the Department.

Sincerely,

A handwritten signature in blue ink, appearing to read "Peter Taylor", is written over a horizontal line.

Peter R. Taylor, P.E.
Regional Remediation Engineer

ec: Young Chang, EPA
Bruce Cook, Alcoa
Lincoln Fancher, DEC
John Gorman, EPA
Mike Schultz, CDM
Gregg Townsend, DEC
David Tromp, DEC
Ian Ushe, DOH

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August 26, 2015

Mr. Michael Elsner
Alcoa Technical Center
100 Technical Drive
Alcoa Center, PA 15069-0001

**Re: 645001, Alcoa Secure Landfill, Proposed Cell 3 Expansion
Massena (T), St. Lawrence County**

Dear Mr. Elsner:

I have reviewed your July 10, 2015, request to expand Cell 3 of Alcoa's Secure Landfill in Massena. Expanding the Landfill or Cell will consist of raising the Cell 3 eastern berm and extending the double composite liner approximately 75' to the east. Your request included the following supporting documentation from CDM Smith: Design Change Order 31, the July 10 2015, Design Justification Memo, the Select Contract Specifications, and Design Drawings.

The concept of raising the Cell 3 berm and widening the Cell to accommodate additional disposal capacity appears approvable. However, before the Department formally approves the expansion I am requesting that you submit the detailed design, construction plans, construction quality assurance plan, and operation and maintenance plan as identified in the Design Justification Memo Construction Schedule for our review. This submission must incorporate the comments and questions listed below. I encourage you to submit these documents for review and approval as soon as possible and prior to any bidding or contracting process. These plans must also be certified by a professional engineer licensed to practice in New York State.

Engineering Plans

1. Subdivision 360-2.13(f) requires a primary leachate collection and removal system (PLCRS) on all areas of the landfill including side slopes. Subparagraph 360-2.13(n)(2)(i) requires that a 24" protective soil layer with a minimum permeability of 1×10^{-3} cm/s be installed when a geosynthetic drainage layer is used in the PLCRS. The plans, however, appear to indicate that "select waste" was used or is proposed for use on the side slopes. Were any allowances provided for this in the 2005 approval? (Note: it appears that all waste will be removed from the side slope, at least along the eastern berm to allow for the expansion. If this is the case, replacement of the PLCRS should be performed in compliance with Part 360 and this should be reflected in the plans).
2. Detail B on sheet C-8 does not appear to apply to the new construction unless (at least) the primary geomembrane liner will be removed to the toe-of-slope.
3. Additional detail needs to be provided regarding construction of the temporary separation berm. It appears leachate may be allowed to run underneath and through the PLCRS.



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4. Drawing C-5, Section 3 identifies the liner as being "clay". This is typical throughout the design. Since you will be tying in geo-synthetics, in addition to clay, this should be revised to indicate that a double liner exists.
5. Section 9 on sheet C-7 should include temporary stakes or markers delineating the horizontal limits of waste placement. (These should also be discussed in a future revisions to the Operations and Maintenance Manual.)
6. Detail C on sheet 8 for the East berm includes a GCL underneath the primary geomembrane liner. Be advised, that paragraph 360-2.13 (f)(2) only requires a single geomembrane barrier for the primary liner on slopes greater than 25 percent. The side slope stability should be confirmed if a GCL is to be included in the side slope design.
7. The plans indicate the primary geonet, primary geomembrane liner, GCL, secondary geonet and secondary geomembrane liner will be rolled or peeled back. This process seems difficult at best. Would it be more appropriate to step each layer back a sufficient distance to allow seaming or splicing of the new materials?

Design Change Order

8. It is not clear what the "miscellaneous PCB waste from the west plant" will consist of. The specific sources should be listed.
9. Will the "waste generated from the upland sites" be limited to waste generated as a result of the Grasse River project only?
10. Item 4 on page 31 regarding the QA plan – please see the second paragraph on page 1 regarding submission of detailed plans.

Design Justification Memo

11. How does the current width or area of the cell compare to the proposed width or area of the cell? Have calculations been performed to confirm that the leachate head on the primary liner will not exceed 12" except during storm events considering the increased width/area or volume of leachate that will be collected from this cell?
12. Page 4 the last sentence under capping system – do you mean that the geomembrane in the landfill cap will be welded to the primary geomembrane in the liner?
13. Has the shear strength or minimum shear strength of the sediment/bulking agents been determined and have calculations been performed to confirm the landfill will be stable at the design grades?
14. In accordance with subparagraph 360-2.13(j)(3)(i), the moisture-density-permeability relationship must be established for every 5000 cubic yards of soil liner placed. Depending on the volume of clay needed and the variability of the source, establishing one relationship may be sufficient.

Specifications

15. 01010-1.02.B.1; what does the temporary separation berm consist of and how will it be constructed?
16. Please note the page numbers in section 02200 are incorrect.
17. 02201-2.01 should include a statement that the clay (soil component of the secondary composite liner) will be compacted within the range specified by the moisture-density-permeability relationship.
18. 02201-2.01.D; what is the "test fill"? If it is a test pad, procedures for constructing, testing and approving the method and equipment used to place the clay should be included.
19. 02273-3.02.D.8 on page 9 states there will be no horizontal seams [in the geomembrane] on any side slopes. Subparagraph 360-2.13(k)(2)(vi) also states that seams should be oriented parallel to the line of slope and not across. How will this be accomplished considering the fact that the existing geomembranes will be cut or are already cut across the slope?

If you have any questions regarding the above, please feel free to contact me.

Sincerely,



Peter R. Taylor, P.E.
Regional Remediation Engineer

cc: Young Chang, EPA
Bruce Cook, Alcoa
Lincoln Fancher, DEC
John Gorman, EPA
Mike Schultz, CDM
Gregg Townsend, DEC
David Tromp, DEC
Ian Ushe, DOH



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November 10, 2015

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Subject: Alcoa Inc. - Massena West Plant
Secure Landfill Expansion
Cell 3 Operating Permit Renewal Request

Dear Mr. Gorman:

Alcoa Inc. (Alcoa) is requesting the United States Environmental Protection Agency's (USEPA) response to the request for approval to operate Cell 3 of the Secure Landfill (SLF) at Alcoa's Massena operations, submitted to the USEPA in a letter dated September 01, 2015. Cell 3 will be opened for placement of additional dredged sediment from the remediation of the Grasse River site and other miscellaneous PCB waste from Alcoa's west plant. The operation of Cell 3 requires authorization from the New York State Department of Environmental Conservation (NYSDEC) and the USEPA. The NYSDEC granted authorization to operate Cell 3 on August 25, 2015 in response to a request submitted by Alcoa on July 10, 2015 (see attached letter).

A copy of the USEPA's prior approval to operate Cell 3 dated July 29, 2005 is attached with this letter to facilitate the USEPA's review of Alcoa's request to re-open and operate Cell 3. Based on the current schedule of remediation activities, Alcoa requests the USEPA's comments and approval to operate Cell 3 on or before January 04, 2016.

If you have any questions, please feel free to contact me.

Sincerely,

Michael Elsner
Remediation Location Manager
Alcoa Inc.

Mr. John W. Gorman
November 10, 2015
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Enclosures

NYSDEC Letter, 645001, SLF, Renewal of Operating Authority, dated August 25, 2015

Final approval for disposal of PCB waste in Cell 3, USEPA letter, dated July 29, 2005

cc:

Y. Chang, EPA
J. Haklar, EPA
D. Tromp, NYSDEC Albany
L. McShea, Alcoa
B. Cook, Alcoa
M. Schultz, CDM Smith (Boston)
J. Jathal, CDM Smith (Boston)
R. Kingsley, CDM Smith (Massena)