



**STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION**



CONDITIONAL APPROVAL

David M. Share
Director, Environmental Remediation
Olin Corporation
3855 North Ocoee Street, Suite 200
Cleveland, TN 37312

October 6, 2008

RE: Hamden Non-Public Properties, Project Schedule Update
Newhall Street Neighborhood (SRD-128)
August 11, 2008

Final Design, Generic Remedial Action Plan
Non-Public Properties, Newhall Street Neighborhood, Hamden, Connecticut
August 19, 2008

Dear Mr. Share:

The Department of Environmental Protection (the Department) has reviewed two recent submittals from the Olin Corporation: (1) the Generic Remedial Action Plan titled "Final Design, Generic Remedial Action Plan, Non-Public Properties, Newhall Street Neighborhood, Hamden, Connecticut", dated August 19, 2008 and prepared by MACTEC on behalf of Olin Corporation, and (2) the letter from Olin Corporation dated August 11, 2008 and titled "Hamden Non-Public Properties, Project Schedule Update, Newhall Street Neighborhood (SRD-128)". The letter report and Generic Remedial Action Plan were submitted in conjunction with requirements contained in Consent Order SRD-128, and the Department's Remedy Selection Plan for the Newhall Street Neighborhood dated October 2007.

The Generic Remedial Action Plan provides plans and specifications for remedial construction at "non-public properties" (largely, residential properties) located within the Newhall Street Neighborhood site. More specifically, the Generic Remedial Action Plan provides details on excavating and removing waste fill located within the top four feet, backfilling with clean soil, and restoring pre-existing features disturbed by the remedial construction.

Olin's August 11, 2008 letter requests an extension of the date for Olin to submit Property-Specific Remedial Action Plans for the first block, or property grouping sequence. Pursuant to the Remedy Selection Plan and subsequent approval of a schedule extension (dated March 19, 2008), Olin is required to submit Property-Specific Remedial Action Plans for the first block, or property grouping sequence, within 60 days from the date that the Department approves the Generic Remedial Action Plan, and each subsequent block or grouping must be submitted on a continuous 90-day schedule thereafter. Olin now requests that the deadline for submitting the Property-Specific Remedial Action Plans for first block or grouping be extended to July 13, 2009.

Conditional Approval

Final Design, Generic Remedial Action Plan
Non-Public Properties, Newhall Street Neighborhood

The Department does not approve the above referenced letter requesting an extension to submit the first group of Property-Specific Remedial Action Plans on July 13, 2009. However, the Department hereby grants an extension to February 6, 2009 for Olin to submit the Property-Specific Remedial Action Plans for the block of properties or property grouping to proceed first with remediation and restoration. Olin shall then submit Property-Specific Remedial Action Plans for subsequent property blocks or property groupings to undergo remediation and restoration on a rolling 90 day cycle, as required in the Remedy Selection Plan.

The above referenced Generic Remedial Action Plan is hereby conditionally approved, subject to the conditions specified in the Attachment to this conditional approval.

Nothing in this conditional approval shall affect the Commissioner's authority to institute any proceeding, or take any action to prevent or abate pollution, to recover costs and natural resource damages, and to impose penalties for violations of law. If at any time the Commissioner determines that the conditionally approved actions have not fully characterized the extent and degree of pollution or have not successfully abated or prevented pollution, the Commissioner may institute any proceeding, or take any action to require further investigation or further action to prevent or abate pollution. This conditional approval relates only to pollution or contamination identified in the above referenced Generic Remedial Action Plan.

In addition, nothing in this conditional approval shall relieve any person of his or her obligations under applicable federal, state and local law.

If you have any questions pertaining to this conditional approval, please contact Raymond Frigon, Jr. of my staff at (860) 424-3797.

Sincerely,



Patrick F. Bowe, Director
Remediation Division
Bureau of Water Protection and Land Reuse

PFB:rlf

c: Robert Bell, CT DEP
Raymond Frigon, CT DEP
Carrie Hunt, Olin Corporation
Jimmy Young, Olin Corporation
Nelson Walter, MACTEC
Mayor Craig Henrici, Town of Hamden
Chris Harriman, Haley & Aldrich, Inc.
David Silverstone, Regional Water Authority
Michael Manolakas, Leggette Brashears & Graham, Inc.
John Albrecht, Metcalf & Eddy
Jill Barrett, Fitzgerald & Halliday, Inc.

Sent Certified Mail
Return Receipt Requested

CONDITIONAL APPROVAL
Final Design, Generic Remedial Action Plan
Non-Public Properties, Newhall Street Neighborhood
Attachment
Page 1 of 4

The Department of Environmental Protection conditionally approves Olin Corporation's Generic Remedial Action Plan, submitted pursuant to the Department's Remedy Selection Plan dated October 2007 and Consent Order SRD-128. The following conditions apply. Sections referenced correspond to the Generic Remedial Action Plan:

1. Section 2.2.2, Specifications. Olin Corporation shall prepare and submit complete Project Work Plans (Work Plan; Health & Safety Plan; Sampling and Analysis Plan; Dust Control/Air Monitoring Plan; Transportation/Consolidation Plan; Quality Assurance Project Plan) for the Department's review and approval by **March 1, 2009**.

The Project Work Plans shall also include a Temporary Relocation Plan in accordance with the Uniform Relocation Act, and such plan shall be submitted for the Department's review on or before **December 10, 2008**.

2. Section 3.1.1 Staging Areas. The Generic Remedial Action Plan states that Olin intends to minimize the number of waste fill stockpiles and the duration that they are present on private properties during the excavation activities. Olin shall inform property owners in advance if Olin will seek to temporarily stockpile waste fill from another property on their property, and obtain consent from the owner before any temporary stockpiling on such property. Also, Olin shall propose in the appropriate Project Work Plan, for the Department's approval, a management protocol for any temporary stockpiling of waste fill (see condition 1. above).

Olin also indicates it may perform certain staging activities on Town of Hamden property. Any use of Town property is subject to Town consent to such use. Also, Olin shall propose in the appropriate Project Work Plan, for the Department's approval, a management protocol for staging locations and activities (see condition 1. above).

3. Section 3.2.2, Excavation of Fill Material, Excavation Next to Permanent Structures and Streets.

Excavation Depth. All waste fill remaining in place below the 4 foot elevation must be covered with a durable warning/marker barrier consisting of standard orange color snow fence material, or other similar material of equal durability.

Excavation next to Permanent Structures and Streets. Permanent structures shall mean: (a) homes, and (b) garages either attached to homes or free-standing, and which have sound foundations, and (c) other permanent structures if approved by the Department. During the remediation, permanent structures will remain in place. Where necessary, wedges of waste fill adjacent to a permanent structure within the top 4 feet may be left in place only in accordance with the conditions in this Conditional Approval.

CONDITIONAL APPROVAL

Final Design, Generic Remedial Action Plan
Non-Public Properties, Newhall Street Neighborhood
Attachment
Page 2 of 4

As required in the Remedy Selection Plan, Olin shall identify through a structural survey which houses Olin may need to use special precautions during construction of the remedy. Such precautions may include structural supports, special excavation and/or backfill techniques, and/or other measures as appropriate. Olin shall use a structural engineer with a Connecticut Professional Engineer license to determine which special precautions are necessary at houses where appropriate, and shall evaluate alternative supports or construction methods that will both fully implement the 4 foot removal/backfill remedy and safeguard the structure. Olin shall indicate what supports and construction practices it will use to achieve the remedy. If after such evaluation Olin proposes that there is no structural support and/or construction methodology that is feasible, Olin may propose leaving such a wedge as is necessary to preserve the structural integrity of the permanent structure.

For each property that Olin proposes that a wedge of waste fill needs to remain, Olin must: notify the property owner, and shall submit a proposal in the Property-Specific Remedial Action Plan to the Department for its review and approval with a copy to the property owner, to include at a minimum a plan showing the proposed wedge, a warning/marker or protective barrier to cover the wedge, analytical results of all sampling performed in the proposed wedge area and any proposal for additional sampling, and identification of any areas where discreet waste fill is proposed to be removed from within the proposed wedge. The durability of any proposed barrier to cover wedges of waste fill, as discussed in the Generic Remedial Action Plan, shall increase in conjunction with the concentration of lead in the wedge of waste fill. At a minimum, any such warning/marker barrier shall consist of standard orange color snow fence or similar material. The Department will approve, approve with conditions, or deny the proposal, and may request additional information (including additional sampling in the proposed wedge area). Olin shall submit any such proposal as part of the Property-Specific Remedial Action Plan, to the extent possible.

4. Section 3.2.2 Excavation of Fill Material, Significant Trees and Landscape Items. When evaluating the potential to retain a tree, Olin must collect a discrete sample from three locations around a tree from the 0-6 inch interval, and from three locations around the tree from the 6-48 inch interval for lead analysis. If the composite sample for the 6-48 inch interval is greater than 400 mg/kg, Olin may demonstrate compliance by volumetric averaging lead results for subsurface soil beneath the tree with all other subsurface soil lead concentration data available for the property, including clean backfill. If the volumetric concentration of the 6-48 inch interval composite sample exceeds 1,200 mg/kg lead, the tree cannot be retained. If the volumetric concentration of the 0-6 inch interval composite sample exceeds 400 mg/kg lead, available technologies (air knife, vacuum) must be implemented to remove the material from that depth interval. Any request to retain a tree must be presented in the respective Property-Specific Remedial Action Plan with the demonstration of compliance for review and approval of the Department and Department of Public Health.

CONDITIONAL APPROVAL

Final Design, Generic Remedial Action Plan
Non-Public Properties, Newhall Street Neighborhood
Attachment
Page 3 of 4.

If a retained tree does not survive within 2 years from the date of clean up on the surrounding area, Olin shall offer to replace the tree with nursery stock of the same variety.

5. Section 3.2.3 Confirmatory Sampling. Given the variability of the nature and characteristics of the waste fill, field analysis for lead (using XRF or similar suitable technology) shall be compared with data derived from a fixed-based laboratory, throughout the duration of the project, to maintain data correlation consistent with data quality objectives for the site, and as specified in the August 30, 2007 letter from the Department to Olin.
6. The data quality objectives for the project will be further specified in the Quality Assurance Project Plan referred to in condition # 1 above.
7. Olin shall submit the first round of Property-Specific Remedial Action Plans by **February 6, 2009**, which shall include Blocks R, S, and N.
8. Attachment F, Initial Property Inventory List and Cut Sheets. The cut sheets provided in this appendix are not considered to be an exhaustive list of existing property features and/or materials that may be disturbed during remediation. As such, this Conditional Approval neither constitutes an approval of these materials for any particular property, nor a limitation of Olin's obligations to restore disturbed features and make best efforts to obtain access.
9. As stated in the Remedy Selection Plan, Olin shall replant, repair or replace any restored feature for which restoration was not successful within a two-year time frame (i.e. not successful due to reasons other than the standard level of care expected to be provided by the property owner, such as watering newly seeded lawn areas).
10. The schedule provided in Attachment E of the Generic Remedial Action Plan is not approved. The following schedule is approved:

December 10, 2008 Submittal by Olin of a Temporary Relocation Plan

February 6, 2009 Submittal by Olin of Property-Specific Remedial Action Plans for blocks R, S, and N.

March 1, 2009 Submittal by Olin of Project Work Plans

May 6, 2009 Submittal by Olin of Property-Specific Remedial Action Plans for blocks H and/or J.

CONDITIONAL APPROVAL

Final Design, Generic Remedial Action Plan
Non-Public Properties, Newhall Street Neighborhood
Attachment
Page 4 of 4.

Upon approval of a block of Property-Specific Remedial Action Plans, Project Work Plans, and obtaining property owners access agreements, Olin will commence construction of the remedy for each such block (including pre-mobilization meetings with affected property owners to address construction issues).

Every 90 days
thereafter May 6, 2009

Submittal by Olin of Property-Specific Remedial Action Plans
for the next block or grouping of properties to be remediated.