

**STATE OF CONNECTICUT**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**



July 20, 2009

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

**RE: DEP Comments – Olin Corporation’s Draft Plans  
Non-Public Properties, Newhall Street Neighborhood  
Hamden, Connecticut**

Dear Mr. Share:

The Remediation Division of the Connecticut Department of Environmental Protection (“the Department”) has reviewed the following plans prepared by MACTEC Engineering and Consulting, Inc. on behalf of Olin Corporation:

1. **“Draft Temporary Relocation Plan, Non-Public Properties, Newhall Street Neighborhood, Hamden, Connecticut, December 2008”**
2. **“Draft Construction Quality Control Plan, Non-Public Properties, Newhall Street Neighborhood Site, Hamden, Connecticut, February 2009”**
3. **“Draft Construction Work Plan, Non-Public Properties, Newhall Street Neighborhood Site, Hamden, Connecticut, February 2009”**
4. **“Draft Dust Control & Air Monitoring Plan, Non-Public Properties, Newhall Street Neighborhood Site, Hamden, Connecticut, February 2009”**
5. **“Draft Health and Safety Plan, Non-Public Properties, Newhall Street Neighborhood Site, Hamden, Connecticut, February 2009”**
6. **“Draft Perimeter Air Monitoring Plan, Non-Public Properties, Newhall Street Neighborhood, Hamden, Connecticut, February 2009”**
7. **“Draft Quality Assurance Project Plan, Non-Public Properties, Newhall Street Neighborhood, Hamden, Connecticut, February 2009”**
8. **“Draft Sampling and Analysis Plan, Non-Public Properties, Newhall Street Neighborhood, Hamden, Connecticut, February 2009”**
9. **“Draft Transportation and Consolidation Plan, Non-Public Properties, Newhall Street Neighborhood Site, Hamden, Connecticut, February 2009”**
10. **“Draft Tree Sampling Plan, Non-Public Properties, Newhall Street Neighborhood, Hamden, Connecticut, February 2009”**

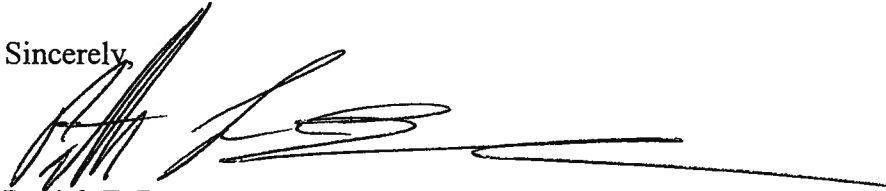
Mr. David Share  
RE: DEP Comments – Olin Corporation's Draft Plans  
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The plans were submitted pursuant to the requirements of the Department's October 2007 Remedy Selection Plan and October 6, 2008 Conditional Approval of the Generic Remedial Action Plan. The plans collectively describe the details of the remedial action and the supporting activities. The plans reflect a lot of work and preparation by Olin and MACTEC.

The Department's comments are attached. The Department's comments require Olin to supplement the plans to address the comments. Pursuant to the Consent Order, Olin has 30 days to supplement the plans to address the Department's comments, from the date of this comment letter. Olin's supplemental plans are due to the Department by August 20, 2009.

Please contact Raymond Frigon, Jr. (860-424-3797) or Michelle Bedson (860-424-3792) of my staff if you have any questions regarding the attached comments.

Sincerely,



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

Attachment: DEP Comments – Olin Corporation's Draft Plans

cc: Carrie Hunt, Olin  
Jimmy Young, Olin  
Nelson Walter, MACTEC  
Meg Harvey, CTDPH  
Jill Barrett, Fitzgerald & Halliday, Inc.  
Honorable Craig Henrici, Town of Hamden  
Chris Harriman, Haley & Aldrich, Inc.  
Larry Bingaman, Regional Water Authority  
Michael Manolakas, Leggette, Brashears & Graham

**Attachment**  
**DEP Comments, July 20, 2009, on**  
**Olin Corporation's Draft Plans for Non-Public Properties, Newhall Street**  
**Neighborhood, Hamden, Connecticut (prepared for Olin by MACTEC**  
**Engineering and Consulting, Inc.)**

This Attachment to DEP's cover letter dated July 20, 2009, contains DEP's comments on Olin Corporation's ten different work plans for implementing the selected remedy for the Non-Public Properties, Newhall Street Neighborhood Site, Hamden, Connecticut.

**"Draft Temporary Relocation Plan, Non-Public Properties, Newhall Street**  
**Neighborhood, Hamden, Connecticut, December 2008"**

General Comments

As stated in the Draft Temporary Relocation Plan, communication is critical to a successful temporary relocation program. Part of effective communication is having documents in-hand that can be referenced by all parties when the community has questions and concerns.

It appears that the Plan and the Temporary Relocation Policy Manual will serve this purpose, and it is imperative that these documents be as complete and specific as possible by the time the residents are notified.

Specific Comments

1. Page 1-1, Section 1.1 Purpose of Temporary Relocation, paragraph 3, bullet point 3 – Referring to the language given in the URAA, please delete "affordable" and revise to "provide decent, safe and *sanitary* replacement housing ...."
2. Page 1-2, Section 1.1 Purpose of Temporary Relocation, paragraph 3 - As indicated earlier, the Temporary Relocation Policy Manual should be designed as a reference document that can be provided to the public and the Department as soon as possible.

The Temporary Relocation Policy Manual should also include as much detail as possible regarding eligibility requirements, and other incidentals such as: mail delivery; moving expenses; laundry services; and in-home small business needs.

3. Page 2-1, Section 2.0 The Relocation Team, Relocation Coordinator - The professional Relocation Coordinator must be available to affected residents at all times.

It is agreed that the Relocation Coordinator will be the primary point of contact for affected residents throughout the clean-up process. If it appears that there will be a large number of temporary relocations occurring simultaneously, it is recommended that the Coordinator have a team of "relocation specialists", and each specialist assigned a grouping of residents.

4. Page 3-1, Section 3.1 The Notification Program Overview, paragraph 2 – The words “all affected properties” could be mistaken for “all properties that have waste fill.” Please revise this to: “the particular properties and owners/occupants for whom Olin recommends temporary relocation, will receive a written Relocation Notice ...”

What is meant by notification “sufficiently in advance” in this paragraph?

5. Page 3-1, Section 3.2 Neighborhood Bulletin/Newsletter - Clarify that the DEP will issue newsletters, as it has done throughout the project, to provide updates to the community. The newsletter issued in January 2009 announced that soil cleanup activities will begin within the 2009 construction season, and that temporary relocation may be necessary in some cases.

The remainder of paragraph 1 (starting with “It will advise residents that temporary relocation will be in phases ....”) and paragraph 2 appears to be information that will be included in the Temporary Relocation Q&A brochure that will be provided with the Property-Specific Remedial Action Plans, and can be discussed under Section 3.3.

6. Page 3-2, Section 3.3 Property-Specific Remedial Action Plans, paragraph 2 - Indicate that the Temporary Relocation Q&A brochure will be included with the Plan.

Revise to: “The Temporary Relocation Agreement will include a questionnaire *to be filled out by the owner* that will be used to confirm information” ... “*Olin will need to secure executed agreements prior to the resident (or tenant), or business owner receiving payment or reimbursement for any relocation expenses...*”

The template questionnaire states that Olin will provide the guidelines for determining eligibility for certain benefits. Olin's guidelines for these decisions should be discussed in the Temporary Relocation Policy Manual – and made available to the resident.

7. Page 3-3, Section 3.4 Face to Face Meetings with Property Owners (and Tenants), paragraphs 2, 3 and 5 - Please revise sentence 3 in paragraph 2 to state, “It is anticipated that representatives from *Olin and its contractors* will go house-to-house and meet with the affected property owner and tenants.”

In reference to scheduling meetings with property owners, what is meant by “sufficiently in advance”?

Please revise bullet 1 in paragraph 3 to state, “General information about the remediation program *construction* and schedule”

In addition to taking photos and video, a written inventory of personal items should be compiled. Olin must ensure that the inventory of personal items will be kept confidential, and must also prepare and present a privacy policy to the displaced resident to this effect.

Documentation of current conditions should include the length and width of pre-existing cracks.

8. Page 3-4, Section 3.5 Updates to Project Website - Who supplies it and how often?

9. Page 3.4, Section 3.6 Notification of Project Completion - What is the procedure to keep the resident updated if there is a construction delay or if amendments to the Relocation Plan are necessary? This should be in writing.
10. Page 4-1, Section 4.2.1 Determining Eligibility for Relocation - Revise to: "Eligibility for relocation assistance is limited to people who live in the affected residence. This determination of eligibility will be made during the interview conducted with the occupants of each residence, and may include requesting documentation of residency. In order to confirm proof of occupancy, items such as driver's license, cover-page of most recent tax returns, *other government documents showing address*, or a copy of the current lease agreement may be requested. *If eligible for temporary relocation assistance, a Temporary Relocation Agreement will need to be signed by the affected resident and Olin.*"
11. Page 4-1, Section 4.2.2 What Relocation Costs Will Be Covered?, paragraph 1 - Revise to: "Olin will pay for relocation costs including alternate housing, meals (where *kitchen is not available*)" ... "*Examples of anticipated costs for special needs that will be covered ...*"
12. Page 4-1, Section 4.2.2 What Relocation Costs Will Be Covered?, paragraph 1, bullet 1 - "costs include ... Housing for pets that cannot accompany owners to temporary housing" ... Please state whether immunizations required by kennels will be a covered cost. Also, please indicate whether alternate transportation for school-aged children includes transportation to extracurricular activities.
13. Page 4-2, Section 4.2.2 What Relocation Costs Will Be Covered?, paragraph 3 - Please clarify that the Temporary Relocation Policy Manual will outline the payment method. Clarify that the payment method will be by reimbursement, however, advanced payment will be considered on a case-by-case basis. In addition, clarify how long it will take the resident to be reimbursed.
14. Page 4-2, Section 4.3 Preparing for Relocation - Revise to: "Individuals *will need* to sign a Temporary Relocation Agreement..."

Is there an opportunity for a resident to modify the Temporary Relocation Agreement once it's been signed? What is the process?

15. Page 4-3, Section 4.4 Determining the Extent of Relocation Assistance, paragraph 1 - Please indicate that the meal allotment has been determined by following the USEPA "Superfund Response Actions: Temporary Relocations Implementation Guidance" document. The compensation for meals and incidentals is based on the appropriate government employee per diem rate for the geographic area. Residents 12 years and older should receive the full per diem rate and children under 12 should receive half that amount.

Please provide an example list of eligible expenses.

16. Page 5-1, Section 5.1 Residence Security, paragraphs 1 and 2 - Revise to: "In the event that it is necessary to temporarily relocate residents from their homes, *Olin will offer* to document current conditions inside the residence" ... "In addition to the pre-relocation inspection, *Olin will provide* security throughout the course of the project."

Who will maintain the record of conditions at the home (Olin, the resident, the contractor)?

Please provide more detail of how site security will be maintained. Will a security guard be hired to ensure that houses are not being broken into?

17. Page 6-1, Section 6.2 Resolution of Disputes - Please include that property owners/tenants that *have a claim determined to not be eligible for reimbursement* must have the opportunity to dispute Olin's decision. Please outline the planned dispute resolution process.
18. Appendix A, Application for Determining Temporary Relocation Assistance, page A-4 - Is storage of large electronic equipment optional or required during temporary relocation?

[Remainder of page intentionally left blank]

**“Draft Construction Quality Control Plan, Non-Public Properties, Newhall Street  
Neighborhood Site, Hamden, Connecticut, February 2009”**

General Comments

Which of Olin's contractors at the work site have the authority to stop work if needed to address a health and safety issue?

Specific Comments

1. Page 3, Section 3.1 Home Office Personnel - How frequently will the contractor's Certified Industrial Hygienist/Corporate Director of Health and Safety come to the site to review operations (aside from quarterly record auditing)? The plan states “periodic trips to the site”; please be more specific, such as monthly at a minimum.
2. Page 7, Section 4.1 Implementation, paragraph 3 – “An on-site quality control meeting will be conducted on a weekly basis ... It is anticipated that the Contractor's On-site Project Manager, Health and Safety Officer, Superintendent and MACTEC/Olin rep will attend.” Add to this sentence that DEP and a Town liaison will be notified in advance of the time and location of such meetings and will have the opportunity to participate.

[Remainder of page intentionally left blank]

**“ Draft Construction Work Plan, Non-Public Properties, Newhall Street Neighborhood Site, Hamden, Connecticut, February 2009”**

General Comments

All stockpiles, vehicles and roll-offs containing waste fill must be covered at all times except during loading and unloading.

Use of any Town of Hamden property for staging and other uses must be with the consent of the Town.

Specific Comments

1. Page 4, Pre-Construction Preparation Activities, 8. – “Call Before You Dig” does not mark out on private property beyond the service connection. An independent locator will be needed to mark out from the service connection to the home where necessary.
2. Page 13, Site Preparation, 5., paragraph 4 – The work plan states that “stone used for temporary roads will be re-used as backfill material during backfilling operations.” Backfill material must comply with the Final Design Generic Remedial Action Plan (Section 3.3, Backfilling of Completed Excavations), the Earthwork Specification (Section 02300), and future Department approval of backfill material. For example, the Earthwork Specification states that gravel can be used to backfill below sidewalks, walkways, and pavements.
3. Page 17, Excavation, Transportation and Disposal of Impacted Fill Material, paragraph 4 – At those properties where fill is excavated to 4 feet, and the fill extends deeper than 4 feet and will remain in place, a warning marker/barrier must be installed. No waste fill will remain in the top 4 feet, unless specifically approved by DEP in limited instances (for example, if related to an owner's desire to keep a large tree, or if necessary as a last resort to maintain structural stability).

Starting on page 17, Olin lists three proposed exceptions (in bullet format) to the general remedy. For the proposed exception for homes that have structural stability issues, Olin will follow the procedure set forth in DEP's Conditional Approval of Generic Remedial Action Plan (dated October 6, 2008), to determine at which homes – if any – Olin will propose (for DEP review and approval) that some limited waste fill needs to be left in place for structural stability purposes. For the proposed exception for trees designed to be saved, Olin will follow the procedure and comments provided in DEP's comments on the “Draft Tree Sampling Plan” below.

4. Page 23, Backfill – Backfill materials will be consistent with the Remedy Selection Plan, p.18, which states:

The soil that will be used to backfill excavated area will be clean, natural material, and of the appropriate grain size to ensure permeability and settlement. Prior to commencing remedial actions, Olin will provide written documentation to DEP listing the proposed sources of topsoil and backfill materials intended for use, and the results of analytical testing of such materials.



Names and locations of borrow sources will be submitted to DEP prior to use in addition to the Engineer. Laboratory testing data and certification will also be submitted to DEP prior to use, including carbon content data. Soils must be clean, which means, among other things, not only meeting DEP remediation standards and risk levels for the site but must be generally consistent with background soil levels in that part of the state (for example, soil must not contain hazardous substances from a prior release regardless of whether concentrations meet remediation standards). Top soil must be capable of supporting vegetative growth.

5. Page 25, Restoration – As set forth in the Remedy Selection Plan, and reiterated in DEP's Conditional Approval of Generic Remedial Action Plan, Olin will inspect restoration work for two years after restoration, and will replant, repair or replace any restored feature for which restoration was not successful within such two years.
6. Appendix A, Figure 1 – A legend defining the color coding is needed.

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**“Draft Dust Control & Air Monitoring Plan, Non-Public Properties, Newhall Street  
Neighborhood Site, Hamden, Connecticut, February 2009”**

No comments.

[Remainder of page intentionally left blank]

**“Draft Health and Safety Plan, Non-Public Properties, Newhall Street Neighborhood Site, Hamden, Connecticut, February 2009”**

General Comments

The HASP needs to specify how the health and safety of residents will be protected from the hazards if any that may result from the remedial construction activities.

Some work may need to be conducted outside normal work hours when lighting is poor. Site illumination should be considered and provided in accordance with OSHA regulations.

Please forward a copy of the Health and Safety Plan that includes figures/plans of excavation routes, assembly areas, etc. to the Hamden Fire Department.

Olin should have a maintenance and protection of traffic plan for this project, coordinated with the Town of Hamden. Sections 3.2.1.2, 8.7 and 8.17 of the HASP contain some elements of such a plan. Given that the project is to be performed in a residential neighborhood, coordination with the Town on vehicular and pedestrian safety prior to start of work is essential.

Specific Comments

1. Page 100, Section 11.0 Emergency Contingency Plan - What constitutes an Emergency and Incident should be clearly defined as it appears in 29 CFR 1926.65(a)(3). An Emergency would generally be any situation which cannot be immediately controlled by assigned site or contract personnel (which results in or has the potential to result in a fire or explosion; which results in human injury or has a serious potential for human injury; which results in the use of water and/or chemical suppressants resulting in contaminated runoff; which results in the release or the serious potential of a release of toxic substances above permissible exposure limits to the environment). An Incident generally includes a fire, spill, fume release, or medical emergency that can be controlled within its area by site or contract personnel.

Given that the remediation construction will occur at an active residential neighborhood, the implementation of the contingency plan and emergency response procedures for the residents/public and workers should be explicitly stated.

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**“Draft Perimeter Air Monitoring Plan, Non-Public Properties, Newhall Street  
Neighborhood, Hamden, Connecticut, February 2009”**

General Comments

Please include sections in either the Perimeter Air Monitoring Plan or the Dust Control and Air Monitoring Plan to address nuisance odors that may occur with the waste fill. Measures must be taken to prevent and minimize offensive odors from open excavations and waste fill stockpile and staging areas, including the removal of waste fill from the area if other odor abatement measures are not successful. Any odor problems identified by workers or residents must be reported to DEP, DPH, and the Quinnipiac Valley Health District.

Specific Comments

1. Page 1-2, Section 1.2 Objectives and Goals – Bullet 2 states as a goal, the development of a correlation between particulate levels and contaminant concentrations so that particulate measurements can act as a surrogate for the site contaminants of concern. The development and application of such a correlation is not mentioned in subsequent sections of the Draft PAMP (such as in Section 4.6 Data Interpretation and Reporting). Furthermore, given the variability of concentrations of the key contaminants of concern throughout the site, it is recommended that if such a correlation is developed, it should be applied only on an individual block basis where the character of the waste fill is more likely to be similar.
2. Page 2-1 - Please provide more explanation of what is in the meteorological station and what it looks like (for public awareness).
3. Page 2-4 – A site map will be used to mark the actual field location of the perimeter air monitoring equipment. Please identify how this information will be available to the public.

Please clarify the height at which the air monitoring stations will be placed.

4. Page 3-1, Section 3.0 Action Levels and Emission Controls – The contaminants of concern for the site include lead, arsenic and PAHs. Will air monitoring include PAHs, and if not explain why not?

Please explain how the site-specific action levels were determined.

5. Page 4-2- Section 4.3, please add an identifier for Wadsworth Street.
6. Page 4-5 – Site data summaries will be made available thru the DEP project website. Please identify who from Olin and its contractors will send the data to DEP, the frequency, and in what form?

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**“Draft Quality Assurance Project Plan, Non-Public Properties, Newhall Street  
Neighborhood, Hamden, Connecticut, February 2009”**

General Comments

Who is responsible for ensuring that the QAPP is followed on-site?

Page number sequence needs to be corrected. After page 2-4, the pages start at 2-2 again.

Specific Comments

1. Page 2-1, Section 2.1 Sampling Methods – “In general, sampling procedures and collection techniques follow standard operating procedures presented in Appendix A to assure consistent collection and reliable data generation”. A general SOP for “soil/fill sampling and borehole logging procedures” is given. Development of a SOP specific to this project should be considered.
2. Page 2-3, Section 2.3 Quality Control – “The laboratory will follow internal quality control procedures in accordance with SW-846.” Also, it must follow the CT DEP Reasonable Confidence Protocol for the method.
3. Page 2-4, Section 2.3.2 XRF Analysis and Quality Control – If the QC checks give unexpected results, what corrective action will be taken?
4. Page 2-5, Section 2.3.3 XRF and Off-Site Laboratory Correlation Analysis, paragraph 3 – Please clarify how the correlation coefficient,  $r^2$ , is determined. If the value does not meet the criteria given, what corrective action will be taken?
5. Page 2-5, Section 2.3.3 XRF and Off-Site Laboratory Correlation Analysis, paragraph 4 – What value of RPD will be considered acceptable? If the value does not meet the criteria, what corrective action will be taken?
6. Page 4-1, Section 4.0 Data Validation and Reporting – Data quality assessment and usability can be conducted per guidance given in the CT DEP “Laboratory Quality Assurance and Quality Control Data Quality Assessment and Data Usability Evaluation Guidance Document, May 2009.”

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**“Draft Sampling and Analysis Plan, Non-Public Properties, Newhall Street Neighborhood,  
Hamden, Connecticut, February 2009”**

Specific Comments

1. Page 1-1, Section 1.1 Regulatory Status, paragraph 1 – Please revise to: “were built *on and next* to the historic fill areas.”
2. Page 1-2, Section 1.2 Confirmatory Sampling Methodology, paragraph 1 – Appendix A is missing.
3. Page 2-2, Section 2.2.1 Sampling Methodology, paragraph 1 – As given in this section, USEPA Method 6200 and the XRF manufacturer’s operation procedures will be followed. To ensure that the procedure is conducted consistently throughout the project, it is recommended that the sampling process be described in a SOP-type format to provide a sufficient level of detail.
4. Page 4-1, Section 4.0 Analytical Methods – Please revise to: “samples will be submitted to a *CT DPH certified laboratory* for analysis of total lead by USEPA Method 6010B.”

[Remainder of page intentionally left blank]

**“Draft Transportation and Consolidation Plan, Non-Public Properties, Newhall Street  
Neighborhood, Hamden, Connecticut, February 2009”**

General Comments

The plan will need to define the appropriate traffic pattern/truck route for each phase (blocks to be remediated) of the remediation. This is an active residential neighborhood and therefore useful to specify exactly which roads will be the most likely haul roads vis-à-vis residential traffic routes during each phase of the work.

Specific Comments

1. Page 4-2, Section 4.4 Material and Waste Handling, Staging, and Storage – Please provide greater detail on any stockpiling and staging of excavated waste fill, including locations, duration, security and measures to prevent any spreading of contamination including from run-off or wind dispersion.

The Work Plan does not appear to contain the proposed stockpile and staging locations within the Sub-Area or Mill Rock Park, contrary to statements made in the plan. Please identify such locations, and explain why stockpile and staging areas are needed in the Sub-Area (why waste fill would not be directly placed into trucks or roll-offs, or other containers, for transport off-site (off the non-public properties)).

Any use of Town of Hamden property or private property must be with the consent of the landowner.

2. Page 5-1, Section 5.1 Notification – Please provide a table with names of site personnel in terms of the hierarchy of who should be notified in the event of an accident that results in a release or incident and/or an emergency.

Notification to DEP's Emergency Response & Spill Prevention Division is required for releases of hazardous substances, for example from any truck accident that releases waste fill.

3. Page 5-1, Section 5.2 Documentation Procedures – RCRA hazardous waste that will be managed at the temporary staging area should be inspected in accordance with applicable Federal and State regulations.

Inspection log sheets should include:

- Name of Inspector;
- Date and time of inspection;
- Physical condition of containment, etc., and
- Labeling and marking eligibility, etc.

4. Page 5-2, Section 5.2.2 – Transportation and disposal activities will be recorded in log. This information should be available for public review. Please establish a reporting system to put on the project website to show progress, such as a summary of quantity, type of material, number of trucks, etc.

5. Page 5-3, Section 5.3 - Spill Response Contingency Plan. Please identify where the plans will be kept.

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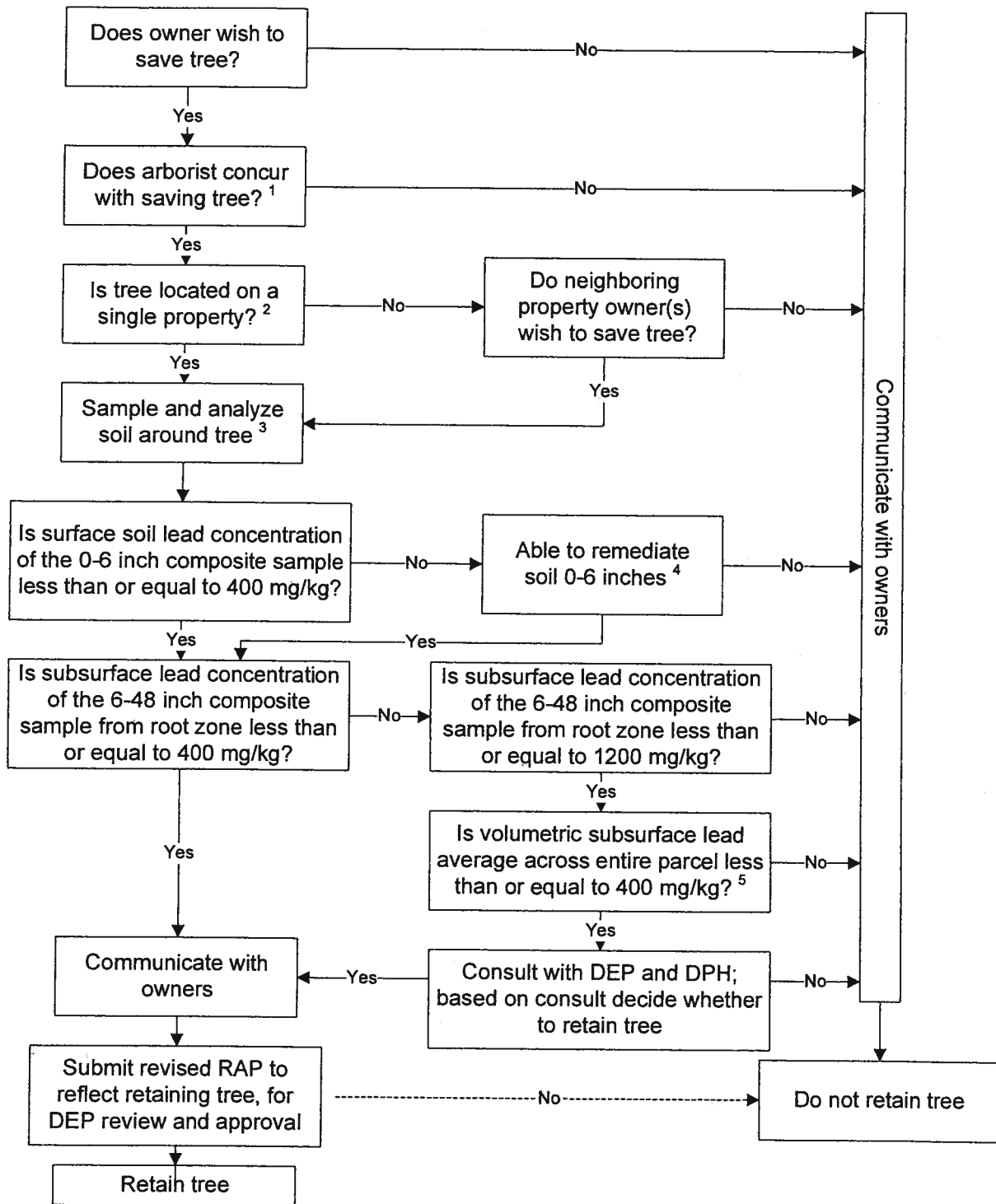
**“Draft Tree Sampling Plan, Non-Public Properties, Newhall Street Neighborhood,  
Hamden, Connecticut, February 2009”**

Specific Comments

1. Page 3-1, Section 3.0 Analytical Methods – Please revise to : “... 5% of the samples being submitted to a *CTDPH- certified laboratory* for the analysis of total lead by USEPA Method 6010B...”
2. Page 2-2, Section 2.1.3 Sampling and Analysis of Fill - Second paragraph, 5<sup>th</sup> sentence. To clarify, “subsurface” means 6-48” below ground surface. If the composite subsurface (6-48” interval) lead concentration in the root zone is greater than 400 but less than 1,200 mg/kg, the volumetric average of lead must be calculated proportionally (with respect to the surface area of the property) with all other lead data from the same property (0-48”), including clean backfill. The following scenario is offered for reference: Waste fill is removed from 80% of the surface area on a property and restored with clean backfill. Native soil will remain on 15% of the surface area of the property, with the root area of a retained tree comprising the remaining 5% surface area. The volumetric lead average for the property should then be calculated by weighing the analytical data of clean backfill 80%, native soil data 15%, and the subsurface composite result from around the tree 5%. Consultation with DEP and DPH will be made regarding the sufficiency of the data and the determination of whether or not to retain the tree.
3. Figure 2-1 – Please replace with the Figure 2-1 attached to these comments. The attached Figure 2-1 properly captures the process and the criteria for arriving at a decision to keep or not keep a tree.

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**Figure 2-1  
Process for Determining Retention of Trees  
Newhall Neighborhood Site Remediation  
Olin Chemical Manufacturing Corporation  
Hamden, Connecticut**



**Notes:**

[1] In determining whether to retain a tree, Arborist will consider health of tree and species considerations (desirable/ invasive; able to tolerate remediation)

[2] As determined by drip line from crown of tree located entirely on a single property (or as defined by arborist)

**[3] Surface soil:**

3 discrete samples from 3 locations around tree; collected 0-6 inches and composited into one sample and analyzed for lead

**Subsurface soil:**

3 discrete samples from 3 locations around tree; collected 6-48 inches and composited into one sample and analyzed for lead

[4] Methodology to be considered: air knife and vacuum

[5] Determine compliance by volumetric averaging lead result for subsurface soil beneath tree with all other soil lead concentration data on property (0-48 inches) including clean backfill