

# Letter Health Consultation

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CHARLES BATCHELDER COMPANY SITE

NEWTOWN, CONNECTICUT

**Prepared by the  
Connecticut Department of Public Health**

JULY 10, 2012

Prepared under a Cooperative Agreement with the  
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Agency for Toxic Substances and Disease Registry  
Division of Community Health Investigations  
Atlanta, Georgia 30333

## **Health Consultation: A Note of Explanation**

A health consultation is a verbal or written response from ATSDR or ATSDR's Cooperative Agreement Partners to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR or ATSDR's Cooperative Agreement Partner which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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LETTER HEALTH CONSULTATION

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NEWTOWN, CONNECTICUT

Prepared By:

Connecticut Department of Public Health  
Under Cooperative Agreement with the  
U.S. Department of Health and Human Services  
Agency for Toxic Substances and Disease Registry

STATE OF CONNECTICUT  
DEPARTMENT OF PUBLIC HEALTH

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Commissioner



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Environmental Health Section

June 29, 2012

Eric Vanderboom  
On-Scene Coordinator  
Emergency Planning and Response Branch  
EPA Region I – New England  
5 Post Office Square, Suite 100  
Mail Code OSRR02-2  
Boston, MA 02109-3912

RE: Charles Batchelder Company Site  
Newtown, CT  
Health Consultation Letter Update 2012

Dear Mr. Vanderboom;

In response to your request, the Connecticut Department of Public Health (CT DPH) working in coordination with the Agency for Toxic Substances and Disease Registry (ATSDR) Eastern Branch Region One Office, participated in a site visit, assessed current site conditions, evaluated new analytical data, and updated the results, conclusions and recommendations of the Health Consultation (HC) previously prepared by CT DPH in 1997. The 1997 HC is included as Attachment A. This letter constitutes the updated 2012 HC for the Charles Batchelder Company Site. As this letter will explain, current conditions at the Batchelder site have not changed enough to warrant any modification to the conclusions presented in CT DPH's 1997 HC. The previous conclusion were that the site represents a public health hazard to trespassers because of uncontrolled access to numerous piles of dross and baghouse fines containing elevated levels of metals. CT DPH fully supports an Environmental Protection Agency Removal Action that will reduce or eliminate the public health and safety hazards present at the Site.

*Background*

The Charles Batchelder Company Site (Site) is one of a number of sites for which assistance from the EPA Emergency Planning and Response Branch (EPRB) was recently requested by the CT Department of Energy and Environmental Protection (CT DEEP). In response, EPA organized a site visit, which occurred on April 4, 2012, and was attended by representatives from



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EPA, CT DEEP, ATSDR, CT DPH, the town of Newtown (including the Newtown Health Department), and an environmental consultant knowledgeable about the site. The purpose of the site visit was to observe current site conditions and strategize about next steps. EPA's consultants collected new environmental samples from the site during the week of April 9, 2012. EPA is evaluating the possibility of conducting an emergency removal action at the site and asked ATSDR/CT DPH to update the 1997 HC. CTDPH considered the new data and other information in this new HC.

The Charles Batchelder Company Site is an abandoned aluminum smelting facility located on a 30-acre site at 44 & 46a Swamp Road in Newtown, CT. The site is bordered by Swamp Road (west), railroad tracks (north) and wetlands (west, south and east). There are residences along Swamp Road but they are separated from the site by wetlands approximately 200 yards wide.

Smelting operations occurred at the site from 1947 to 1987. A description of historic metal smelting operations is contained in the 1997 HC (Attachment A). The 1997 HC concluded that the site represented a public health hazard to trespassers because of uncontrolled access to numerous piles of dross and baghouse fines containing elevated levels of metals. Specifically, the 1997 HC concluded that lead concentrations in one of the waste piles posed a health threat to children via ingestion and ATV use posed an acute threat via metal dust inhalation.

Evidence of trespassing (graffiti, beer bottles, trash, shoes) and evidence of access to the contaminated piles (tire tracks on and near the piles) was documented in the 1997 HC. The 1997 HC also documented numerous physical hazards at the site including open pits, buildings in danger of collapse, and numerous drums, tanks and other debris. The primary recommendations contained in the 1997 HC were that access to the site be restricted by securing the perimeter fence and posting warning signs. In response, in late 1997, the existing perimeter fence was repaired, signs were posted and a limited removal of drums from the site occurred. Also, at least one of the powder metal baghouse fine piles was covered with a geotextile membrane.

Sampling of private wells adjacent to the Site has been conducted on an ongoing basis since 1995. Data indicate that the private wells have not been impacted by site-related contaminants.

#### *Site Visit*

CT DPH visited the site on April 4, 2012. At the site visit, the observations detailed below were made. Instances are noted where CT DPH's 2012 observations match observations made in the 1997 HC. Selected photos from the April 4, 2012 site visit are included in Attachment B.

- The onsite buildings are in severe disrepair. The structural integrity of buildings appears compromised. Much of the roofing material has fallen into the interior of the buildings. A fire at the site several years ago involving the center building caused complete collapse of the structure and all that remains is a pile of rubble. Aside from the fire-caused collapsed building, these observations match what was observed in 1997.
- Numerous areas of debris (trash, building materials, broken glass, structural steel, old machinery, rusted drums, tires, vehicles) were observed across the entire site. This was also observed during the 1997 site visit.

- Open pits are present inside several buildings. This was also observed in 1997.
- Two large tanks (with sections cut out on the ends) were observed. Oily water filled the bottom of both tanks. These tanks were observed in the same condition in 1997.
- Large piles of baghouse fines and dross (i.e. metal waste) are located throughout the site. One pile is located inside the large building on the eastern part of the property. The pile was partially covered with a geotextile membrane.
- A large amount of graffiti was visible on the inside and outside of the buildings. Some of the graffiti had recent dates (within the last few years). Graffiti was also noted in 1997.
- Tire tracks (most likely from a dirt bike, motorcycle or all-terrain vehicle) were visible on the large piles of metal waste in the eastern portion of the site. Tire tracks were also visible inside the large building on the eastern part of the property. One of the town representatives on the site visit stated that as recently as two weeks prior to the site visit, he had witnessed trespassers at the site and had required them to vacate the property. In 1997, tire tracks were also observed on and around the metal waste piles.
- A large section in the northeastern portion of the perimeter fence was cut away. Soon after the site visit, CTDPH was informed by the Town of Newtown that they had repaired the breach in the fence.
- One “Private Property” sign was observed on the perimeter fence but it did not clearly communicate that there were chemical and safety hazards present on the property.
- The material in the metal waste piles was observed to be extremely fine-grained, almost the consistency of flour. On the day of the site visit, the weather was not windy, but tiny particles could be seen in the air around the metal waste piles.

### *Environmental Data Evaluation*

On April 9, 2012, EPA contractors collected composite samples from the waste piles and from soil at the site. Each composite was comprised of 10 “grab” samples and all samples were collected from a depth of 0 to 3 inches below ground surface. A total of 53 samples were analyzed (13 from soil and 40 from metal waste piles). Analyses were conducted for metals, polychlorinated biphenyls (PCBs) and volatile organic compounds (VOCs). Metals were analyzed via XRF with 5 samples confirmed in the laboratory. Laboratory-confirmed results were evaluated instead of XRF samples, where available. Where duplicate results were available, the higher of the two results were evaluated. Table 1 provides the maximum concentration for each contaminant detected at a concentration above health comparison values. Maximum concentrations are shown separately for soil samples and waste pile samples. The results in the table are identified as “maximum” but because all samples are composites, they

are likely to be more representative of average concentrations than the maximum. Contaminant concentrations were higher in the waste piles than in the soil. Polychlorinated biphenyls (PCBs) were detected at the highest concentration relative to comparison values (metal waste piles were 274 times higher than the comparison value). Only one sample detected VOCs (metal waste pile sample), and all concentrations were well below comparison values. Chromium was not speciated so the comparison value for both chromium III and chromium VI are included in the table.

A comparison between 1997 and 2012 sample results shows that in the waste piles, the maximum PCB concentration was much higher in 2012 than in 1997 (15 times higher) and the lead concentration was lower (7 times lower). Concentrations of other metals were generally consistent with what was measured in the waste piles in 1997. In the 2012 sample results, a greater number of metals were measured at concentrations above comparison values than in 1997.

Table 1. Maximum Contaminant Concentration Detected at the Batchelder Site, Newtown, CT. Samples collected by EPA, April 9, 2012. Samples were collected from waste piles and soil around the site [2]

| Chemical                               | Maximum Concentration (ppm) | Comparison Value (ppm) | Source       |
|----------------------------------------|-----------------------------|------------------------|--------------|
| <b>SOIL</b>                            |                             |                        |              |
| Arsenic                                | 62                          | 10                     | CT-RSR-RDEC  |
| Cadmium                                | 89                          | 34                     | CT-RSR-RDEC  |
| Copper                                 | 7,492                       | 500                    | I-EMEG-Child |
| Chromium (unspecified III or VI)       | 1,455                       | 100 <sup>&amp;</sup>   | CT-RSR-RDEC  |
|                                        |                             | 3,900 <sup>^</sup>     | CT-RSR-RDEC  |
| Lead                                   | 805                         | 500 <sup>#</sup>       | CT-RSR-RDEC  |
| Nickel                                 | 1,393                       | 1,000                  | RMEG-Child   |
| Total Polychlorinated Biphenyls (PCBs) | 43                          | 1                      | CT RSR-RDEC  |
| <b>METAL WASTE PILES</b>               |                             |                        |              |
| Arsenic                                | 64                          | 10                     | CT-RSR-RDEC  |
| Antimony                               | 67                          | 27                     | CT-RSR-RDEC  |
| Cadmium                                | 179                         | 34                     | CT-RSR-RDEC  |
| Copper                                 | 17,000                      | 500 <sup>#</sup>       | I-EMEG-Child |
| chromium (unspecified III or VI)       | 1,523                       | 100 <sup>&amp;</sup>   | CT-RSR-RDEC  |
|                                        |                             | 3,900 <sup>^</sup>     | CT-RSR-RDEC  |
| Lead                                   | 2,500                       | 500 <sup>#</sup>       | CT-RSR-RDEC  |
| Manganese                              | 1,800                       | 1,400                  | CT-RSR-RDEC  |
| Nickel                                 | 2,200                       | 1,000                  | RMEG-Child   |
| Zinc                                   | 31,900                      | 20,000                 | CT-RSR-RDEC  |
| Total Polychlorinated Biphenyls (PCBs) | 274                         | 1                      | CT-RSR-RDEC  |

CT-RSR-RDEC: CT Remediation Standards Regulations, Residential Direct Contact Standard for Soil (1995).

I-EMEG-Child: Intermediate Environmental Media Evaluation Guideline for Children

RMEG-Child: Reference Dose Media Evaluation Guideline for Children

ppm: parts-per-million; mg/kg; milligrams per kilogram

&: Hexavalent chromium.

^: Trivalent chromium.

#: While 500 mg/kg is CT's current regulatory soil cleanup standard, it is recognized that there is no safe level of lead exposure (CDC 2012).

### *Exposure Pathway Evaluation*

There are numerous piles of metal waste containing elevated levels of metals and PCBs present on the Charles Batchelder Company Site. Surface soil at the site also contains elevated levels of metals and PCBs. Concentrations of contaminants exceed comparison values by as much as 274 times (PCBs). All sample results are from composite samples, thus the concentrations of contaminants at discrete location could be much higher.

There are numerous physical hazards at the site including open pits, buildings in danger of collapse, debris piles (trash, building materials, broken glass, structural steel, old machinery, rusted drums, tires, vehicles), and open tanks. Access to the site is uncontrolled (a large breach in the fence was observed) and there is evidence of recent trespassing (including operation of dirt bikes, motorcycles or ATVs on the waste piles). These observations were also made in the 1997 HC.

Trespassers can be exposed to contaminants in soil and metal waste piles via direct contact (dermal and incidental ingestion) and inhalation during vehicle use on the waste piles and by walking/playing on the property. The material in many of the piles is so fine that it can become airborne even with light wind or without vehicle use on the piles. People using adjacent land parcels could potentially be exposed via inhalation to fine particles from the waste piles if they are blown off the Batchelder property by wind.

### *Public Health Implications*

CTDPH used comparison values to evaluate the 2012 environmental data and also compared the 2012 data with data collected in 1997. Concentrations of metals and PCBs are present at levels exceeding comparison values in surface soil and the surface layer of the metal waste piles. In the 1997 HC, CTDPH concluded that the site posed an acute health hazard to trespassers from inhalation of metal dust from the waste piles during motorized bike use. The 1997 HC further concluded that these exposures could result in damage to the respiratory system and metal fume fever. Considering current site conditions and current environmental data, this is still the primary health hazard at the Batchelder Site. Physical hazards (tanks, drums, open pits, unstable buildings) were determined to pose a safety hazard to trespassers in the 1997 HC. Based on current site conditions, these hazards to safety still exist for trespassers. The 1997 HC should be consulted for details on these public health implications (See Appendix A).

### *Conclusions*

The conclusions listed below are consistent with conclusions appearing in the 1997 HC.

1. Metals present at elevated levels in the waste piles and surface soil at the Site pose an acute public health hazard to trespassers via inhalation of dust. Until very recently, trespassers could access the site through a breach in the fence and ride dirt bikes or ATVs through the site and on the waste piles. Trespassers accessing the site are also potentially exposed to elevated levels of PCBs in the waste piles and in surface soil.
2. Drums, tanks, debris piles, structurally unstable buildings and open pits located throughout the Site pose a physical hazard to trespassers who (until very recently) could regularly and easily access the site.

3. Aside from the results of ongoing private well testing done since 1995 (which showed no impact from site-related contaminants in nearby private wells), there is a lack of data regarding whether site-related contamination have impacted groundwater onsite.

#### *Recommendations*

- Place chemical and safety hazard warning signage on the perimeter fencing as soon as is practicable. Signage and perimeter fencing should be inspected periodically to ensure that the fencing has not been breached and the signage has not been removed.
- Eliminate safety hazards at the Site as quickly as is reasonably achievable.
- Eliminate exposure to the piles of baghouse fines and dross located throughout the site.
- Eliminate access to contaminated surface soil at the site.
- A Health and Safety Plan should be prepared prior to the start of any actions that could disturb contaminated soil or the metal waste piles. The Health and Safety Plan should ensure that workers and the public are protected from exposures to contamination at the Site.
- A communications plan should be prepared prior to the start of any cleanup activities at the Site to ensure that the public is aware of the work and how they will be protected.
- Additional environmental testing may be needed to determine if site-related contamination has migrated offsite.

#### *Public Health Action Plan*

- CT DPH would like the opportunity to review the Communication and Health and Safety Plans.
- CT DPH will work with the LHD and EPA to provide education and outreach to the community about the hazards at the site and any future work to address the hazards.

If you have any questions regarding this letter, please contact me at 860-509-7748.

Sincerely,

*Margaret L. Harvey*

Margaret L. Harvey, MPH  
Supervisor, Site Assessment and Chemical Risk Unit  
Environmental Epidemiology and Occupational Health Program

Attachments

References:

CDC 2012, Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention, Report of the Advisory Committee on Childhood Lead Poisoning Prevention of the Centers for Disease Control and Prevention, January 4, 2012.

Attachment A: 1997 Health Consultation

**Health Consultation**

**Public Health Implications of  
Environmental Sampling and Physical site Conditions  
at the  
Charles Batchelder Company Incorporated Site  
Fairfield County  
Newtown, Connecticut**

**CERCLIS Number: CTD 01182278**

**March 13, 1997**

**Prepared by  
Connecticut Department of Public Health  
Under Cooperative Agreement  
With  
The Agency For Toxic Substances and Disease Registry**

*The conclusions and recommendations in this Health Consultation are based on the data and information made available to the Connecticut Department of Public Health and the Agency for Toxic Substances and Disease Registry. The Connecticut Department of Public Health and the Agency for Toxic Substances and Disease Registry will incorporate additional information if and when it becomes available. The incorporation of additional data could change the conclusions and recommendations listed in this document.*

## **BACKGROUND AND STATEMENT OF ISSUES**

On February 6, 1997, the U.S. Environmental Protection Agency (EPA) requested that [1] the Agency for Toxic Substances and Disease Registry (ATSDR) examine the environmental data available for the Charles Batchelder site in Newtown, CT. The purpose of this Health Consultation is to determine whether contamination present on-site (soil, storage drums, and debris) pose a public health hazard and/or a physical hazard.

The Charles Batchelder Company Site is located at 40 Swamp Road in the Botsford section of Newtown, Fairfield County, Connecticut [2,5]. The property is an abandoned aluminum smelting facility located on a 30.65 acre site. The facility consists of two buildings [2,5]. Smelting operations were conducted from 1947 to 1987. Scrap metals which entered the smelting operations included: transformers, painted venetian blinds, automobile parts, edge cuttings, containers and various other items [3]. Aluminum is separated from the various metals entering the smelter. During the smelting process, aluminum enters a molten phase. The top stratum contains a material known as dross or slag. This material contains cadmium, lead, tin, chromium, copper, zinc, nickel, and iron [3]. These metals, which were reportedly used as inputs to the smelter, included such as lead paint on venetian blinds, etc.

The property is bordered on the west by Swamp Road. On the northern section, the site is bordered by an active rail road tract and Newtown Lumber. The eastern and southern sections are bordered by wetlands (Pine Swamp). There are undeveloped properties in the wetlands areas. Water supply wells for residential properties are located within 500 feet of the western boundary adjacent to Swamp Road [5].

Throughout the site are mounds of baghouse fines. These consist of fine particles precipitated from the smelter furnace. Cooling waste water containing heavy metals including arsenic was disposed of in a lagoon. This disposal method was conducted until 1983.

An oil tank farm on-site consisted of eighteen tanks. The combined capacity was 270,000 gallons of waste oil. The waste oil was burned as fuel in the smelting process [3]. In 1993, the main portion of these tanks were removed. The dirt under the tanks was saturated with oil from previous spills [3], and was not removed. Contamination on-site also includes PCB from waste oil and possibly cyanide [3].

In 1975, Newtown landfill workers complained of illnesses after handling the baghouse fines disposed of at the Newtown landfill [9]. On June 28, 1979, private citizens, government and health officials in the Newtown telephoned the Connecticut Department of Environmental Protection (CT DEP) to complain of severe skin irritations, choking sensations, bronchial, and respiratory irritation and sore throats [10]. The cause was reported to be the active Batchelder Aluminum Smelter [10]. In 1983 the cooling water ran across the paved parking lot into the wetland area. In 1984, one worker was fatally injured in a furnace explosion. This explosion also damaged the structural integrity of the building [3].

In 1995, the Newtown District Department of Health notified the CT DEP commissioner of dust clouds possibly containing dross pile material observed on-site and in the neighborhood. In addition, the District Department of Health was notified of adolescents reporting illness who have been on the site. This report occurred during the summer of 1996, and the illnesses were not detailed, but the affected individuals were advised to consult with their physicians [8].

In June and July of 1993, scrap metal removal operations were conducted. During this activity, large sections of the fence on the north and east of the property were removed [5]. The fence has not been repaired.

Site access is currently entirely uncontrolled [5]. There is ample evidence of regular trespassing (dirt bike tracks, graffiti, and beer bottles, etc.) [6,7].

## DISCUSSION

### Physical Site Conditions

Two site visits were conducted by the Connecticut Department of Public Health (CT DPH) during October of 1996 and February of 1997 [6,7]. In addition, Weston conducted a site visit during August of 1996 [2]. During these site visits the following observations were made.

- Numerous drums were observed both inside the two buildings and throughout the property. Many drums were overturned and some appeared to contain material. There were three 20,000 gallon capacity above ground storage tanks in the former tank farm. The soil around the tanks was heavily stained with what appeared to be oil. Several large piles of baghouse dust and dross slag were observed throughout the property, including inside the two buildings.
- Many piles of debris, abandoned vehicles and machinery were observed throughout the site.
- Vandalism of office equipment was noted in the abandoned office.
- Bicycle tracks were noted on one of the piles of baghouse fines.
- Two piles of discarded toys were observed near one pile of lead contaminated slag pile.
- Along the southwest portion of the property is a former landfill area containing baghouse dust and dross slag. The liner and soil cap have been breached in several locations.
- Many of the baghouse dust and dross slag waste piles located along the eastern portion of the site had flowed through the fence and completely covered sections of the fence.
- Several deep open pits, some filled with water were observed.
- Abandoned gasoline pump was located on-site.
- Various tanks and drums were noted throughout the site. These are described in the table below.

Table 1.

Storage container (Drum, Tank, etc.) identification collected by WESTON from the Charles Batchelder Site in Newtown.

| Classification                           | Quantity | Status                      |
|------------------------------------------|----------|-----------------------------|
| 1-cubic yard box                         | 6        | full or partially full      |
| 30-gallon drums                          | 5        | full or partially full<br>* |
| 50-pound bags                            | 9        | full                        |
| 55-gallon drum                           | 26       | full or partially full<br>* |
| 55-gallon drum                           | 18       | empty                       |
| Above ground Storage Tanks Various Sizes | 10       | unknown *                   |
| Gas Cylinder                             | 1        | unknown                     |
| Propane Cylinders                        | 31       | unknown                     |

\* The contaminants concentrations are listed on table 4.

Samples Collected

On August 29, 1996, Weston collected thirty-two samples. On December 18, 1996, a second round of sampling was conducted by Weston [11]. During this sampling, twenty-eight samples were collected. The sample type and matrix are presented in Table 2 below.

Table 2  
Samples collected by Weston from the Charles Batchelder Site in Newtown [2,11].

| Sample type and Matrix                          | Number of samples collected on |                   |
|-------------------------------------------------|--------------------------------|-------------------|
|                                                 | August 29, 1996                | December 18, 1996 |
| Debris                                          | 0                              | 1                 |
| Drum                                            | 2                              | 0                 |
| Landfill                                        | 3                              | 2                 |
| Manhole                                         | 1                              | 0                 |
| Sediment                                        | 1                              | 0                 |
| Soil Pile                                       | 4                              | 2                 |
| Surface Soil                                    | 5                              | 0                 |
| Tank                                            | 4                              | 0                 |
| Waste Piles (includes dross and baghouse fines) | 12                             | 23                |

Tables 3, 4, and 5 highlight the maximum concentrations of contaminants detected above health comparison values from both sampling rounds (August and December of 1996). Table 3 lists the metals analysis, and Table 4 lists the VOCs. Table 5 lists the maximum PCB concentration detected in soil.

Table 3  
Maximum Metals Detected in Waste Piles collected by Weston from the Batchelder Site in Newtown [2,11].

| Chemical                         | Maximum Concentration (ppm) | Comparison ppm | Value Source |
|----------------------------------|-----------------------------|----------------|--------------|
| antimony                         | 100                         | 20             | RMEG-Child   |
| beryllium                        | 16.4                        | 0.2            | CREG         |
| cadmium                          | 90                          | 40             | EMEG-Child   |
| chromium (unspecified III or VI) | 1,160                       | 300            | RMEG-Child   |
| lead                             | 17,200                      | #              | #            |
| zinc                             | 27,000                      | 20,000         | EMEG-Child   |

|            |                                                                                                                                                                                                                   |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #          | There are no soil health comparison values for lead. However, based on pharmacokinetic modeling using 200 mg soil ingestion, this concentration of lead in the waste pile could result in high blood lead levels. |
| CREG       | Cancer Risk Evaluation Guideline                                                                                                                                                                                  |
| EMEG-Child | Environmental Media Evaluation Guideline for Children                                                                                                                                                             |
| ppm        | parts per million                                                                                                                                                                                                 |
| RMEG-Child | Reference Dose Media Evaluation Guideline for Children                                                                                                                                                            |

Samples were collected from a depth of 0 to 3 inches. The highest concentrations were detected in the dross, slag and baghouse fines piles located throughout the site. All soil samples for VOCs were below a level of concern. The samples from the open tanks are listed below in Table 4. The maximum PCB concentration detected in soil, from the factory floor, was 19 ppm, the results are listed in Table 5. Off-site migration of site-related contamination is unknown.

Table 4  
Maximum Contaminant Concentrations Detected  
in Liquid Sampled From Storage Tanks  
collected by Weston from the  
Batchelder Site in Newtown [2].

| Chemical              | Concentration<br>(ppb) |
|-----------------------|------------------------|
| toluene               | 3,500                  |
| ethylbenzene          | 2,800                  |
| meta & para<br>xylene | 6,300                  |
| ortho xylene          | 8,400                  |

ppb                      parts per billion

Table 5  
Maximum PCB Concentration Detected in Soil Collected by Weston  
from the Batchelder Site in Newtown [2].

| Chemical | Concentration<br>(ppm) | Comparison<br>ppm | Value<br>Source |
|----------|------------------------|-------------------|-----------------|
| PCB      | 19                     | 0.06              | CREG            |

ppm                      parts per million  
CREG                    Cancer Risk Evaluation Guideline

#### Private well sampling

On August 30, 1995, the CT DEP conducted domestic well sampling from seven private wells. All VOCs and metals detected in the private wells were below a level of concern (below safe water quality standards) [12].

#### Toxicological Evaluation

This site contains numerous piles of dross and baghouse fines. One pile contains lead at levels that represent a public health hazard to trespassers, especially young children who may incidentally ingest the soil during contact with the piles. Exposure to contaminants in the remaining piles does not represent a health hazard if exposure is limited to either ingestion or dermal contact. However trespassers that regularly gain access and travel with dirt bikes on the piles may experience an unacceptable health risk from the inhalation of metal dust. The CT DPH calculated the risks to these trespassers from inhalation of metal dust during a motorized bike riding episode. We assume that trespassers gained site access 30 days a year, ride for 3 hours on the site, and have been accessing the site for 8 years. The CT DPH utilized establish EPA methodology to calculate dust generated during the trespassing episodes [13]. On the basis of these assumptions, there is an acute health hazard from inhaling the metal dust. The metals which were at elevated levels include: chromium, cobalt, aluminum, and cadmium. Inhalation of metal dust may cause damage to the respiratory system. One outcome of exposure to powdered metal dust, reported in the literature, may be metal fume fever. This is an acute syndrome that follows exposure to metal fumes or very fine metal dust particles. The symptoms are characterized by symptoms similar to the flu: fever, chills, excess sweating, nausea, weakness, fatigue, and throat irritation [14]. Metal fume fever is often incorrectly identified as the flu. Metals associated with this syndrome include: aluminum, antimony, cadmium, copper, iron, magnesium, manganese, nickel, selenium, silver, tin, and zinc [14].

There have been two reports of youths experiencing flu-like symptoms after trespassing the site [8]. The CT DPH does not know or is unable to obtain the diagnosis of the reported illnesses, therefore metal fume fever can not be ruled out.

## **Conclusions**

1. The baghouse fine piles and dross piles located throughout the site represent a public health hazard to trespassers who regularly and easily access the site and ride motorized bicycles through the piles and inhale the metal fines.
2. Numerous drums, tanks, and other debris located throughout the Batchelder Site represent a physical hazard to trespassers who regularly and easily access the site.
3. One pile of dross material near the landfill contains lead at concentrations which present a health hazard to trespassers who may play on this pile. Incidental ingestion of this waste could result in blood lead poisoning.
4. The structural integrity of sections of the larger building has been damaged to such an extent that a building collapse is likely.
5. Two tanks, that are nearly one quarter full of liquid, have sections cut out on the ends, and present a physical hazard to trespassers.
6. The Batchelder Site contains numerous accessible storage drums (containing waste oil and fuel oil), that present a physical hazard to trespassers who may play on them.
7. The Batchelder Site contains one known asbestos source from abandoned tiles located outside of the main building. The current friable condition is unknown, and may be disturbed by trespassers.
8. The Batchelder Site contains soil contaminated with PCBs that present a potential health hazard to trespassers.
9. The security fence is damaged and in some sections non-existent.
10. One gasoline pump was noted near the main building. The underground storage tank is believed to be present, but the current gasoline storage is unknown. This may represent an explosion hazard to trespassers who may start a fire near the hose.
11. Numerous open pits are located inside the main building which present a physical hazard to trespassers.
12. The extent of off-site migration of site-related contamination is unknown.

## **Recommendations**

### *Short-term Recommendations*

1. Prevent access to all baghouse fine piles and all dross piles located throughout the site.
2. Secure the perimeter fence and include visible warnings posted around the site.
3. Prevent access to the above ground storage tanks which contain product and have large openings cut out on the ends.
4. Prevent access to the contaminated PCB soil.
5. Prevent access to the storage drums located throughout the site.
6. The CT DPH would like the opportunity to review the health and safety plan during remediation.
7. Educate the community about the site hazards.

### *Long-term Recommendations*

1. Determine if there are any underground gasoline storage tanks, and if present, conduct VOC and SVOC analysis of the product.
2. Continue monitoring private wells adjacent to the Batchelder site for VOCs, metals, and SVOCs.
3. Determine if site-related contamination has migrated off-site: either via dust clouds or other transport mechanism.

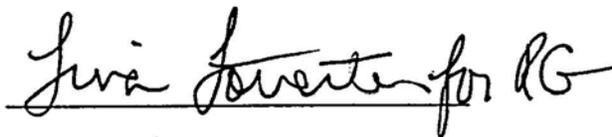
## CERTIFICATION

The Charles Batchelder Company Incorporated Site Health Consultation was prepared by the Connecticut Department of Public Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the Health Consultation was initiated.



Technical Project Officer, SPS, SSAB, DHAC

The Division of Health Assessment and Consultation, ATSDR, has reviewed this Health Consultation and concurs with its findings.



Chief, SPS, SSAB, DHAC, ATSDR

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5. CT Department of Environmental Protection: Decision Document Charles Batchelder Company, Inc. Site Newtown Connecticut. Use of State Funds and Accounts to Remediate a Hazardous Waste Disposal Site. March 6, 1995.
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Attachment B: Site Photos Taken 4/4/12



Collapsing Building, Debris Piles, Graffiti



Debris Pile



Open Pit



Open Pit



Building Collapsed After the Fire



Debris (foreground), metal waste pile (background)



Metal waste pile partially covered with geotextile



Tire tracks



Metal waste pile



Tire tracks leading to/from pile



Largest metal waste pile, with tire tracks



Missing portion of perimeter fence

## **REPORT PREPARATION**

This Health Consultation for the Charles Batchelder Company Site was prepared by the Connecticut Department of Public Health under a cooperative agreement with the federal Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with the approved agency methods, policies, procedures existing at the date of publication. Editorial review was completed by the cooperative agreement partner. ATSDR has reviewed this document and concurs with its findings based on the information presented.

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