

CCA

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ENGINEERING SURVEYING ENVIRONMENTAL

FACSIMILE

September 30, 2003

*Medallic Art
CTD001265636
R-13
RDMS # 100187*

To: Juan Perez - USEPA
From: Ralph A. Klass, P.E.
Subject: Former Medallic Arts Site - Danbury, CT
Fax No.: 617-918-1294



RDMS DocID 00100187

THIS MESSAGE CONTAINS 13 PAGES INCLUDING COVER SHEET. IF YOU HAVE DIFFICULTIES IN RECEIVING THIS MESSAGE, PLEASE CALL 203-775-6207.

Attached for your review/consideration is a revised copy of the updated Environmental Indicator (EI) RCRIS code (CA725) form and attachments prepared at your request.

Please feel free to contact Gary Michael or this office with any questions or comments.

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)

Current Human Exposures Under Control

Medallic Art
CTD001265636
R13

Facility Name: Former Medallic Art Facility
Facility Address: Old Ridgebury Road, Danbury, Connecticut
Facility EPA ID #: CTD001265636

1. Has all available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been considered in this EI determination?

X If yes - check here and continue with #2 below.

 If no - re-evaluate existing data, or

 If data are not available skip to #6 and enter "IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

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2. Are groundwater, soil, surface water, sediments, or air media known or reasonably suspected to be "contaminated" above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

Table with 5 columns: Media Type, Yes, No, ?, Rationale / Key Contaminants. Rows include Groundwater, Air (indoors), Surface Soil, Surface Water, Sediment, Subsurf. Soil, and Air (outdoors).

If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

X If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s): Noted in "Voluntary Corrective Action Program, Former Medallie Art Facility - CTD001265636 Site Characterization Summary Report and Evaluation of Stabilization Measures of Success", prepared for USEPA Region I RCRA Corrective Action Section, May 7, 1997, in "Groundwater Monitoring Event Sampling Report (Sept/Nov 1997), Former Medallie Art Facility, Danbury, Connecticut" of February 9, 1998 sent to Mr. Juan Perez, RCRA Corrective Action Section, USEPA. "Groundwater Monitoring Report July 19 & 20, 2000 Sampling Event" (September 2000) and in "Groundwater Monitoring Report June 20 & 21, 2002 Sampling Event" (July 2002). See attached supporting statements.

Footnotes:

1 "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

2 Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

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3. Are there complete pathways between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

Potential Human Receptors (Under Current Conditions)

<u>"Contaminated" Media</u>	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food ³
Groundwater	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>
Air (indoors)	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Soil (surface, e.g., <2 ft)	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Surface Water	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Sediment	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Soil (subsurface e.g., >2 ft)	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Air (outdoors)	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated") as identified in #2 above.
2. Enter "yes" or "no" for potential "completeness" under each "Contaminated" Media - Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces ("___"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

- If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).
- If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.
- If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code

Rationale and Reference(s): See attached supporting statements.

³ Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

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4 Can the exposures from any of the complete pathways identified in #3 be reasonably expected to be "significant"⁴ (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

_____ If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

_____ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) - continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

_____ If unknown (for any complete pathway) - skip to #6 and enter "IN" status code

Rationale and Reference(s): _____

⁴ If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

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6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

- YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the Former Medallic Art facility, EPA ID # CTD001265636 located at Danbury, Connecticut under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.
- NO - "Current Human Exposures" are NOT "Under Control."
- IN - More information is needed to make a determination.

Completed by (signature) [Signature] Date 9/30/2003
 (print) JUAN A. PEREZ
 (title) Environmental Scientist

Supervisor (signature) [Signature] Date 2/2/04
 (print) Matthew R. Haglund
 (title) Section Chief
 (EPA Region or State) Reg. I

Locations where References may be found:

Documents referenced have been forwarded to Juan Perez of the RCRA Corrective Action Program (HBT).

Contact telephone and e-mail numbers

(name) Ralph A. Klass, P.E.
(phone #) 203-775-6207
(e-mail) rklass1 cca@snet.net

FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.



FIGURE 1
 SITE LOCATION MAP
 FORMER MEDALLIC ARTS FACILITY
 DANBURY, CONNECTICUT



QUADRANGLE LOCATION

TOPOGRAPHIC CONTOUR INTERVAL = 10'

NOTE: FIGURE TAKEN FROM THE BREWSTER, N.Y.-CONN.
 U.S.G.S. TOPOGRAPHIC QUADRANGLE MAP.
 (DATED 1955 PHOTO REVISED IN 1984)

40 Old New Milford Road
 Brookfield, CT 06804
 (203)776-6207



33 Village Green Drive
 Litchfield, CT 06759
 (860)567-3799

By: G.P.C.	Scale: 1" = 1000'	Sheet: 1
Date: 3 / 18 / 99	Project No. 8095.02	Acad No. RF8

"CONTAMINATED" MEDIA (Page 2)

From approximately 1983 to 1990, the Connecticut Department of Environmental Protection (CTDEP) and the U.S. Environmental Protection Agency (EPA) identified three general areas of the Former Medallie Art site that required Environmental remediation.

- Two contiguous (exterior) 12.5' by 25' surface impoundments that were used for dewatering sludge generated from wastewater treatment operations from 1972 to 1983;
- The (interior) electroplating, bright dip, hazardous waste storage and wastewater treatment areas;
- Groundwater contaminated with low to moderate levels of halogenated solvents (primarily tetrachloroethene (PCE), 1,1,1-trichloroethane (TCA) and their biodegradational breakdown components)

The interior of the former Medallie Art Facility was decontaminated in accordance with a CTDEP approved quality assurance work plan. Verification sampling was performed following the completion of decontamination activities. In September of 1994, the CTDEP approved the "Decommissioning Verification Report" (January 5, 1994, amended April 6, 1994) prepared by Sailer Environmental. It may therefore be concluded that the decontamination efforts within the buildings were sufficient to satisfy CTDEP concerns relative to potential human exposures.

The on-site buildings are all one story structures built on concrete slab foundations. No subsurface, confined spaces are known to exist nor are any significant cracks observable in the slab foundations. The likelihood of a build-up of any volatile organic vapors from VOC contaminated groundwater beneath the building foundations is therefore considered minimal. A limited soil gas survey and an interior organic vapor screening were performed by CCA on May 28, 1997 to evaluate whether a build-up of volatile organic vapors had occurred beneath the building foundations. The conclusion of this study was that a build-up of volatile organic vapors had not occurred.

Based upon the above observations, it may be concluded that no unacceptable human exposures to hazardous constituents should exist within the on-site structures.

Decontamination verification soil sampling performed in 1993 within the area of the former sludge drying impoundments indicated that no significant concentrations of hazardous waste constituents remain in the surface impoundments area. This determination was further confirmed through performance of "clean closure" confirmation sampling performed in 1997. Subsequent to performance of the confirmation sampling the former sludge drying impoundments area was paved with asphalt in its entirety rendering the underlying soils inaccessible. It may therefore be

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concluded that no unacceptable human exposures exist relative to soils in the area of the former impoundments.

Based upon historical and recent subsurface investigations at the site, it may be concluded that the former treatment plant effluent dry wells were the primary source of the VOCs detected in the groundwater beneath the site. Subsurface investigations performed in the vicinity of the former drywells, in 1998, indicated that no significant ongoing source of VOC contamination exists related to the former drywells. The concentration of VOCs, primarily PCE, detected in the groundwater beneath the site would not cause any lasting adverse impacts on human health due to dermal exposure. Likewise, when exposed to the atmosphere, air movement and dilution/dispersion would reduce any volatile vapors from the groundwater to levels below what would be considered hazardous for short term exposure via inhalation.

If consumed in sufficient quantities over a period of time, the level of VOCs present in the groundwater beneath the site would be considered hazardous to human health. However, based upon a review of Danbury Water Department records the former Medallic Art site (currently Belimo) and all of the residences and industrial/commercial facilities surrounding the site are connected to municipal water supplies. A nearby trailer park type development that historically was not serviced by a public water supply was recently (2000) connected to a new water main installed at the expense of Fairway Asset Management (current site owner). The private water supply well was subsequently disconnected. Ingestion of the groundwater should therefore not be of concern.

There are no permanent surface water bodies on or immediately adjacent to the Former Medallic Art Facility. Lake Kenosia is located approximately one-half mile down-gradient from the site. Surface water impacts should not be a significant concern. There are reportedly no private or public water supply wells currently in use down gradient from the site.

With regard to potential impacts to downgradient buildings via the accumulation of VOC vapors (from groundwater) in basements and/or other confined spaces, the Connecticut RSR "Residential Volatilization Criteria for Groundwater" for PCE is 1,500 ppb. Given that the concentration of PCE in the groundwater along the downgradient site property boundary is below this criteria, no significant impacts to downgradient buildings due to VOC vapor accumulations are expected.

In summary, although groundwater monitoring data indicates that some contamination remains at the former Medallic Art site that may require further monitoring, action has been taken and/or site conditions are such that unacceptable threats to human health or the environment from the actual exposure to the contamination are not deemed plausible based on existing data. In addition Fairway Asset Management (current site owner) has entered into (Fall 2003) an Administrative Order on Consent (Consent Order) with EPA under which the associated Scope of Work (SOW) includes implementation of Corrective Measures (construction of a permeable reactive barrier for treatment of groundwater and demonstration of effectiveness through performance of groundwater quality monitoring) designed to further limit the potential for human exposure.

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It should be noted that the current site occupants (Belimo Air Control, USA) has implemented site security policies that comply with the Homeland Security Act Customs Trading Partnership Against Terrorism (C-TPAT) program. Under these policies, entrance to the site building is controlled by double locked doors requiring passcards for entrance during business hours. Motion detectors are in use during off hours. These procedures effectively control access to the site and limit the potential for exposure to contaminated media.

Planned modification of current site activities, scheduled for the fall of 2003, includes expansion of the existing building and associated paved parking areas. Implementation of these site plan revisions will result in additional site soils becoming inaccessible to human exposure.

SUPPORTING DOCUMENTATION PREVIOUSLY SUBMITTED

- *Voluntary Corrective Action Program, Former Medallic Art Facility – CTD001265636, Site Characterization Summary Report and Evaluation of Stabilization Measures of Success (May 7, 1997). Prepared by CCA on behalf of Fairway Asset Management, Inc.*
- *“Clean Closure” Confirmation Sampling Report, Former Impoundments Area, Former Medallic Arts Facility, Danbury, CT (November 10, 1997). Prepared by CCA on behalf of Fairway Asset Management, Inc.*
- *Groundwater Monitoring Event Sampling Report, Former Medallic Arts Facility, Danbury, CT (February 9, 1998). Prepared by CCA on behalf of Fairway Asset Management, Inc.*
- *Limited Subsurface Investigation, Former Medallic Arts Facility, Danbury, CT (May 19, 1998). Prepared by CCA on behalf of Fairway Asset Management, Inc.*
- *Limited Soil Gas Survey & Building Interior Organic Vapor Screening, Medallic Arts Facility, Danbury, CT (May 28, 1997). Prepared by CCA on behalf of Fairway Asset Management, Inc.*
- *“Groundwater Monitoring Report – July 19 & 20, 2000 sampling event for former Medallic Arts Facility Danbury Connecticut” (September, 2000). Prepared by CCA on behalf of Fairway Asset Management, Inc.*
- *“Groundwater Monitoring Report – June 20 & 21, 2002 sampling event for former Medallic Arts Facility Danbury Connecticut” (July 2002). Prepared by CCA on behalf of Fairway Asset Management, Inc.*

HUMAN EXPOSURE PATHWAY SUMMARY (Page 3)

Screening Potentially Complete Pathways for Contaminated GROUNDWATER

- There are no wells located off site. Based upon Danbury Water Department records, the subject site and all adjacent properties are connected to municipal water supplies. Ingestion, inhalation and dermal contact of the groundwater by a resident, therefore, should not be a concern.
- On site wells have been impacted. Based upon Danbury Water Department records, the subject site and all adjacent properties are connected to municipal water supplies. A limited soil gas survey and an interior organic vapor screening were performed by CCA on May 28, 1997. The conclusion of this study was that a build up of volatile organic vapors had not occurred. Ingestion, inhalation and dermal contact of the groundwater by a worker, therefore, should not be a concern.
- There is no construction expected on the site which will disturb the groundwater. Inhalation and dermal contact by construction workers should, therefore, not be a concern.
- There is no expected irrigation of vegetables or fruit on or down gradient of the site. Ingestion of contaminated food supply should, therefore, not be a concern.

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