

**EPA – New England**  
**Resource Conservation and Recovery Act (RCRA) Corrective Action**  
**Ecological Receptor Exposure Pathway Scoping Checklist**

**Facility Name:** Bovano of Cheshire  
**Facility Address:** 830 Main St., Cheshire, Ct  
**Facility EPA ID #:** CTD001179316

**Purpose:**

This checklist is designed as a screening tool to help EPA-New England (EPA-NE) RCRA Corrective Action project managers determine whether there is the potential for complete exposure pathways between RCRA facility contaminants and ecological receptors (i.e., plants and wildlife).

**Intended Use:**

EPA-NE has recognized a need for a tool to guide its review of facility information pertaining to ecological risk assessment. This checklist is intended to guide EPA-NE review of available information on environmental conditions at a facility to determine whether further ecological assessment is necessary. Ideally, the checklist should be completed early in the RCRA Corrective Action process. If complete ecological exposure pathways are identified, an EPA or state ecological risk assessor should be involved in planning subsequent site investigation and ecological risk assessment.

Some state environmental agencies in New England have developed, or are in the process of developing, their own checklists or other tools for scoping ecological exposure pathways. Although EPA-NE believes the use of this checklist may be comparable and complimentary to other existing scoping tools used by states, the format and content of this EPA-NE checklist may differ from such state tools. Accordingly, this checklist is designed primarily for use by EPA-NE RCRA Facility Managers and their agents.

The checklist is considered a public document and, once completed for a given facility, may be included in the facility file. As a public document, the checklist may be shared with states, the regulated community, or the public for informational purposes.

**Note. Please be advised that new data or new information could alter the findings of this checklist. The checklist should be revisited if new information that might change the checklist findings becomes available. Completion of this checklist is not intended to substitute for a Screening Level Ecological Risk Assessment (SLERA) or a Baseline Ecological Risk Assessment (BERA). Findings, documented by this checklist that ecological exposure to facility contaminants is not expected, are not considered final until a site-wide remedy decision made by EPA or a state environmental agency authorized for RCRA Corrective Action results in the**

**termination of interim status of a facility or satisfaction with the conditions of a hazardous waste operating or post-closure permit.**

**REVIEW OF FACILITY INFORMATION & CONCEPTUAL SITE MODEL**

In order for ecological risks to exist there must be a potential for exposure of ecological receptors to contaminants. This portion of the evaluation is designed to assist in the identification of contaminated environmental media associated with a site.

Based on a review of the file and an understanding of the conceptual site model for the facility, please identify the environmental media present on or adjacent to the facility property which are known or reasonably expected to be impacted by contaminants from the facility. Place a check mark next to the media type. Additionally, please evaluate the potential for migration of contaminants from the site. Potential migration pathways include surface water flow, run off, groundwater flow, erosion, placement of fill and discharge locations. See attached figure of the site showing areas of potential contamination.

<b>Media Potentially Affected by Facility Operations:</b>	<b>Potential for Migration</b>	<b>Migration Pathways</b>
<input type="checkbox"/> Soil	Yes__ / No <b>X</b> _____	
<input type="checkbox"/> Sediment	Yes__ / No <b>X</b> _____	
<input type="checkbox"/> Surface Water	Yes__ / No <b>X</b> _____	
<input type="checkbox"/> Ground Water	Yes__ / No <b>X</b> _____	

**Rationale and References:**

Reference # Draft Statement of Basis	Document Name	Page	Table	Figure	Appendix
4	“Technical Report to Bovano Industries on Groundwater Investigations”, July 1983				3
Rationale: Soil borings and analytical tests show no surficial soil contamination at the site. Soil contamination is only associated with the treatment pit, which was removed.					
5	“Soil Sampling Results”, Sept 1986		1,2	1	

Reference # Draft Statement of Basis	Document Name	Page	Table	Figure	Appendix
Rationale: Soil and groundwater samples taken by TRC inside the chemical storage building and outside in copper sludge lagoon.					
10	“Ph. I Environmental Site Assessment Report”, July 1995	22, 25			
Rationale: Soil and groundwater sampling results, plus descriptions of site and environment.					
12	“Report on Geoprobe Drilling/Groundwater Sampling”, Aug 1997	1,2		1	A
Rationale: Drilling and analytical testing to evaluate projected hypothetical plume from historical site source showing limitations of offsite groundwater plume in direction of surface water.					
17	“RCRA Post-Closure Groundwater Monitoring Event”, Aug. 2006	3		2	Laboratory Report
Rationale: Ground water sampling and analytical data showing that residual ground water contamination which existed historically down gradient from the lagoon is nondetect.					
18	“RCRA Post-Closure Groundwater Monitoring Event”, Oct. 2006	3		2	Laboratory Report
Rationale: Ground water sampling and analytical data showing that residual ground water contamination which existed historically down gradient from the lagoon is nondetect					
19	“RCRA Post-Closure Groundwater Monitoring Event”, Nov. 2006	3		2	Laboratory Report
Rationale: Ground water sampling and analytical data showing that residual ground water contamination which existed historically down gradient from the lagoon is nondetect					

**HABITAT DOCUMENTATION**

In order for ecological risks to exist there must be a potential for ecological receptors to come into contact with contaminated media. This portion of the evaluation is designed to assist in the identification of potential presence of environmental receptors associated with a site. It is predicated upon the assumption that if suitable habitat exists, then ecological receptors could potentially be present.

Please check the potentially impacted habitats present on, adjacent to, or immediately downgradient of the facility based on a site visit and an understanding of the site conceptual model. Also, indicate for each habitat whether the presence of site-derived contamination has been confirmed, is suspected, is not expected, or is unknown

Table 1: Summary of habitats and presence of Site-derived contamination							
Habitat type	Location			Presence of Site-derived contamination			
	At the site <sup>a</sup>	Adjacent to the site	Not present	Confirmed	Suspected	Not expected	Unknown
<b>MARINE/ESTUARINE ENVIRONMENTS</b>							
Salt marsh			X				
Tidal rivers & streams			X				
Exposed mudflats			X				
Seagrass beds			X				
Rocky shoreline			X				
Other <sup>*</sup>			X				

<b>FRESHWATER ENVIRONMENTS</b>							
Wetlands			X				
Lakes & ponds			X				
Rivers and streams		X				X <sup>1</sup>	
Vernal pools <sup>c</sup>			X				
Other <sup>*</sup>			X				
<b>TERRESTRIAL ENVIRONMENTS</b>							
Wooded			X				
Transitional			X				
Open field			X				
Other <sup>*</sup>	Urban	Urban					

<sup>a</sup> “at the site” is defined as within the limits of the site perimeter or site fence

<sup>b</sup> “adjacent to the site” is more loosely defined as terrestrial or aquatic habitat present in the immediate vicinity of the site

<sup>c</sup> vernal pool refers to a temporary body of standing water in terrestrial habitat which appears in early spring but completely dries out by late spring-early summer. This type of habitat can be suitable for amphibian reproduction.

<sup>\*</sup> provide additional details

<sup>1</sup> steam is cross gradient of historical groundwater contamination so no contamination would be expected to have ever entered the stream, so no need for testing at the stream adjacent to the site, nor hydraulically downgradient in stream sediments.

**Habitat Documentation Rationale and References:**

<b>Reference Number from Draft Statement of Basis</b>	<b>Document name</b>	<b>Page Number</b>	<b>Table Number</b>	<b>Figure Number</b>
13	“Current Conditions and Proposed Final remedy Report” October 2000	7		1 and 2
<p>Rationale: Habitat observations by field personnel as documented in this phase of work shows the site to be a mostly paved and not containing any sensitive habitat listed in Table 1 of this checklist. Conclusion is there are no threatened or endangered species at site.</p>				
	“Draft Statement of Basis” August 2007	9-10		
<p>Rationale: Risk assessment of the migration pathways and ecological exposures in this report state there is no viable habitat adjacent to the site and no complete exposure pathway due to the absence of a chemical stressor.</p>				

**EXPOSURE ASSESSMENT**

In order for there to be a potential for ecological risks to occur at a site, there must be a potential for stressors, in this case chemicals, to be present where ecological receptors could come in contact with them. After reviewing the previous pages on Facility Information and Habitat Documentation, plus additional facility information as necessary, please answer the following questions in order to determine if ecological receptors are known or could reasonably be expected to be exposed to contaminants at or from the facility. **If any contaminant concentration data showing non-detect results are used to conclude that an environmental medium is not contaminated, please consult an ecological risk assessor to confirm that analytical methods used were adequate to detect contaminants at concentrations below levels of concern for ecological receptors.**

**Surface Water Bodies**

*Sediments*

- 1 a. Is sediment in surface water bodies known or reasonably expected to be contaminated due to releases at or from the facility? Releases from a facility may include but are not limited to: point source discharges, run-off from contaminated soil, groundwater migration, erosion, filling or aerial deposition resulting from air emissions. **Note: If sediment samples are taken adjacent to or downstream of the site, collection should take place in depositional areas present.**

**Yes\_\_ (Complete the remaining questions in this checklist and circle “Yes” in Surface Water Body Finding under the PRELIMINARY ECOLOGICAL RISK EVALUATION Section below.)**

**No\_X\_ (Proceed to question 1b.)**

***Surface Water***

1b. Is surface water known or reasonably expected to be contaminated due to releases at or from the facility? Releases from a facility may include but are not limited to: point source discharges, run-off from contaminated soil, discharge of contaminated groundwater, groundwater migration or aerial deposition resulting from air emissions. (Note: for surface water, dissolved metal data, from analysis of filtered water samples, is a better indicator of exposure than total metal data).

**Yes\_\_ (Complete the remaining questions in this checklist and circle “Yes” in Surface Water Body Finding under the PRELIMINARY ECOLOGICAL RISK EVALUATION Section below.)**

**No\_X\_ (Proceed to question 1c.)**

***Groundwater***

1 c. For groundwater discharging to surface water, is groundwater, at the point of discharge to the surface water body, known or reasonably suspected to be contaminated due to releases at or from the facility?

**Yes\_\_ (Complete the Surface Water Bodies Rationale and References section and the remaining questions in this checklist. Then, circle “Yes” in the Surface Water Body Finding under the PRELIMINARY ECOLOGICAL RISK EVALUATION Section below.)**

**No\_X\_ (Complete the Surface Water Bodies Rationale and References section directly below, then proceed to the Surface Soil Section below.)**

**Surface Water Bodies Rationale and References:**

<b>Reference # Draft Statement of Basis</b>	<b>Document Name</b>	<b>Page</b>	<b>Table</b>	<b>Figure</b>	<b>Appendix</b>
10	“Phase I Environmental Site Assessment Report”, July 1995	9, 21		1	
Rationale: Description of site, its environment and abutting property showing no surface water bodies on site and distance to the closest river.					
13	“Current Conditions and Proposed Final remedy Report” October 2000	7		1 and 2	
Rationale: Observations by field personnel as documented in this phase of work show the site					

to be a mostly paved and not containing any surface water bodies.

**Surface Soil**

- 2 a. Is surface soil (found at depths of 2 feet or less from the surface) known or reasonably expected to be contaminated due to releases at or from the facility?

Yes\_\_ (Proceed to question 2 b.)

No\_ **X**\_ (Complete the Surface Soil Rationale and References section and the remaining questions in this checklist, then circle “No” under Surface Soil Finding in the **PRELIMINARY ECOLOGICAL RISK EVALUATION** Section below.)

- 2 b. Is all contaminated surface soil covered with buildings, pavement or other physical barriers that prevent plants or wildlife from being exposed to contaminants and that prevent migration of soil contamination into groundwater that could affect a surface water body?

Yes\_\_ (Proceed to question 2 c.)

No\_\_ (Complete the Surface Soil Rationale and References section below and the remaining questions in this checklist, then circle “Yes” under Surface Soil Finding in the **PRELIMINARY ECOLOGICAL RISK EVALUATION** Section below.)

- 2 c. Is an institutional control in place to ensure the maintenance of the barriers described above so that receptors will not be exposed to contaminated soil (i.e., ensuring that soil will not be exposed as a result of excavation, demolition or other activities and that pavement or other physical barriers will be maintained in good condition and that if soil is exposed, appropriate measures will be taken to address any ecological risks).

Yes\_\_ (After completing the Surface Soil Rationale and References section below and the remaining questions in this checklist, circle “No” under Surface Soil Finding in the **PRELIMINARY ECOLOGICAL RISK EVALUATION** Section below.)

No\_\_ (After completing the Surface Soil Rationale and References section below, and the remaining questions in this checklist, circle “Yes” under Surface Soil Finding in the **PRELIMINARY ECOLOGICAL RISK EVALUATION** Section below.)

**Surface Soil Rationale and References:**

<b>Reference # Draft Statement of Basis</b>	<b>Document Name</b>	<b>Page</b>	<b>Table</b>	<b>Figure</b>	<b>Appendix</b>
4	“Technical Report to Bovano Industries on Groundwater Investigations”, July 1983				3
Rationale: Rationale: Soil borings and analytical tests show no surficial soil contamination at the site. Soil contamination is only associated with the treatment pit, which was removed.					
5	“Soil Sampling Results”, Sept 1986		1,2	1	
Rationale: Rationale: Soil and groundwater samples taken by TRC inside the chemical storage building and outside in copper sludge lagoon.					
10	“Ph. I Environmental Site Assessment Report”, July 1995	22, 25			
Rationale: Soil and groundwater sampling results, plus descriptions of site and environment.					

**Subsurface Soil**

- 3 a. Is subsurface soil (found at depths greater than 2 feet from the surface) known or reasonably expected to be contaminated due to releases at or from the facility?

**Yes\_\_ (Proceed to question 3 b.)**

**No\_X\_ (Skip to the Subsurface Soil Rationale and References section. Then complete the remaining questions in this checklist and circle “No” under Subsurface Soil Finding in the PRELIMINARY ECOLOGICAL RISK EVALUATION Section below.)**

- 3 b. Are the contaminated subsurface soils located in a setting where they could be exposed by erosion or that subsurface soil contaminants could be mobilized and transported via groundwater to a surface water body?

**Yes\_\_ (After completing the Subsurface Soil Rationale and References Section and the remaining questions in this checklist, circle “Yes” under Subsurface Soil Finding under the PRELIMINARY ECOLOGICAL RISK EVALUATION Section below).**

**No, engineering controls are in place.\_\_ (Proceed to question 3c)**

- 3 c. Is an institutional control be in place to ensure that contaminated soil will not be brought to the surface, as a result of excavation, demolition or other activities and, if applicable, to ensure that engineering controls are maintained and that if contaminated soil is exposed, appropriate measures will be taken to address

ecological risk?

- Yes\_\_** (After completing the Subsurface Soil Rationale and References Section and the remaining questions in this checklist, circle “No” under Subsurface Soil Finding under the **PRELIMINARY ECOLOGICAL RISK EVALUATION** Section below.)
- No\_\_** (After completing the Subsurface Soil Rationale and References Section and the remaining questions in this checklist, circle “Yes” under Subsurface Soil Finding under the **PRELIMINARY ECOLOGICAL RISK EVALUATION** Section below.)

**Subsurface Soil Rationale and References:**

<b>Reference # Draft Statement of Basis</b>	<b>Document Name</b>	<b>Page</b>	<b>Table</b>	<b>Figure</b>	<b>Appendix</b>
5	“Soil Sampling Results”, Sept 1986		1,2	1	
Rationale: Soil and groundwater samples taken by TRC inside the chemical storage building and outside in copper sludge lagoon.					
10	“Ph. I Environmental Site Assessment Report”, July 1995	22, 25			
Rationale: Soil and groundwater sampling results, plus descriptions of site and environment.					

**PRELIMINARY ECOLOGICAL RISK EVALUATION**

**Surface Water Body Finding:**

Based on the information provided above, is further evaluation of risks to ecological receptors from contaminants in surface water or sediments of surface water bodies necessary?

**Yes\_\_** (Check “Yes” if the response to any of the questions above regarding Surface Water Bodies is “Yes”)

**No\_X\_** (Check “No” if the response to all of the questions above (1a, 1b, and 1c) regarding Surface Water Bodies is “No”)

**Surface Soil Finding:**

Based on the information provided above, is further evaluation of risks to ecological receptors from contaminants in surface soil necessary?

Yes \_\_\_

No X

**Subsurface Soil Finding:** Based on the information provided above, is further evaluation of risks to ecological receptors from contaminants in subsurface soil necessary?

Yes\_\_\_

No X

Based on the information provided on the preceding pages, check the appropriate response:

X The answer was “No” for all three of the findings in this checklist (i.e., the Surface Water Body Finding, the Surface Soil Finding and the Subsurface Soil Finding). Therefore, based on the data considered in this checklist, ecological exposure to contaminants at or from the Bovano Cheshire facility, EPA ID # CTD001179316, located at (street address) 830 Main Street, Cheshire, CT in (town and state) is not reasonably expected and further ecological risk assessment does not appear necessary.

**Note: Releases from the facility must be adequately characterized, in accordance with EPA guidance, in order to make this determination. This checklist should be revisited if new information, that would alter the checklist findings, becomes available. In addition, the finding that ecological exposure to facility contaminants is not expected is not considered final until a site-wide remedy decision made by EPA or a state environmental agency authorized for RCRA Corrective Action results in the termination of interim status of a facility or satisfaction with the conditions of a hazardous waste operating or post-closure permit.**

\_\_\_\_\_ The answer was “Yes” for any of the findings in this checklist (i.e., the Surface Water Body Finding, the Surface Soil Finding and the Subsurface Soil Finding). Therefore, further evaluation of ecological risk is recommended for the \_\_\_\_\_ facility, EPA ID # \_\_\_\_\_, located at (street address) \_\_\_\_\_ in (town and state) \_\_\_\_\_.

An EPA or state ecological risk assessor should be involved as early as possible in planning the facility investigation. This checklist can be provided to the

ecological risk assessor to focus the ecological risk assessment on the potential exposure pathways.

Completed by: \_\_\_\_\_  \_\_\_\_\_

Date 6/12/2008  
(printed name) Muriel S. Robinette  
(title) President

Locations where References may be found:

Cheshire Public Library - 104 Main Street, Cheshire, CT