

**DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION**

Interim Final 2/5/99

**RCRA Corrective Action**

**Environmental Indicator (EI) RCRIS code (CA725)**

**Current Human Exposures Under Control**

**Facility Name:** Ball Metal Beverage Container Corp.  
**Facility Address:** 750 Old Abingdon Hwy., Bristol, Virginia, 24201  
**Facility EPA ID #:** VAD 055 576 326

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?

- 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**

The Ball facility is located at 750 Old Abingdon Highway, Bristol, VA 24201. Bristol is located in Washington County, VA which is in the southwest corner of the Commonwealth.

The facility is bordered by the Norfolk and Western Rail line to the northwest. Across from the railroad are apartment buildings. Beaver Creek borders the facility from the north corner to the southeast side of the main building. Old Abingdon Highway follows the same route as Beaver Creek. Along the northeast side of the building, across Beaver Creek and Old Abingdon Highway are residential buildings.

In 1971 the Reynolds Metals Corporation (Reynolds) built the plant that is now occupied and operated by Ball. In 1973 Reynolds started metal beverage end manufacture operations at the plant. In August of 1998 Ball conducted Phase I and Phase II Environmental Site Assessments, purchased the plant and continued facility operations.

At the time of the July 2007 site visit, the site employed approximately 230 employees. The staff operates in two 12-hour shifts, 7 days per week, 52 weeks per year, with the exception of major holidays.

The Ball Plant makes aluminum tops for beverage cans. This facility makes the shell of the top from large rolls of aluminum sheet metal stock, and then makes the curler edge of the top and applies a rubberized compound liner to the edge the seam of the top. Additional press details are added to the top ends. Currently one of the facility's production lines uses a water based compound liner material to edge the seam while one half of the facility's production uses a volatile organic compound (VOC) solvent based rubberized compound liner material. The rubberized compound liner material consists of 43% VOC solvent (heptane). The newer production lines use the water based solvent and eventually the facility will be eliminating the VOC based solvent rubberized compound liner material.

**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”<sup>1</sup> 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)?

	<u>Yes</u>	<u>No</u>	<u>?</u>	<u>Rationale / Key Contaminants</u>
Groundwater		X		While all groundwater monitoring wells have been removed from the site, no evidence was found in VDEQ or USEPA Region III files indicating a release to groundwater has occurred.
Air (indoors) <sup>2</sup>		X		No evidence of indoor air issues found
Surface Soil (e.g., <2 ft)		X		1998 Site Investigation found no environmental impacts. SWMUs and one AOC that previously impacted the site have been cleaned up and closed with VDEQ approval.
Surface Water		X		1998 Site Investigation revealed no surface water contamination
Sediment		X		1998 Site Investigation revealed no sediment contamination
Subsurf. Soil (e.g., >2 ft)		X		1998 Site Investigation found no environmental impacts. SWMUs and one AOC that previously impacted the site have been cleaned up and closed with VDEQ approval.
Air (outdoors)		X		No activities take place 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.
- 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):

Closure of SWMU #1 – Former Waste Tab Lube Storage System was approved by VDEQ in 1999. Activities completed including the removal of a 10,000-gallon UST, a 150-gallon below ground sump, and associated piping and related remediation. The area of SWMU #7 – Former Holding Pond and Trench System was sampled during a 1998 Site Investigation; no contamination was found. AOC A – Release on Dock Apron was cleaned up; 1998 soil sampling activities revealed no contamination in this area.

Historic groundwater monitoring wells have been removed, however no evidence of releases to groundwater was found in VDEQ or USEPA Region III files. Groundwater was not encountered during the 1998 Site Investigation and therefore was not sampled.

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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)

<b><u>“Contaminated” Media</u></b>	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food <sup>3</sup>
Groundwater							
Air (indoors)							
Soil (surface, e.g., <2 ft)							
Surface Water							
Sediment							
Soil (subsurface e.g., >2 ft)							
Air (outdoors)							

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):

<sup>3</sup> 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”**<sup>4</sup> (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):

<sup>4</sup> 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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5. Can the “significant” **exposures** (identified in #4) be shown to be within **acceptable** limits?
- If yes (all “significant” exposures have been shown to be within acceptable limits) - continue and enter “YE” after summarizing and referencing documentation justifying why all “significant” exposures to “contamination” are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).
  - If no - (there are current exposures that can be reasonably expected to be “unacceptable”)- continue and enter “NO” status code after providing a description of each potentially “unacceptable” exposure.
  - If unknown (for any potentially “unacceptable” exposure) - continue and enter “IN” status code.

Rationale and Reference(s):

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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 (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 Ball Metal Beverage Container Corp., EPA ID # VAD 055 576 326, located at 750 Old Abingdon Hwy., Bristol, Virginia 24201. Specifically, this determination indicates that the migration of "contaminated" groundwater is 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) \_\_\_\_\_ Date 1/22/09  
(print) Denis Zielinski  
(title) \_\_\_\_\_

Supervisor (signature) \_\_\_\_\_ Date 1/22/09  
(print) Luis Pizarro  
(title) \_\_\_\_\_  
(EPA Region or State) \_\_\_\_\_

Locations where References may be found:

US EPA Region III  
Waste & Chemicals Management Division  
1650 Arch Street  
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