

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: Asea Brown Boveri, Inc.
Facility Address: Greensburg, PA
Facility EPA ID #: PAD 08 295 7127

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

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”**¹ 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)?

----- 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):**
- a) Corrective Action Facility Report, PADEP, 07/29/94.
 - b) Site Inspection of ASEA Brown Boveri, NUS, 10/24/91.
 - c) Preparedness, Prevention, and Contingency Plan, BBC Brown Boveri, Inc., 1994.
 - d) PADEP, Hazardous Waste Inspection Reports from 07/06/81 to 05/02/90.
 - e) letter to file dated 07/ 29/94 (EPA, Region III project manager Ms. Atkinson.

Asea Brown Boveri (ABB) Incorporation is occupying 6 acres at 125 Theoboid Ave. ABB owns the facility 6-acre property north of Broad Street and south of Theobold Avenue. Also, currently leases offices and assembly buildings, and uses the former landfill area, SWMU #9, as an employee parking lot on the northern parcel, which was sold by the facility in 1985.

From 1958 various facilities operated assembling facility for high voltage circuit breakers and accessories for circuit breakers (i.e. safety equipment). The assembly process includes painting and welding. The painting of the circuit breaker components is the source of hazardous waste generating on the facility: waste paint (a filters, waste thinner, waste paints rags), xylene, toluene, mineral spirits, and methyl ketone. Prior to 1985, a TSD facility, due to facility operations which included the removal of an acid etching process (D002 waste) and the rinse water in the paint booth (D001 waste). In total approximately 3 x 55-gallon drums of Haz. Waste were produced in a 6 month period on the facility. In 1985 the 5,000 gallon bulk spent acid storage tank system, which use to receive spent acid from plating and galvanizing lines, was eliminated. Part B Permit was not needed any more. The facility became a Conditionally Exempt Small Quantity Generator.

Adjacent property owners are classified into three major categories: residential, industrial, and commercial. VOC emissions from the plant are monitored under Air Permit. The only on-site process subject to an air permit is the spray painting operation. In 1999 the spray painting processes was converted from a solvent-based paint system to a non-solvent based powder coat system to reduce VOCs. The facility continued to maintain NPDES Permit in the event of need to switch painting operations back.

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).

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According to the letter to the file, dated July 29, 1994 from the project manager Ms. Cheryl Atkinson, EPA, Region III: "Facility requires no corrective action at this time." Facility is stabilized and should be removed from the NCAP list." "Although, the landfill SWMU #9, remains a potential area of concern, ABB sold that portion of the facility" in 1985.

The Corrective Action program referred ABBs SWMU #9 to the Superfund program because ABB was on a non-interim status, non-RCRA, non-permitted Facility, i.e. not a TSD or a generator of hazardous waste. In February 1991 the EPA, Region III, Superfund program conducted a site inspection of the landfill on the site. The 2 acre landfill, SWMU #9, was situated between Jacks Run and Broad Street. It is covered with asphalt and used as an employee parking lot. The unlined landfill was active from the early 1980s until 1988. "An unauthorized landfill with no permit was known to receive municipal waste such as scrap metal, wood, and plastics." The toxicological evaluation of 1991 defined "samples of soils and sediments and surface water revealed notable levels of PAHs (benzopyrene) and low levels PCBs in soil and sediments and elevated metals in surface water and some soil." According to the facility manager statement in 2001: "these compounds were no use by the plant at the time." Surface water geochemistry revealed no release of hazardous wastes from the former landfill area. It appears to receive input from storm drains on Broad Street and Short Street upgradient from the landfill. No groundwater data is available, as there are no monitoring wells on the site.

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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)

	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food ²
Groundwater	no	no	no	no	---	---	no
Air (indoors) via SoilVapor	na	na	na	---	---	---	---
Soil (surface, e.g., <2 ft)	no	no	no	y	y	no	no
Surface Water	no	no	---	---	no	no	no
Sediment	no	no	---	---	y	no	no
Soil (subsurface e.g., >2 ft)	---	---	---	y	---	---	no
Air (outdoors)	no	no	no	no	no	---	---

Instructions for Summary Exposure Pathway Evaluation Table: (na – not applicable, no – not contaminated)

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).

 X 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):** a) Corrective Action Facility Report, PADEP, 07/29/94.
 b) Site Inspection of ASEA Brown Boveri, NUS, 10/24/91.
 c) Preparedness, Prevention, and Contingency Plan, BBC Brown Boveri, Inc., 1994.
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 e) letter to file dated 07/ 29/94 from EPA, Region III project manager Ms. Atkinson.

Construction workers excavating soil may be exposed to elevated concentrations of benzopyrene (PAH) and PCBs.

² 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”³ (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

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³ 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?

 X 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):**
- a) Corrective Action Facility Report, PADEP, 07/29/94.
 - b) Site Inspection of ASEA Brown Boveri, NUS, 10/24/91.
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