



New Hampshire Department of Environmental Services
DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
RCRA Corrective Action
Environmental Indicator (EI) RCRIS Code (CA725)

Current Human Exposures Under Control

Site Name: Former Beebe River Mill Lagoon Site
Site Address: Route 175, Campton, NH
Facility EPA ID #: NHD 001085430
DES Site #: 199902022

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

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

BACKGROUND

The Area of Concern is a former lagoon that received plating wastewater from the former Beebe River Mill. The unit was closed under a Department approved Remedial Action Plan in September 1982 and documented in a closure report submitted 1984. The closure consisted of removal of contaminated plating sludge, severing and plugging pipe connections to the impoundment, backfilling the bottom of the excavation to an elevation above the seasonal high water table, redeposition of the sludge and berm materials into the excavation and installation of a synthetic cap covered with sand/loam and vegetation. The Department has required maintenance of a Groundwater Management Permit (GMP) for the site, with the most recent renewal issued December 29, 2008. The GMP requires annual groundwater and surface water sampling of the site. There are no water supply wells in the area and there have been no detectable impacts to the Beebe River since June 2005.

RCRA RECORDS CENTER
FACILITY Rockwell Int.
I.D. NO. NHD 001085430
FILE LOC. R-13
OTHER # 108029

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)?

	YES	NO	?	RATIONAL
Groundwater	x			See# 1 below
Air (indoors)		x		
Surface Soil, 2 feet or less		x		
Surface Water		x		
Sediment		x		
Air (outdoors)		x		
Subsurf. Soil (e.g., >2 ft)	x			See # 2 below

	If no (for all media) - skip to # 6, and enter "YES," 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:

2009 Annual Report dated July 30, 2009

Closure/Post Closure Report prepared by Weston and dated February 1984

1. One down gradient monitoring well has had elevated cadmium levels above Ambient Groundwater Quality Standards (AGQS).
2. The unit is a closed surface impoundment. The sludge remains on-site with contamination present at depth.

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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)

Contaminated Media, Recreation, Food3	Residents	Workers	Day-Care	Construction	Trespassers
Groundwater	No	No	No	No	No
Air (indoors)	No	No	No	No	No
Surface Soil, 2 feet or less	No	No	No	No	No
Surface Water	No	No	No	No	No
Sediment	No	No	No	No	No
Air (outdoors)	No	No	No	No	No
Subsurf. Soil (e.g., >2 ft)	No	No	No	No	No

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.

X	If no (pathways are not complete for any contaminated media-receptor combination) - skip to # 6, and enter "YES" 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 <u>Pathway Evaluation Work Sheet</u> 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):

The Department requires annual cap inspections to ensure the integrity of the cap and prevent direct contact with the waste. Groundwater and surface water is monitored under a Groundwater Monitoring Permit on an annual basis with the results reported to the Department. There are no residential structures or water supply wells adjacent to the former impounds.

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

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 "YES" after summarizing <u>and</u> 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"

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 (All documentation must be referenced for future reference):

X	YES - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination. 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: David Bowen 9/17/09
Signature Date

David Bowen
Print name

Hydrogeologist III
Title

Supervisor: Kenneth N. Kettenring 9/17/09
Signature Date

Kenneth N. Kettenring
Print name

Hydrogeologist V
Title

Locations where References may be found:
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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.