US ERA ARCHIVE DOCUMENT

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	Address:	Highway US 45 North							
Facility	EPA ID #:	ILD 006 278 170							
	groundwater, sur	as all available relevant/significant information on known and reasonably suspected releases to soil, roundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Walanagement Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been considered in I determination?							
	<u>X</u>	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

Facility Name:

Definition of Environmental Indicators (for the RCRA Corrective Action)

AlliedSignal, Inc.

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).

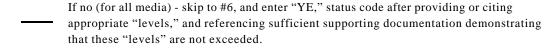
Duration / Applicability of EI Determinations

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)?

	Yes	<u>No</u>	?	Rationale / Key Contaminants
Groundwater	X			dibenzofuran, naphthalene, phenanthrene, 2-methyl
				naphthalene
Air (indoors) ²		X		
Surface Soil (e.g., <2 ft)	X			PAH's and Arsenic
Surface Water		X		
Sediment	X			PAH's and Arsenic
Subsurf. Soil (e.g., >2 ft)	X			PAH's and Arsenic
Air (outdoors)		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):

Polycyclic Aramatic Hydrocarbons (PAHs) including naphthalene (13,700mg/kg), acenaphthene (5,920 mg/kg), pentachlorophenol (25,600 mg/kg), anthracene (28,200 mg/kg), and phenanthrene (25,600 mg/kg).

Arsenic (282 mg/kg).

Phase III RFI Report for the AlliedSignal Metropolis Works Creosote Contaminated Area, dated July 26, 1996.

Phase II RCRA Facility Investigation Report, Area of Creosote Contamination, dated July 28, 1992.

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).

²Recent 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

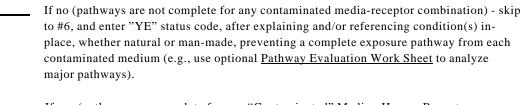
Potential **Human Receptors** (Under Current Conditions)

"Contaminated" Media Residen	nts	Workers	Day-Care	Construction	Trespassers	Recreation	$Food^3$
Groundwater	no	no	<u>no</u>	<u>no</u>			no
Air (indoors)	===	===	===				
Soil (surface, e.g., <2 ft)	no	no	no	no	yes	yes	no
Surface Water	===	===			===	===	===
Sediment	no	no			no	no	no
Soil (subsurface e.g., >2 ft)				no			no
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 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):

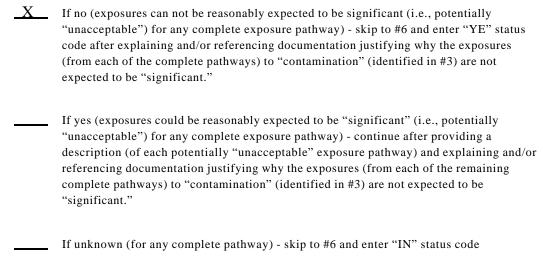
The only current potential exposure pathway is to a trespassers or possible recreation user (hiking, dirt bikes, etc.).

Corrective Measures Study Report, AlliedSignal Metropolis Works, April 30, 1997.

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" (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)?



Rationale and Reference(s):

A site specific risk assessment was performed which demonstrated that no target cleanup objectives were exceeded for the construction worker or trespasser/recreational use scenario.

Corrective Measures Study Report, AlliedSignal Metropolis Works, April 30, 1997.

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.

^{5.} Can the "significant" exposures (identified in #4) be shown to be within acceptable limits?

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_	If yes (all "significant" exposures have been shown to be within acceptable limits) - continue and enter "YE" 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" status code
ationale a	nd Reference(s):

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(CA725), and c	•	Human Exposures Under Control EI event code signature and date on the EI determination below as a map of the facility):
X	review of the information contained in the are expected to be "Under Control" at the EPA ID # _ ILD 006 278 170, located at H	termination will be re-evaluated when the
	NO - "Current Human Exposures" are N	NOT "Under Control."
	. IN - More information is needed to ma	ake a determination.
Completed by	(signature)	Date
	(print)	
	(title)	
Supervisor	(signature)	Date
	(print)	
	(title)	
	(EPA Region or State)	
Locations whe	re References may be found:	
77 West Jacks	s Center, 7 th Floor on Blvd	
Chicago, Illino	s 60604	
Contact telepho	one and e-mail numbers	
(nam	e) Todd Gmitro	
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(phor	ne #) 312-886-5909	

FINAL NOTE: THE HUMAN EXPOSURES ELIS 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.

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