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:	Appalachian Timber Services, Inc.
Facility Address	Sutton, West Virginia
Facility EPA ID	#: WVD063461958
groundw Manager	vailable relevant/significant information on known and reasonably suspected releases to soil, ater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Wasternent Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been considered in etermination?
	X 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 Env	orionmental 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).

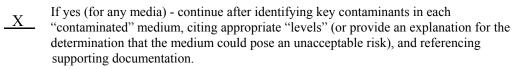
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2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be "**contaminated**" above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, 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			See Comments below
Air (indoors) ²		X		
Surface Soil (e.g., <2 ft)	X			See Comments below
Surface Water		X		
Sediment		X		
Subsurf. Soil (e.g., >2 ft)	X			See Comments below
Air (outdoors)		X		

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 unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s):

ATS is a wood treating facility, in operation since 1972. Historically, ATS has treated wood with creosote and for a short time there was some chromated copper arsenate ("CCA") treatment.

Groundwater at the ATS site is contaminated with creosote constituents, BTEX, arsenic and chromium. The Corrective Measures Implementation (CMI) order(RCRA III-086-CA) issued to ATS in June 1997 spells out the clean-up levels for all constituents found in groundwater based on the RCRA Facility Investigation and the Post-closure permit.

Soil was also evaluated in the Statement of Basis. Contaminants of concern in soil were compared to EPA Region III's Risk-based Concentrations ("RBC") for an industrial site. The contaminants of concern that were above EPA's RBC's were arsenic, benzo(a) athracene, and benzo(a) pyrene.

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).

² Recent 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

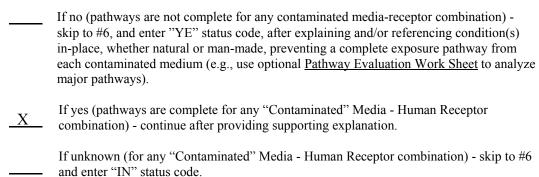
Potential **Human Receptors** (Under Current Conditions)

"Contaminated" Media	Residents	Workers	Day-Care	Construction '	Trespassers	Recreation	Food ³
Groundwater	No	No	No	No	No	No	No
Air (indoors)							
Soil (surface, e.g., <2 ft)	No	YES	No	YES	YES	No	No
Surface Water	No	No	No	No	No	No	No
Sediment	No	No	No	No	No	No	No
Soil (subsurface e.g., >2 ft)	No	No	No	No	No	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.



Rationale and Reference(s):

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)?

<u>X</u>	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):

The Corrective Measures Implementation (CMI) order (RCRA III-086-CA) issued to ATS in June 1997 spells out the clean-up levels for all constituents found in soil . ATS has chosen to cap the affected soil contaminated areas of the facility to prevent exposure to onsite workers or trespassers. Design Plans for capping the affected areas have been approved by EPA in August 2004. A contractor will be selected by ATS and implementation of the capping plan will commence in late September 2004. By providing an asphalt cap over the contaminated areas of the facility, the potential exposure pathways (incidental ingestion and dermal contact) for onsite workers and/or trespasses will have been removed.

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.

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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

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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 (and attach appropriate supporting documentation as well as a map of the facility):									
<u>X</u>	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 Appalachian Timber Services Facility, EPA ID # WVD063461958 , located at Sutton, West Virginia 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 mal	ke a determina	tion.				
Completed by	(signature)		/s/		Date _	9/29/04			
	(print) (title)	Michael Ja Project M							
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Supervisor	(signature)		/s/		Date	9/29/04			
-	(print)	Robert Gr	eaves		_				
	(title)								
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Locations whe	re References	may be for	ınd:						
Contact telepho	one and e-mai	l numbers:							
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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.

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?

Potential Human Receptors include:

- (1) <u>Site Workers</u>: Site workers may come in contact with impacted surface soil.
- (2) Construction Workers may come in contact with surface soils.
- (3) <u>Trespassers</u> may come in contact with surface soils

Potential Exposure Pathways by Media:

- (1) <u>Surface Soil</u>: Onsite industrial worker, onsite construction worker, and trespassers incidental ingestion and dermal contact.
- (2) <u>Subsurface Soil</u>: Onsite construction worker incidental ingestion and dermal contact. Subsurface soil contamination is only found onsite and is only accessible during intrusive activities