

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action

Environmental Indicator (EI) RCRIS code (CA750)

Migration of Contaminated Groundwater Under Control

Facility Name: Wood Industries
Facility Address: 11373 Southton Rd, San Antonio, TX 78223
Facility EPA ID #: TXD027070655

1. Has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, 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, 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 "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "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, GPRRA). The "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

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. Is **groundwater** known or reasonably suspected to be “contaminated”¹ above appropriately protective “levels” (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

_____ If yes - continue after identifying key contaminants, citing appropriate “levels,” and referencing supporting documentation.

 X If no - skip to #8 and enter “YE” status code, after citing appropriate “levels,” and referencing supporting documentation to demonstrate that groundwater is not “contaminated.”

_____ If unknown - skip to #8 and enter “IN” status code.

Rationale and Reference(s):

Samples were collected from three domestic wells and sub-surface soil near each source to document downward migration of lead in the soil. A down-gradient well located at residents of Sam & Lori Rohmer Jr, west of Wood Industries near San Antonio River was sampled. An upgradient well located at residence of Mrs Wanda Camp, approximately 1/3 mile north of Wood Industries on Southton Rd was sampled. The nearest well is located on-site and is used sporadically for drinking and industrial purposes.

Lead was not detected in any of the water wells sampled during this inspection. The subsurface soil samples collected to document downward migration of lead contamination revealed lead below background.

Although, analytical results indicated that lead contamination exists beneath the surface soils, contaminant migration to ground water has not been documented. No documentation to support off-site migration of contaminants via the surface water pathway. There are no water intakes along the 15 mile downstream segment of the San Antonio River.

Duplicate samples of on-site well both indicated the presence of 4,4-DDE, 4,4-DDD and 2,4-DDD at concentration less than 2 ug/l. Follow-up samples collected in 12/20/1989 showed the presence of 4,4-DDD in both duplicate samples of the onsite well at same concentrations, up-gradient and down-gradient well samples did not show contamination. Identification of a source at Wood Industries could not be determined.

Reference: Screening Site Inspection of Wood Industries, July 31, 1990.

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 appropriate “levels” (appropriate for the protection of the groundwater resource and its beneficial uses).

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Recent Activities:

Weston Solutions Inc Superfund Technical Assessment and Response Team, was tasked by the U.S. Environmental protection Agency (EPA) Region 6 Response and Prevention Branch to perform soil, surface water and residential well sampling at various locations surrounding Wood Industries located at 11373 Southton Road in San Antonio, Bexar County, Texas. The property drains into an unnamed tributary, which flows into Segment 1911 of the San Antonio River Basin. The site is a primary collection site for recyclable glass, paper, plastic, and metal that are generated off site and consists of approximately 40 acres of land. The site contains small slag waste piles and two lead battery case piles. The site is bordered by residential, industrial, and open vegetated land. The San Antonio River is west of the site and an industrial area is located approximately 1/4 mile south of the site, across Center Road.

A total of ten soil samples from areas adjacent to the battery case piles and two slag piles; two groundwater samples from two residential wells; and one surface water sample from an on-site pond; were collected August 20-27, 2004 for analytical testing. Soil samples were analyzed for target analyte list (TAL) metals, mercury, and pesticides. Surface water and groundwater samples were analyzed for TAL metals, mercury, pesticides, total complete list (TCL) volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). Based on the analytical data received, only one sample contained a level of constituent of concern that exceeded the EPA Region 6 Human Health Medium-Specific Screening Levels for Industrial Outdoor Workers for lead at 2,040 mg/kg.

The location of the wells identified for groundwater sampling was determined by a groundwater well survey completed in June 2004 by Atlas E.R. Water Well Search. The survey identified 16 groundwater wells within a one mile radius of the facility. The well owners could not be contacted, as the information in the survey was out of date and new well owners could not be confirmed. A house to house well survey was conducted and determined that all but one of the residences and the business surrounding the site had plugged the groundwater wells that were located on their property. The one active adjacent off-site well is owned by Mr and Mrs Kevin Taylor and is located approximately 50 yards north of the site boundary. They allowed access to sample their well.

Two groundwater samples were collected. One sample was collected off-site from a private well (Taylor Residence) located northwest of the site on an adjacent resident; the second sample was collected on-site from a private well with the spigot located adjacent to the current work shop. Both analytical results indicated that the samples collected did not contain COC levels above the EPA Region 6 Human Health Screening Levels. See attached analytical results.
Reference: Removal Assessment Report for Wood Industries, October 2004

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3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within “existing area of contaminated groundwater”² as defined by the monitoring locations designated at the time of this determination)?

_____ If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the “existing area of groundwater contamination”²).

_____ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the “existing area of groundwater contamination”²) - skip to #8 and enter “NO” status code, after providing an explanation.

_____ If unknown - skip to #8 and enter “IN” status code.

Rationale and Reference(s):

² “existing area of contaminated groundwater” is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of “contamination” that can and will be sampled/tested in the future to physically verify that all “contaminated” groundwater remains within this area, and that the further migration of “contaminated” groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

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4. Does “contaminated” groundwater **discharge** into **surface water** bodies?

_____ If yes - continue after identifying potentially affected surface water bodies.

_____ If no - skip to #7 (and enter a “YE” status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater “contamination” does not enter surface water bodies.

_____ If unknown - skip to #8 and enter “IN” status code.

Rationale and Reference(s):

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5. Is the **discharge** of “contaminated” groundwater into surface water likely to be “**insignificant**” (i.e., the maximum concentration³ of each contaminant discharging into surface water is less than 10 times their appropriate groundwater “level,” and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

_____ If yes - skip to #7 (and enter “YE” status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration³ of key contaminants discharged above their groundwater “level,” the value of the appropriate “level(s),” and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

_____ If no - (the discharge of “contaminated” groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration³ of each contaminant discharged above its groundwater “level,” the value of the appropriate “level(s),” and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations³ greater than 100 times their appropriate groundwater “levels,” the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

_____ If unknown - enter “IN” status code in #8.

Rationale and Reference(s):

³ As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

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6. Can the **discharge** of “contaminated” groundwater into surface water be shown to be “**currently acceptable**” (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented⁴)?

_____ If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site’s surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR 2) providing or referencing an interim-assessment,⁵ appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment “levels,” as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

_____ If no - (the discharge of “contaminated” groundwater can not be shown to be “**currently acceptable**”) - skip to #8 and enter “NO” status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

_____ If unknown - skip to 8 and enter “IN” status code.

Rationale and Reference(s):

⁴ Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

⁵ The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

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7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the “existing area of contaminated groundwater?”

_____ If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the “existing area of groundwater contamination.”

_____ If no - enter “NO” status code in #8.

_____ If unknown - enter “IN” status code in #8.

Rationale and Reference(s):

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8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), 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).

 X YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the Wood Industries facility, EPA ID # TXD027070655, located at 11373 Southton Rd, San Antonio, TX 78223. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

 NO - Unacceptable migration of contaminated groundwater is observed or expected.

 IN - More information is needed to make a determination.

Completed by (signature) _____ Date 1-5-05
 (print) Debra Tellez
 (title) Environmental Engineer

Supervisor (signature) _____ Date 3-15-05
 (print) Laurie King
 (title) Chief, Federal Facilities Section
 (EPA Region or State)

Locations where References may be found:

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1445 Ross Ave, Dallas, TX 79202

Contact telephone and e-mail numbers

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Completed by	(signature) <u>Debra A Tellez</u>	Date <u>1-5-05</u>
	(print) <u>Debra Tellez</u>	
	(title) <u>Environmental Engineer (6PD-F)</u>	
Supervisor	(signature) <u>Laurie King</u>	Date <u>3-15-05</u>
	(print) <u>Laurie King</u>	
	(title) <u>Chief, Federal Facilities Section</u>	
	(EPA Region or State) _____	

Locations where References may be found:

U.S. EPA Region 6
1445 Ross Ave, Dallas, TX 79202

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