

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: City of Chesapeake - Hollowell Lane Yard
Facility Address: 930 Hollowell Lane
Facility EPA ID #: VAR000005058

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

The 3.75 acre Hollowell Lane Yard site is located at 930 Hollowell Lane, Chesapeake, Virginia, in the Greenbrier section of the City. The site is located in a developed and commercial/industrial portion of the City of Chesapeake, Virginia, which has a population of approximately 223,000 people.

The Site is located adjacent to and south of the City of Chesapeake Traffic Engineering Field Office and the Southeastern Public Service Authority (SPSA) Chesapeake Transfer Station. The Site is bounded to the west by a railroad spur to the nearby Yupo Corporation and to the east by the newly installed radio tower and a City of Chesapeake Mosquito Control facility. To the south of the Site is a wooded area in which a relatively large drainage ditch exists. To the south of the wooded area is the Chesapeake City Park. The Site is relatively level with elevations ranging from approximately 17 to 20 feet above mean sea level.

The Hollowell Lane Yard is currently used by the City of Chesapeake for storage of some heavy equipment used by the City's Public Works Departments, temporary storage of small piles of soils from soil excavations associated with the Public Works Departments projects, and storage of reinforced concrete pipe, and some storage of solid waste soil and woody debris in roll-off containers.

No hazardous waste is currently generated or stored at the facility site. In addition, no maintenance of equipment occurs in the yard.

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)?

	<u>Yes</u>	<u>No</u>	<u>?</u>	<u>Rationale / Key Contaminants</u>
Groundwater		X		
Air (indoors) ²		X		
Surface Soil (e.g., <2 ft)		X		
Surface Water		X		
Sediment		X		
Subsurf. Soil (e.g., >2 ft)		X		
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 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):

Air

No report of air contaminant releases was presented in any of the site files. No evidence of releases of contaminants to the air was observed during the site visit

Soil

The site is not paved, providing a direct soil contamination pathway, however, no evidence of potential soil contamination was observed during the site visit.

Site history documentation shows that previous waste that was disposed at the site has been removed and disposed in accordance with the VSWMR, the VWHMR, and RCRA. The VDEQ approved “clean closure” of the soils and groundwater of the site by correspondence, dated November 3, 2005.

In addition, the residual contaminants at the site have been removed to levels in soils that are protective of groundwater, human health, and the environment and the site has been determined “clean closed” for soils in accordance with the VHWMR and the RCRA Regulations.

Groundwater

Groundwater is currently not used as a potable or irrigation water supply at the site. Groundwater usage by properties surrounding or located in close proximity to the facility is unknown; however, potable water is available throughout the surrounding area from the local municipality.

Site history documentation shows that previous waste that was disposed at the site has been removed and disposed in accordance with the Virginia Solid Waste Management Regulations (VSWMR), the VWHMR, and RCRA Regulations.

During the groundwater monitoring period that immediately followed the waste removal, quarterly ground water samples were collected for Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) and Metals. Samples were collect in May, August, December 2004 and February 2005. Based on the results of that monitoring period, it was determined that there was no evidence of groundwater contamination as a result of the previous waste disposal units, which were regulated as hazardous waste management units (HWMUs) under the VHWMR, and the RCRA Regulations.

The VDEQ approved “clean closure” of the soils and groundwater of the site by correspondence, dated November 3, 2005.

On January 9, 2006, the VDEQ approved the closure procedures associated with abandonment of the monitoring wells.

On January 27, 2006, the Contractor provided the VDEQ with the “Well Closure Abandonment Notification and Certification.”

Surface Water

The closest surface water body to the site is a manmade storm water management pond located approximately 100 yards to the south of the facility. No evidence of releases of contaminants to this environment was observed during the site visit and no storm drains were observed at the site.

No report of surface water contaminant releases was presented in any of the site files. No evidence of releases of contaminants to surface waters was observed during the site visit.

For additional information see the December 24, 2008, Final Site Visit Report for the City Of Chesapeake.

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)

<u>“Contaminated” Media</u>	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food ³
Groundwater							
Air (indoors)							
Soil (surface, e.g., <2 ft)							
Surface Water							
Sediment							
Soil (subsurface e.g., >2 ft)							
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 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).
- 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):

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”**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

Rationale and Reference(s):

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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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 “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):

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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 (attach appropriate supporting documentation as well as a map of the facility).

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 City of Chesapeake - Hollowell Lane Yard Site, EPA ID # VAR000005058, located at 930 Hollowell Lane 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 make a determination.

Completed by (signature) SIGNED Date 3/17/09
Denis M. Zielinski
Senior RPM

Supervisor (signature) SIGNED Date 3/17/09
Luis Pizarro
Associate Director, Office of Remediation
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Locations where References may be found:

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