

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: Reynolds Aviation Division
Facility Address: 5700 Clarkson Road, Sandston, Virginia, 23150
Facility EPA ID #: VAD 988 186 599

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

Dominion Resources Services Inc. (Dominion) Aviation Hangar is located at 5700 Clarkson Road in Richmond, VA 23250. Dominion leases a hangar building that is used to maintain and store jet aircraft. The Capitol Region Airport Commission (CRAC) owns the hangar and property, and Dominion leases the aircraft hangar and property from the CRAC. Access to the site property and parking area remains uncontrolled; however entrance in to the hangar building is fully secure. There are currently nine standard full-time employees at the facility that work a 9:00 AM to 5:00 PM workday, 5 days per week.

Reynolds Aviation Division (Reynolds) was a former lessee of the property. Dominion is the current lessee and that contract was started in the fall of 2000. Dominion representatives stated that Dominion employees moved into the facility in approximately December 2000. The Reynolds Corporation was purchased by Alcoa in the year 2000. Facility personnel indicated that the Alcoa US Corporate Center is located in Pittsburgh, PA.

Dominion is currently registered as a conditionally exempt small quantity generator. The conditionally exempt small quantity generator designation solely comes from the parts washer installed on site by Dominion. The hangar is located on an area of land that is approximately 3 acres in size. Facility personnel have indicated that the building construction was completed by the former Reynolds facility in either 1956 or 1957. The hangar and office space total in a building footprint sized at approximately 20,000 square feet.

Floor drains are located in the facility building and collectively they discharge to the sanitary sewer system and the Publicly Owned Treatment Works (POTW) along with the facility's sanitary wastewater. Any improvements that are made on the property default back to the CRAC when the lease agreement in place terminates.

There are currently (2) two underground storage tanks (USTs) that store Jet-A Fuel (Tank No.82 and 83). They each have a storage capacity of 20,000 gallons. A Phase-I Initial Site Investigation Report prepared by Burns and McDonnell in September 1989, stated that the tanks were installed in 1987 and provide fuel by two fueling pits located in the apron pavement south of the USTs. In 1997, the two fueling pits were decommissioned and replaced with an engineered/concrete (ground level) fueling station for loading and unloading fuel to and from the USTs.

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		Groundwater is not actively monitored, however, no releases to groundwater have been identified.
Air (indoors) ²		X		No indoor air issues have been identified
Surface Soil (e.g., <2 ft)		X		Two SWMUs have been clean closed. No releases have been identified.
Surface Water		X		No releases to surface water
Sediment		X		No releases to sediment
Subsurf. Soil (e.g., >2 ft)		X		Two SWMUs have been clean closed. No releases have been identified.
Air (outdoors)		X		No activities take place outdoor

- 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):

Groundwater - There are currently two observation wells near two 20,000-gallon Jet-A Fuel USTs (installed in 1987) (an associated fueling station exists here as well). These two monitoring wells were installed to provide leak detection for the above two USTs currently at facility. While groundwater is not actively monitored, no releases of fuel were reported from the fueling station to the environment. No groundwater issues were identified during the investigation and closure of two SWMUs.

Soil (surface and subsurface) – Two SWMUs (a Former 8,000-gallon Hazardous Waste Tank and SWMU No. 7 – Former 1,000 gallon Used Jet Fuel UST) were clean closed in 1992 and 1997, respectively. No additional soil issues have been identified.

Surface water/sediment - The closest surface water body to the site is the White Oak Swamp Creek which runs to the south and east of the property. The White Oak Swamp Creek is located approximately ¼ mile from the facility. The facility does not discharge to any surface water bodies or operate under any discharge permits. No releases to surface water or sediment have been identified.

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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):

