

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: Allion Chemical Company, Incorporated
Facility Address: 109 Darby Commons Court Folcroft, PA 19032
Facility EPA ID #: PAD 020075347

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

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	_____	<u>No record or evidence of release contamination.</u>
Air (indoors) ²	_____	X	_____	<u>No record or evidence of release contamination.</u>
Surface Soil (e.g., <2 ft)	_____	X	_____	<u>No record or evidence of release contamination.</u>
Surface Water	_____	X	_____	<u>No record or evidence of release contamination.</u>
Sediment	_____	X	_____	<u>No record or evidence of release contamination.</u>
Subsurf. Soil (e.g., >2 ft)	_____	X	_____	<u>No record or evidence of release contamination.</u>
Air (outdoors)	_____	X	_____	<u>No record or evidence of release contamination.</u>

 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):

Figures, tables, and superscript references cited herein apply to those items presented in the FINAL Environmental Indicator Inspection Report October, 2008. Additionally, acronyms applied in the following checklist responses are defined in the “Glossary of Acronyms” in the EI Report.

The Allion Chemical Company, Incorporated (which changed its name in 1986 to, and is also referred to as, Nova Consultant, Ltd.) facility (‘Facility’), was situated in the Folcroft Industrial Park in Folcroft, Darby Township, Delaware County, Pennsylvania. The facility’s former location can be found on the USGS Lansdowne, Pennsylvania

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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7.5-minute Topographic Quadrangle at -75° 16' 17" west longitude and 39° 53' 29" north latitude. The Georgetown building, which was constructed by Henderson Builders in 1977 on land purchased in 1975, is approximately 44,300 square feet in size and is one of several buildings in the industrial park complex. Prior to construction, the land was a series of farms and/or woods whose owners are unknown. Allion was the first occupant to lease a 3,500 square foot office and warehouse space within the Georgetown Building. The building is currently owned by the Henderson Group in Media, Pennsylvania. Nova moved in January 1996 and is currently located in Wilmington, Delaware. The two most recent tenants of the former Facility were an aluminum siding and window manufacturing businesses, respectively. The number and types of tenants since the Facility was vacated in January, 1996 is not known.

The Facility purchased water-treatment chemicals for blending and redistribution and operated at the Facility from 1977 through 1996. The chemicals arrived in 55-gallon drums and different chemicals were blended to create a new product and/or chemicals were diluted based on specific needs. The general process included transferring a specific amount of the chemical(s) to another 55-, 30-, or 5- gallon container and then diluting or blending the chemical(s). An on-site laboratory was used to run standard water treatment tests on customer wastewater samples for quality assurance purposes. The laboratory sink received small amount of wastewater samples and standard reagents.

In the early 1980s, two 110-gallon mixing tanks were used at the facility for chemical blending and dilution. A floor drain was located underneath the pad where the two 110-gallon mixing tanks were located. In 1980 or 1981, a 2,000 gallon wastewater neutralization tank was purchased and placed within a concrete containment structure. The tank was used to neutralize wastewater produced through a cleaning process using soda and caustic ash. In 1981, the Facility began processing alkaline wastewater. This was discontinued in 1983 or 1984 and the Facility stopped using the 2,000 gallon tank in 1984. All pipes and drains for the Nova facility had a permitted connection to the DELCORA sewer system. The 2,000 gallon tank discharge pipe and 110-gallon mixing tank area floor drain were cemented over in 1989. According to a June 4, 2008 URS phone interview, all tanks and piping were removed when the Georgetown Building was vacated in 1996.

An NUS 1990 Preliminary Assessment Report (PAR) identified the following five SWMUs: inactive 2,000-gallon waste neutralization tank and associated drain lines; two 110-gallon raw product dilution tanks and associated drain lines; slop sink and associated drain lines; raw product drum spill area and dumpster; and, the laboratory sink and associated drain lines. There is no record of reported releases from any of these SWMUs.

Groundwater: There are no industrial wells documented at the former facility. Public water is supplied to the area by the Aqua Water Company of Philadelphia, Pennsylvania. Any residents/facilities within the vicinity of the Facility that are not serviced by public water are assumed to use groundwater obtained from private water supply wells. Research through the PAGWIS website indicates that there are no groundwater wells documented in the Folcroft Industrial Park. However three wells, ranging in depths of 19 to 228 feet, are present within a half-mile radius of the Site. Eight wells, with depths ranging from 10 to 500 feet, exist within a one-mile radius. However, there have been no known/documented releases to Site soils or groundwater relative to former operations and therefore no detailed site-specific geologic or hydrogeologic studies have been conducted at the Facility, nor is there evidence available to presume that such work is warranted.

Indoor and Outdoor Air: No exposure pathways to air (both outdoor air and indoor air) were documented for this facility. Exhaust fans in the laboratory area were not indicated in the PAR and no air permits were located during the file review. No air releases for this facility have been reported. There are no known/documented releases to soils or groundwater at the Facility, therefore the vapor intrusion to indoor air pathway does not need to be evaluated.

Surface and Subsurface Soils: Similar to groundwater, on-site soils have not been investigated and, based on information presented in the EI report, there is no indication that such a study would be required because there have been no reported/suspected releases to Site soils as a result of former operations.

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Surface Water and Sediment: The nearest surface water body is the Hermesprota Creek which is located approximately 2000 feet southwest of the Facility. Hermesprota Creek flows into Darby Creek and on into the Delaware River. This portion of Darby Creek flows through the John Heinz National Wildlife Refuge before reaching the Delaware River. All of the Facility water discharges were permitted through the regional wastewater treatment facility, DELCORA, in Chester, Pennsylvania. The former Facility had no reported surface water discharges. Additionally, there have been no reported/suspected releases to soils or groundwater as a result of former operations and thus there is no reason to presume that a diffuse groundwater-to-surface water pathway from the Facility could impact nearby surface water quality.

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	<u>Residents</u>	<u>Workers</u>	<u>Day-Care</u>	<u>Construction</u>	<u>Trespassers</u>	<u>Recreation</u>	<u>Food</u> 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):

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):

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

 X 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 **Allion Chemical Company, Inc.** facility, EPA ID # **PAD 020075347**, located at **109 Darby Commons Court Folcroft, PA 19032** 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)  Date 1/28/09
(print) Kevin Bilash
(title) ECEA Project Manager
Supervisor (signature)  Date 1-28-09
(print) PAUL GOTTHOLD
(title) ASSOC DIR, PA REMEDIATION
(EPA Region or State) EPA REG 3

Locations where References may be found:

USEPA Region III
Land and Chemicals Division
1650 Arch Street
Philadelphia, PA 19103

PADEP
Southeast Regional Office
2 East Main Street
Norristown, PA 19401

Contact telephone and e-mail 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.