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: BASF Corporation
Facility Address: P. O. Box 457 Geismar, LA 70734
Facility EPA ID#: LAD 040776809

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 #8 and enter "IN" (more information needed) status code.

2. Is **groundwater** known or reasonably suspected to be **"contaminated"** 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?

   __X__ If yes – continue after identifying , key contaminants, citing appropriate "levels," and referencing supporting documentation.

   _____ 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):

Mercury	Trichloroethene
Bentazon	Tetrachloroethene
Chlorobenzene	chloroform
Ethylene dichloride	vinyl chloride (as a daughter product)
2,4-DNT	Toluene diamine

References: RFA Preliminary Study, RFI Reports, and Interim Measures Reports. The Louisiana Department of Environmental Quality (LDEQ) has developed a Risk Evaluation/Corrective Action Program (RECAP) to address risks to human health and the environment posed by the release of chemical constituents to the environment. This is LDEQ's primary statutory mandate for remediation activities. RECAP uses risk evaluation to: (1) determine if corrective action is necessary for the protection of human health and the environment, and (2) identify constituent levels in impacted media that do not pose unacceptable risks to human health or the environment, i.e. RECAP Standards. Currently, RECAP Standards have not been approved for the contaminants at the BASF facility. BASF has developed RECAP standards and Corrective Measures Studies for its Facility and submitted them for approval to LDEQ in June 2000 and March 2001. A No Further Action At This Time determination has been granted by LDEQ for one of its SWMUs.

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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)?

X 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): Normal groundwater flow is ± 10 ft/yr. In areas of remediation, pump and treat has reversed the flow toward the pumping centers. Groundwater migration has been brought under control by pumping at the SWMUs under remediation. This is supported by the sampling and analytical program ongoing at the site. The RFI Preliminary Study and RFI Reports support this as well.

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

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

X 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): BASF has an internal stormwater drainage system throughout the facility. However, the location and position of the drainage system do not afford any likelihood of migration from contaminated zones into surface water within the drainage system. See RFI Preliminary Report and RFI Reports for documentation. No other surface water bodies exist to pose this possibility either.

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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?"

__X__ If yes – continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identifying 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): BASF currently operates a well field of 116 monitor wells of varying number at each of these SWMUs. A large portion of these wells are at SWMUs that are currently under remediation and are sampled monthly, quarterly, semi-annually, or annually, dependent upon the remediation requirements of LDEQ. The analytical results of this sampling program are routinely delivered to LDEQ on a quarterly basis as they are collected. A specific sampling program relevant to the constituents of concern, conditions at each SWMU have been implemented with interim measures until the approval of the CMS. RECAP with CMS for the Facility was submitted to the LDEQ and are waiting agency approval.

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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, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Migration of Contaminated Groundwater is "Under Control" at the BASF Corporation facility, EPA ID# LAD040776809, located at Geismar, Louisiana. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and remains within the "existing area of contaminated groundwater". This determination will be re-evaluated with 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) James M. Bradley Date December 18, 2001
(print) Mike Bradley
(title) Geologist 3

Supervisor (signature) Douglas Bradford Date December 18, 2001
(print) Douglas Bradford
(title) Geologist Supervisor
(EPA Region or State) Louisiana

Locations where References may be found:

LDEQ Files / EPA Region VI Files
Gonzales Library
BASF Files

Contact telephone and e-mail numbers

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