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: American Standard
Facility Address: 240 Princeton Avenue, Hamilton Township, NJ 08619
Facility EPA ID #: NJD002366441

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.

   Justification:

SWMUs / AOCs
1. Area 1 landfill (closed RCRA Regulated Unit with a post-closure permit)
2. Area 2 landfill/Glaze Area
3. Area 3 settling basins (closed RCRA Regulated Unit with a post-closure permit)
4. Area 4 canal (closed RCRA Regulated Unit with a post-closure permit)

There is soil contamination at every SWMU/AOC, but measures were taken to address this contamination as part of the RCRA Closure and Post-Closure Plan. Engineering and institutional controls were employed at all four areas according to the plan, and each of those areas closed with approval. The waste related contaminants have not migrated into the groundwater.

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, GPRA). 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).

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): American Standard initiated quarterly groundwater monitoring in 1982 as part of a hydrogeological investigation to determine impacts from the four waste disposal areas. In 1991, NJDEP issued a Closure/Post-Closure NJPDES-DGW Final Permit which decreased the sampling frequency to a semi-annual basis. NJDEP decreased the sampling frequency again in 1995 to an annual basis, and, finally, in 1997 NJDEP decreased the sampling frequency in the NJPDES-DGW Final Permit Renewal for two of the waste disposal areas to every five years while keeping the other two areas on an annual basis. The number of monitoring parameters have also been reduced over the years to a maximum of six constituents for Area 1. Based on a review of the ongoing post-closure groundwater monitoring data, barium, the primary waste constituent, has never been found above New Jersey's Ground Water Quality Standards. Of the remaining waste related metals identified, only one was found at levels exceeding New Jersey's Ground Water Quality Standards. Lead exceeded the standards on a couple of occasions in Areas 2 and 3, however, it was determined that the elevated levels of lead were due to problems associated with the sampling techniques and ever since those problems were corrected, in 1997, lead has not been found exceeding standards. There are two aquifers at this site, namely, the shallow water table aquifer, which is unconfined, and the deep bedrock aquifer. There is little to no hydraulic connection between the two aquifers. The shallow water aquifer is located in the Pennsauken Formation, which consists of gravelly and silty sands. The lower boundary of the shallow aquifer is the dense clay of the Raritan member of the Magothy-Raritan Formation. The clay has varying thicknesses and extends to the bedrock of the Wissahicken Formation. Groundwater flow is to the south-southeast.

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

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 American Standard facility, EPA ID #NJD002366441, located at 240 Princeton Avenue, Hamilton Township, NJ 08619. 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: original signed by **Date**: 08/24/00
Elizabeth Butler, Project Manager
RCRA Programs Branch
EPA Region 2

original signed by **Date**: 08/24/00
Barry Tornick, Section Chief
RCRA Programs Branch
EPA Region 2

Approved by: original signed by **Date**: 08/24/00
Raymond Basso, Chief
RCRA Programs Branch
EPA Region 2

Locations where References may be found:

The references may be found at EPA Region 2 in New York or at NJDEP in Trenton.

Contact telephone and e-mail numbers

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References Used To Make This Determination

1) Final Renewal New Jersey Pollutant Discharge Elimination System/Discharge to Ground Water Permit, dated July 24, 1997

2) NJPDES-DGW Monitoring Reports, dated September 14, 1999, August 19, 1997 and July 31, 1996

3) Supplemental Groundwater Monitoring Report, dated October 31, 1997

4) Request for Modification to the NJPDES-DGW Permit, dated July 31, 1996

5) RCRA Groundwater Quality Assessment Plan, dated September 15, 1989

Barium Concentrations (ppb) in Compliance Wells (Shallow Aquifer)

Note: NJ's GWQS for Ba is 2000 ppb

Area 1

	1997	1998	1999
MW-6	72.2	85	85.8
MW-10	44.5	41.8	34
MW-11	40.9	20.7	24

Area 2

	1997	1998	1999
MW-7	21	15.7	57.1
MW-13	33.6	20.1	18.8

Areas 3 & 4*

	1995	1996	1997
MW-2A	102	99.2	170
MW-9	57.5	56.6	393
MW-14	20.8	26.6	84.3

* Note: For the wells in Areas 3 and 4, the NJPDES Permit issued in 1997 only required them to be sampled every five years. Therefore, the next sampling round for those wells will not occur until 2002. The wells in Areas 1 and 2 are sampled once a year.

Attachment truncated, see facility file (MSS, 06/17/02)