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:	**Kennametal, Inc.**
Facility Address:	**100 Devonshire Drive Delmont, PA 15626-1607**
Facility EPA ID #:	**PAD004316923**

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 #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 "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 contaminatedgroundwater" (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):

Kennametal, Inc. manufactured ceramic cutting parts to be used for metal tooling in this facility at 100 Devonshire Drive in Delmont, Pennsylvania. The facility originally consisted of one main building and three small out buildings located on a 5-acre property. As of July 9, 1993, the facility has been owned by the Westmoreland County Food Bank.

Operations at the facility under Kennametal involved machining processes, such as grinding and pressing. A condensing unit and a heat treatment process were also used in the production process. A variety of wastes, including isopropanol, petroleum naphtha, coolant, and hydraulic oil were generated at the facility. Spent oil and coolant and all hazardous wastes were stored in drums within the main facility. Manufacturing of metal tool parts at this facility began with Armwall Manufacturing Company in 1970. Kennametal purchased the facility in 1976 and continued manufactured metal tool parts until 1985 when processes were altered to produce ceramic cutting tools, using three ceramic mixtures, two of which were isopropanol processed. In September 1992, the facility operations were terminated.

According to Kennametal's consultants, no recent or historical releases, studies, monitoring or remedial actions have occurred at this facility. They also indicated that they had no knowledge of the presence of monitoring wells at the facility. After investigating the facility, reviewing the files, and talking to neighbors; EPA and Baker are convinced that no releases have occurred at the Kennametal facility.

The regional hydrogeology summarized in the PA (NUS, 1991) suggests that groundwater in the study area occurs under both water-table and artesian conditions. Rocks of the Conemaugh Group are reported to comprise the uppermost aquifer beneath the area, and are a reliable source of small to moderate supplies of water. Sufficient water for domestic purposes can be obtained from wells in this area that are drilled 100 to 150 feet below the water table. Groundwater movement and storage occur in and through secondary openings such as fractures and in some sandstones, may occur in primary intergranular openings. Wells in the Conemaugh Group of Westmoreland County have yields ranging from 1 to more than 100 gallons per minute (gpm) and a median yield of 20 gpm, according to sources reported in the PA (NUS, 1991).

The direction of groundwater flow beneath the facility is unknown. The PA (NUS, 1991) reported that the location of the facility is atop a local drainage divide suggested that shallow groundwater flow may be towards the northwest, toward a small unnamed tributary of Beaver Run and/or to the southeast, toward a different unnamed tributary of Beaver Run. The deeper groundwater beneath the site may flow down the dip of the bedrock layers to the northwest. The expected groundwater flow directions are based on topographic control and geologic structure and on the role of streambeds or discharge points for groundwater. Depth to shallow groundwater was estimated to be approximately 20 to 40 feet below ground surface.

During the 1991 well survey, two neighborhood residents were reported to be dependent on groundwater as a potable water source. The depths of their wells were reported to be approximately 75 feet and 100 feet, respectively. In a

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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).

telephone interview on September 01, 2009 with Baker personnel, one of the residents mentioned that she continues to use her well as the main source of water and she also mentioned that the other residents in the neighborhood are dependent on groundwater as their main source of potable water. The facility obtains its water supply from the Municipal Authority of Westmoreland County.

Onsite surface water drainage from parking areas could flow towards the southeast and the north. Drainage to the southeast may enter an unnamed spring-fed tributary before flowing into Beaver Run two miles away. The tributary originates 100 feet southwest of the facility boundary (NUS, 1991). Drainage to the north enters another unnamed tributary of Beaver Run 75 feet north of the property line, before flowing 1.75 miles before discharging into Beaver Run. Storm drains located in the parking lot also empty into the drainage ditch, forming the northern tributary of Beaver Run. Beaver Run is designated as a high-quality cold-water fishery. No surface intakes are located within a three-mile radius of the facility. According to available records, the facility did not operate under an NPDES permit. Kennametal (via an email dated August 29, 2009) indicated that there was no NPDES permit or approval for discharge of floor drains to the tributary of Beaver Creek.

No releases to groundwater are known to have occurred.

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)?

_____ 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):

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

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

_____ 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):

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2 "existing area of contaminated groundwater" is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of "contamination" that can and will be sampled/tested in the future to physically verify that all "contaminated" groundwater remains within this area, and that the further migration of "contaminated" groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., includng public participation) allowing a limited area for natural attenuation.

EPA Performance Appraisal and Recognition System
Performance Plan Coversheet
AFGE Bargaining Unit

Employee Name: Catheryn Blankenbiller	Organizational Location (Mail Code): Office of Pennsylvania Remediation (3LC30) Land and Chemical Division

CE #2 : PROGRAM MANAGEMENT

Strategic Plan elements supported by this CE:
3. Preserve Land
3.2 Restore Land
3.2.2. Clanup and Reuse Contaminated Land.

Assumptions:

Employee Performance Must be Evaluated against the Agency Benchmark Standards.

Measures and Metrics:

PROGRAM MANAGEMENT: To ensure effective management of ongoing program activities to meet programmatic goals and objectives:
- Maintains up-to-date knowledge of programmatic area.
- Ensures organizational goals and priorities are addressed by program plans and activities.
- Engages appropriate stakeholders in the planning process so that their input is duly considered.
- Identifies programmatic issues, priorities and concerns and ensures they are timely addressed with appropriate parties.
- Uses formal and informal systems to monitor progress, follow-through on critical tasks, track results, and evaluate outcomes.
- Keeps management informed of progress, with early warning of potential problem areas ("no surprises").
- Collaborates with counterparts at state/local/HQ levels as applicable to contribute to larger program objectives.
- Participates in program evaluation activities, such as audits and responding to findings.

Area of Focus

~~CAT's RESPONSIBILITY~~ Responsibilities for SCEP students:

Supervisor's Notes: *

1. ~~Show~~ demonstrate initiative in learning engineering and science principles at the core of hazardous site cleanup
2. demonstrate initiative in learning Federal law and ~~applicable~~ EPA policies governing hazardous site cleanup
3. demonstrate competence in important program tools, such as RCRAInfo, Region 3 website, and Google-Earth
4. Communicate with mentor(s)/management regarding above

*** Written highlights are required to support an element rating of Outstanding, Minimally Satisfactory, or Unacceptable.**

Rating: ☐ Outstanding ☐ Exceeds Expectations ☐ Fully Successful ☐ Minimally Satisfactory ☐ Unacceptable

5. Is the **discharge** of "contaminated" groundwater into surface water likely to be **"insignificant"** (i.e., the maximum concentration[3] of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

_____ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration[3] of key contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

_____ If no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration[3] of each contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations[3] greater than 100 times their appropriate groundwater "levels," the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):

3 As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

6. Can the **discharge** of "contaminated" groundwater into surface water be shown to be '**currently acceptable**" (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented[4])?

_____ If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR
2) providing or referencing an interim-assessment,[5] appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

_____ If no - (the discharge of "contaminated" groundwater can not be shown to be '**currently acceptable**") - skip to #8 and enter "NO" status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

_____ If unknown - skip to 8 and enter "IN" status code.

Rationale and Reference(s):

4 Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways nearsurface water bodies.

5 The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

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?"

_____ If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify 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):

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 **Kennametal, Inc.** facility, EPA ID # **PAD004316923**, located at **100 Devonshire Drive Delmont, PA 15626**. 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 reevaluated 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 (signature) _____ Date 6/20/11

(print) Grant Dufficy

(title) RCRA Project Manager

Supervisor (signature) _____ Date 10-3-11

(print) Paul Gotthold

(title) Associate Director, LCD

(EPA Region or State) EPA Region 3

Locations where References may be found:

USEPA Region III
Waste and Chemical Mgmt. Division
1650 Arch Street
Philadelphia, PA 19103

PADEP
Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222

Contact telephone and e-mail numbers

(name) _____
(phone#) _____
(e-mail) _____