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**Title:** Collecting Static Water Level Measurements and Developing Groundwater Flow Maps

**Identification Number:** WASTE-0033-NPD

**Date Originally Adopted:** March 25, 1999

**Dates Revised:** None

**Other Policies Repealed or Amended:** None

**Citations Affected:** 40 CFR 261.4(b)(9), 329 IAC 10-2, 329 IAC 10-2-179(b)(2), 329 IAC 10

**Brief Description of Subject Matter:** This document identifies the exceptions where preparing a potentiometric-surface map based on limited sampling is not required. The policy relies on a provision in the rules which allows the commissioner to approve alternative procedures which are equivalent in accuracy and no less protective of human health and the environment.

This nonrule policy document is intended solely as guidance and does not have the effect of law or represent formal Indiana Department of Environmental Management (IDEM) decisions or final actions. This nonrule policy document shall be used in conjunction with applicable laws. It does not replace applicable laws, and if it conflicts with these laws, the laws shall control. A revision to this nonrule policy document may be put into effect by IDEM once the revised nonrule policy document is made available for public inspection and copying. IDEM will submit revisions to the Indiana Register for publication.

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## **Collecting Static Water Level Measurements and Developing Ground Water Flow Maps**

Please find below a policy statement regarding the collection of static-water level measurements from a facility's permitted monitoring wells and piezometers and developing ground-water flow maps based on the collected data.

**Policy Background:** The policy is being developed in response to questions posed by the regulated community. The question posed, "Is it necessary to collect static-water level measurements at all permitted wells and piezometers and develop ground-water flow maps when additional sampling at the monitoring boundary is necessary for reasons such as verifying an initial exceedance or a Table 2 scan at a well(s) for assessment monitoring?" The purpose of the policy is to clarify when static-water level measurements and ground-water flow maps are to be submitted in order to comply with 329 IAC 10-21-1(p). The regulation states, "...Each time ground-water samples are collected from the ground-water monitoring wells at the monitoring boundary the owner, operator or permittee shall prepare and submit to the commissioner ground-water potentiometric-surface maps, or flow maps, of the aquifer being monitored at the site". The policy statement answers the question.

**Policy Statement:** 329 IAC 10-21-1(p) requires that static-water level measurements and ground-water flow maps be submitted “each time ground-water samples are collected from the ground-water monitoring wells at the sampling boundary.” This nonrule policy document clarifies that the static-water level measurements should be submitted for a well each time that a sample is taken from the well. However, in some instances, where very few wells need to be sampled, and where complete static-water level measurements and maps have been recently submitted, the commissioner, in accordance with 329 IAC 10-21-1(b), hereby approves the alternative procedures outlined below as equivalent in accuracy and reliability and no less protective of human health and the environment

The circumstances when measurements will not need to be collected from all the permitted wells and piezometers, and ground-water flow maps will not need to be developed and submitted include:

1. When very few wells need to be sampled to establish background for the Table 1A constituents listed under 329 IAC 10-21-15(a);
2. When very few wells need to be sampled to verify an initial exceedance under 329 IAC 10-21-8(c);
3. When very few wells need to be sampled to scan for any constituents listed in Table 2 of 329 IAC 10-21-16; or
4. When very few wells need to be sampled to establish background for a constituent or constituents detected as a result of a Table 2 scan required by 329 IAC 10-21-10(b)(1).

Although these four (4) instances provide exceptions to the requirement to prepare and submit ground-water flow maps, in certain circumstances, site specific conditions may override those exceptions and require the maps be developed from all wells and piezometers and submitted to IDEM. Examples of such site specific conditions that require the submittal of ground-water flow maps include:

1. When the site experiences frequent ground-water flow change, including, but not limited to flow reversal;
2. When most of the wells at the site are being sampled;
3. When the facility is modeling ground-water flow under 329 IAC 10-21-9 to better demonstrate the source of a statistically significant increase; or
4. When the facility is effectively developing and implementing an assessment monitoring program under 329 IAC 10-21-10 or a corrective action program under 329 IAC 10-21-13.

Questions about the application of this nonrule policy statement may be directed to the IDEM Solid Waste Geology Section.