Annex 3: Approach to Resolution of Water Quality Contamination

The selection of the corrective measures to implement when the water quality guidance levels are exceeded depends on a variety of factors, most of which depend on potentially unique site characteristics and local context. The two most important issues to consider prior to implementing a corrective response are:

* Does the exceedance present an immediate health risk to consumers?
* Are there alternative water sources which are accessible and safe?

If there is no immediate danger to the life and health of the beneficiaries, then additional information should be collected into order to select the proper corrective measures.

In all cases, the implementing partner should notify and consult with relevant USAID MEO, REA, BEO, and relevant local authorities regarding the exceedance and appropriate responses.

In general, the implementing partner will collect sufficient information to answer the following questions:

1. Are the data valid/accurate?

*Water quality samples are easily contaminated if not properly collected, stored, or transported. Results can be invalid if the samples have been compromised. Additionally, it is important to ensure that no administrative or clerical errors have occurred.*

1. Has the source of the contamination been identified?

*Source identification usually starts with an observational sanitary survey of the drinking water supply and could involve further environmental or hydrogeological studies.*

1. Did the community provide feedback on the contamination?

*When identifying the source of contamination and appropriate solutions for resolution, local community feedback can provide vital information on how the contamination occurred and what methods they are capable of taking to resolve and protect the source.*

1. Can the contaminant be physically removed from the drinking water source?

*Physical removal of the contaminant from the water source through either source protection or treatment is the primary treatment step that should be considered. Treatment options may include, but are not limited to, sedimentation, filtration, coagulation and flocculation, and settlement. Solutions that are practical at the household level, so called point-of-use treatment, should also be considered.*

1. Can the contaminant be chemically treated?

*The second option for resolution if physical removal is not possible is chemical treatment. This could include, but is not limited to, chlorination, disinfection (chemical or mechanical/UV), conditioning, or other chemical treatment options. Chemical treatment options that are practical for use in the household should be considered.*

1. Did the host country source management authority provide feedback on the contamination?

*The host country authority for protection and enforcement must be included in the resolution of any contamination. Because they have the responsibility and directive for ensuring safe drinking water to their constituents, it is important to obtain their input into the process, to educate and prepare against future contamination as well as to build capacity for drinking water protection.*

Upon completion of the data gathering and compilation, knowledgeable water quality technical specialists, including USAID staff, must be consulted.