

**BUREAU OF ENVIRONMENTAL REMEDIATION/REMEDIAL SECTION
POLICY and SCOPE OF WORK
INTERIM MEASURES**

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RS Section Chief:



Date:

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INTRODUCTION

This Kansas Department of Health and Environment—Bureau of Environmental Remediation (KDHE—BER) Remedial Section policy and scope of work establishes a management strategy and general framework for implementation of an interim measure at a given site. There are various programs within the Remedial Section responsible for direction and/or oversight of investigation and cleanup of sites throughout Kansas. This policy and scope of work has been developed to promote consistency across Remedial Section programs for which interim measure implementation may be appropriate. The expectation is that each program, through whatever agreement or enforcement mechanism might be available (e.g., consent agreement, consent order, voluntary agreement, etc.), will contemplate the need for possible interim measures at a site and include boiler-plate language to require interim measure implementation as determined necessary by KDHE in consultation with the responsible or voluntary party (hereinafter referred to as the implementing party).

There is a presumption that implementation of any interim measure will be accomplished in a cooperative, voluntary manner with the implementing party. However, under certain circumstances (e.g., implementing party hesitation or recalcitrance in an emergency situation), the KDHE—BER project manager may recommend mandatory interim measure implementation in order to protect human health and the environment from an actual or imminent threat from hazardous substances, pollutants or contaminants. Although this policy and scope of work are intended to allow flexibility in management of site risks, the need for adherence to this policy and scope of work is critical for the purpose of anticipating possible interim measures and ensuring early action is taken in as expeditious a manner as possible where deemed appropriate.

For more complex interim measures implemented under the auspices of the KDHE—BER Remedial Section, or as requested by the implementing party, a goal will be to achieve general consistency with the National Oil and Hazardous Substances Contingency Plan (NCP) to the extent practicable. Individual programs within the KDHE—BER Remedial Section may have other unique or possibly less rigorous requirements associated with an interim measure. Therefore, it is incumbent upon each KDHE—BER project manager to have a clear understanding of all program-specific guidelines, policies and regulatory requirements that may have bearing on interim measure implementation at a particular site. On a final introductory note, this policy and scope of work was written using more familiar, universally recognized terminology from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) realm and is not intended to supplant other analogous Remedial Section program elements.

DEFINITION AND APPLICABILITY

In general, an interim measure is defined as a set of short-term actions or activities taken to quickly prevent, mitigate or remedy unacceptable risk(s) posed to human health and the environment by an actual or potential release of a hazardous substance, pollutant or contaminant. An interim measure is generally a less complex type of remedial response, requiring minimal design effort, and somewhat presumptive in nature, thereby negating the need for rigorous treatability study or pilot testing. An interim measure may be warranted in either an emergency (immediate response) or non-emergency situation to manage the source(s) of contamination, control the exposure pathway(s) and/or control the hazard(s) to human and environmental receptors. An interim measure may be conducted without extensive investigation at any time during the investigation or remedial alternatives evaluation process with approval by the KDHE—BER project manager. Minimally, implementation of an interim measure must be conducted in a manner consistent with the concept of best management practices (BMPs) wherein overall improvement in site conditions is achieved. Depending upon site-specific circumstances or conditions, one or more interim measures may be determined necessary.

Factors to be considered in assessing the need for interim measure implementation include the following:

- Actual or imminent threat of exposure to hazardous substances, pollutants or contaminants by nearby human populations, ecological receptors or ecosystem food web;
- Actual or imminent threat of contamination of drinking water supplies or sensitive ecosystems;
- Hazardous substances or wastes in drums, barrels, tanks, piles or other bulk storage containers that may pose an imminent threat of release;
- High levels of hazardous substances, pollutants or contaminants in predominantly surface soils that may readily migrate;
- Weather conditions that may cause hazardous substances, pollutants or contaminants to migrate or be released;
- Threat of fire or explosion; and,
- Other situations or factors that may pose imminent threats to public health or welfare or the environment.

In order to assess the relative magnitude of an actual or imminent threat to human health and the environment and the need for possible interim measure implementation, the KDHE—BER project manager must consider all applicable federal and state regulatory standards or threshold screening levels for the media of interest including, but not limited to, the following:

- U.S. Environmental Protection Agency (EPA) maximum contaminant levels (MCLs);
- U.S. EPA numeric removal action levels (RALs) for contaminated drinking water sites;
- Tier 2 screening levels as provided in the Risk-Based Standards for Kansas RSK Manual – 3rd Version (or as further revised); and,
- Kansas surface water quality standards.

An interim measure would be expected to comply with all applicable or relevant and appropriate requirements (ARARs) and to be considered (TBC) guidance identified to that point in time consistent with BER Policy #BER-RS-015.

If gross measurable or visible contamination to the environment is evident (e.g., catastrophic release of separate phase liquid waste), this may serve as a threshold criterion for interim measure implementation as required by the KDHE—BER project manager.

The intent in allowing interim measure implementation is not to circumvent the more linear investigation, remedial alternatives evaluation, remedial design and remedial action processes established by the various Remedial Section programs. However, if site characteristics suggest the site may be amenable to interim measures designed to control or abate imminent threats or prevent or minimize the further spread of contamination, the KDHE—BER project manager may consider the appropriateness of interim measure implementation as an element of the final remedy.

GOALS/OBJECTIVES AND TIMING

The ultimate goal of an interim measure is to control or abate threats to human health and/or the environment from releases of or exposures to hazardous substances, pollutants or contaminants, and to prevent or minimize the further spread of contamination while long-term remedies are evaluated. An interim measure is intended to provide a partial, albeit more immediate, solution while being consistent with the final site remedy. Implementation of an interim measure often results in significant overall reduction in cost and scope of the final remedy. In some instances, the interim measure may prove to be all that is necessary to achieve site remedial goals should all significant threats to human health and the environment be mitigated or eliminated. In terms of timing, an interim measure is generally conducted before the investigation and evaluation of remedial alternatives are completed.

PROCESS ELEMENTS AND EXAMPLES

Again, an interim measure is intended to be a generally less complex type of remedial response requiring only focused characterization, as necessary; “back of the envelope” target receptor identification and exposure pathway analysis; focused interim measure identification/selection; and, minimal design effort with emphasis on “off-the-shelf” remedial system components. The KDHE—BER project manager should limit the scope and duration of treatability study or pilot testing activities. A typical interim measure may include, but is not limited to, one or more of the following:

- Removal of abandoned drums or other waste containers;
- Excavation of contaminated soil “hot spots”;

- Hydraulic control of groundwater contaminant plume;
- Removal of non-aqueous phase liquid (NAPL) from groundwater;
- Provision of alternate water supply or point-of-use treatment;
- Installation of indoor air vapor mitigation systems;
- Construction of perimeter fencing to limit uncontrolled site access;
- Construction of surface (e.g., dike or berm for runoff/runoff control) or subsurface barriers (e.g., French drain or interceptor trench);
- Receptor point monitoring (e.g., periodic residential well or public water supply sampling)

PLAN/DESIGN AND REPORTING REQUIREMENTS

Whether conducted in an emergency or non-emergency situation, the decision process leading to the selection and implementation of an interim measure, and the resultant action itself, must be appropriately documented. Before an emergency interim measure is implemented, the KDHE—BER project manager must prepare a brief proposed action memorandum to the file (with appropriate chain-of-command sign-off through the Remedial Section Chief). Essentially, the proposed action memorandum is to provide a description, implementation schedule and justification for the proposed emergency interim measure. Upon completion of the emergency interim measure, the KDHE—BER project manager must prepare a summary final action memorandum to the file in order to document the emergency action taken while noting any deviations from the original proposal. If the emergency interim action is performed by an implementing party, the KDHE—BER project manager may allow the implementing party to generate the requisite “before and after” documentation subject to KDHE—BER review and approval. However, given an emergency interim measure designation, the KDHE—BER project manager must recognize the need to complete the review and approval process within a more expedited timeframe (e.g., seven days).

For all non-emergency interim measures, an Interim Measure Work Plan/Design must be submitted for KDHE review and approval. This Work Plan/Design may vary in detail depending on the requirements of the participating Remedial Section program. The Work Plan/Design will include, at a minimum, a summary of available site information and available investigation results; a detailed description of the proposed interim measure; justification and benefit of interim measure implementation including interim remedial action objectives; depending on the complexity of the interim measure, complete design specifications and drawing/schematics, including any relevant figures and/or site system engineering layouts (e.g., process flow diagram, piping and instrumentation diagram, etc.) and engineering design basis; cost estimate; and, a detailed working schedule presented graphically in the form of a milestone chart (e.g., Gantt chart) to show the duration and interdependencies of the various activities. Depending on the complexity of the proposed interim measure and requirements of the specific Remedial Section program, the Interim Measure Work Plan/Design may need to address operation and maintenance (O&M) as well as performance monitoring needs. Please refer to BER Policy #BER-RS-023 (Section 1.4), for a discussion of typical performance monitoring elements, and to Attachment A, as an example outline of an Interim Measure Work Plan/Design package.

Attachment A is not intended to be prescriptive in nature, rather a model from which to work. The exact elements and content of any Interim Measure Work Plan/Design package will be determined by the KDHE—BER project manager dependent upon the overall complexity of the anticipated interim measure while being consistent with the specific requirements of the respective Remedial Section program.

Once the non-emergency interim measure is determined by the KDHE—BER project manager to be complete (e.g., alternate water supply provided) or fully operational and functional (e.g., soil vapor extraction system installed in accordance with the KDHE-approved design and achieves performance expectations), the implementing party must submit an Interim Measure Report documenting the nature of the threat, the action(s) taken and the success in mitigating the threat. The KDHE—BER project manager will determine the appropriate form or content of the Interim Measure Report. If the interim measure continues as an on-going effort (e.g., subsurface interceptor trench operation), then the implementing party must submit a monitoring/progress report at a frequency specified in the KDHE—approved Interim Measure Performance Monitoring Plan (e.g., quarterly).

PUBLIC INVOLVEMENT

Given that interim measure implementation will normally precede the final remedy and any associated site decision documents, the KDHE—BER project manager should prepare a fact sheet describing the interim measure and distribute to interested parties in the immediate site vicinity. This is not for the intent of soliciting public comment on a proposed interim measure, but rather to keep local government officials and area residents informed as to site activities. Depending on the site-related complexities or sensitivities, conduct of a public availability session may be warranted. Public involvement requirements may vary for the various Remedial Section programs.

REFERENCES

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. § 9601 et seq. as amended by the Superfund Amendments and Reauthorization Act)

Resource Conservation and Recovery Act of 1976 (42 U.S.C. § 6901 et seq. as amended by the Hazardous and Solid Waste Amendments of 1984 and 1986, the Federal Facilities Compliance Act of 1992 and the Land Disposal Program Flexibility Act of 1996)

National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300)

U.S. EPA National Primary Drinking Water Regulations and Implementation (40 C.F.R. 141 and 142) (i.e., establishment of MCLs)

U.S. EPA OSWER Directive 9360.1-01 (October 1993) (i.e., establishment of numeric removal

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action levels (RALs) for contaminated drinking water sites) as supplemented by November 10, 1998 U.S. EPA Memorandum entitled “Retransmittal of latest Superfund Removal Action Levels”

KDHE—BER *Risk-Based Standards for Kansas RSK Manual – 3rd Version* (March 1, 2003)

KDHE—BER *Voluntary Cleanup and Property Redevelopment Program Manual* (May 20, 2005) (includes VCPRP statutes and regulations)

Kansas Water Pollution Control Regulations, K.A.R. 28-16 (i.e. establishment of surface water quality standards)

Attachment A
Interim Measure Work Plan/Design Package
Example Outline

- I. Site Background
- II. Previous Investigations and Summary of Results
- III. Description of Proposed Interim Measure
- IV. Interim Remedial Action Objectives
- V. Interim Measure Design
 - a. Design Basis
 - b. Design Specifications
 - c. Drawings/Schematics
 - d. Cost Estimate
 - e. Detailed Working Schedule (to be periodically updated)

APPENDICES

Appendix A – Data Acquisition Plan (optional)

Appendix B – Quality Assurance Project Plan (or reference existing document)

Appendix C – Treatability Study Testing Plan (optional)

Appendix D – Health and Safety Plan (or reference existing document)

Appendix E – Operations and Maintenance Plan