

**Response to USEPA Comments to Clarify and Streamline Submission of an Allied Chemical &
Ironton Coke Operable Unit 3 Feasibility Study Addendum
Ironton Tar Plant, Ironton, Ohio
June 15, 2007**

General Comments

In our conference call on June 4, 2007, U.S. EPA asked Honeywell and Honeywell agreed to provide revised cost estimates and alternatives evaluation text in the form of a feasibility study addendum (FSA). The FSA will include new the following new alternatives:

- Alternative 3b: Ohio EPA solid waste compliant cover: Similar to alternative (renamed) 3a except for use of a solid waste compliant cover.
- Alternative 4b: Limited excavation, off-site disposal and Ohio EPA solid waste compliant cover. Similar to alternative (renamed) 3a except for the use of a solid waste compliant cover.
- Alternative 5: same as originally included in the comparative analysis of alternatives, but not screened out now. Instead, this alternative is still included with rough cost analysis.
- Alternative 6b: Limited excavation, on-site consolidation and Ohio EPA solid waste compliant cover. Similar to alternative (renamed) 6a except for the use of a solid waste compliant cover.

Response: As agreed in our conference call on June 4, 2007, an FSA was prepared to evaluate three new soil alternatives Alternative Soil – 3b, Alternative Soil – 4b, and Alternative Soil – 6b, including cost estimates for the three new alternatives. Per EPA's request, the revised cover alternatives assume a cover system that meets OEPA specifications for solid waste landfills, Honeywell does not believe that such a solid waste landfill cover system is needed for this Site, or that the OEPA landfill cover regulations constitute ARARs for this Site. Alternative Soil – 5, which USEPA previously approved as being screened out because excavation to the water table would be extremely difficult to implement, would result in significant disruption to the community and would not address all risks, despite its extremely high cost, is also now included in the detailed analysis section of the FSA.

Additionally, the following comments are presented here for further clarification while preparing the FSA. While reference is made to the draft FS, these comments are provided for assistance in preparing the FSA.

1. Cost estimates in the draft FS are presented without explanation as to the assumptions which were included. Therefore, we need the assumptions on depth and aerial extents of excavation and/or covering for the soils and sediments (if possible) alternatives in the FSA.

Response: The FSA discusses assumptions on the depth and aerial extents of excavation and/or covering for the soils for the newly evaluated alternatives. Assumptions used to develop cost estimates for sediment alternatives are also presented in Section 4 of the FSA.

2. In the FSA, for the alternatives involving institutional controls, there is no discussion as to what form the institutional control might take. Please be specific as to the type(s) of proposed institutional controls which may include environmental covenants, easements, deed restrictions, zoning, ordinance, municipal ordinances, or other state-wide controls. Institutional controls may have to utilize some mechanism which is independent of Honeywell, such as state law.

Response: Specific information regarding institutional controls for the newly developed alternatives is provided in the FSA.

3. Applicable or Relevant and Appropriate requirements (ARARs) are generally considered to be not applicable to No Action alternatives.

Response: Acknowledged.

SPECIFIC COMMENTS

1. **Section 1.2.3, Nature and Extent of Contamination, Page 1-5.** What is the difference in the term shallow versus deep when discussing soils? The definition of shallow vs. deep must be clear and consistently applied in the FSA.

Response: Clarification of the terms shallow and deep soils is provided when discussing alternatives in the FSA. Shallow soils are defined as soils to 0- to 5-foot depth, and deep soils are defined as soils below 5-foot depth.

2. **Section 1.2.6.1, Human Health, Page 1-10, 3rd Bullet.** The 10^{-4} and 10^{-6} range is the range where EPA has discretion concerning response actions, not the “acceptable risk” range. Please refer to this as the discretionary risk range.

Response: The term “discretionary” is used in the FSA when referring the 10^{-4} and 10^{-6} risk range.

3. **Section 2.2.4.1, RAOs for Soil,** Page 2-4. The presentation in the draft FS switches from using the term shallow versus deep in describing impacts to soils (see comment on Section 1.2.3, above) to the use of surface versus sub-surface (in Sections 2.2.4.1 and 1.2.6) and in neither case are these well defined (e.g., to what depth are these considered applicable?). Please use a consistent set of terms, defining those terms, and allowing for cross-reference or use of a single set in the FSA.

Response: The terms shallow and deep soils are defined and are used consistently in the FSA. Shallow soils are defined as soils to 0- to 5-foot depth, and deep soils are defined as soils below 5-foot depth.

4. **Section 3.1.1, Remedial Alternatives for Soil, Alternative Soil-4, Page 3-3, 5th Paragraph.** This alternative in the draft FS presents several different sub-alternatives, based on the exposure pathway and risk level achieved. In the FSA, we need one “master” scenario that addresses all exposures for reasonable future anticipated use.

Response: The most conservative scenario (i.e., future commercial/industrial outdoor worker) is used in the FSA when discussing the new alternatives.

5. **Section 3.1.4, Remedial Alternatives for Sediment, Alternatives Sediment 3, 4 and 5.** The description of these alternatives should include an indication as to the amount of sediment to be dredged and/or capped. If possible, the FSA should include this information.

Response: Section 4 of the FSA presents rough estimates of the amounts of sediment to be dredged and/or capped. As it has been discussed with USEPA, these estimates are very rough and will be further defined, based upon further additional data collection.

6. **Section 4.0, Detailed Analysis of Alternatives, Page 4-3, 4th paragraph.** The assumptions for the cost estimates included in the FS are not provided. The FSA must contain all assumptions for the new alternatives.

Response: Assumptions for developing cost estimates for the new alternatives are provided in the FSA.

7. **Section 4.0, Detailed Analysis of Alternatives, Page 4-3, 5th paragraph.** The correct EPA guidance for the directive is USEPA Office of Solid Waste and Emergency Response (OSWER) Directive 9355.3-20 dated June 25, 1993. The discount rate specified for non-federal facility sites is 7%. For the FSA, please either leave the cost estimates using the incorrect discount rate of 5% for consistency or if it is easy enough to fix, please update all cost estimates for each air, soil and sediment alternative using the 7% discount rate. U.S. EPA recognizes that use of the 5% discount rate results in overestimation of the costs, but if 5% is used consistently, then each of the costs will be overestimated consistently.

Response: The 5% discount rate was used in accordance with the Guidance for Conducting Remedial Actions and Feasibility Studies Under CERCLA, EPA/540/G-89/004, OSWER Directive 9355.3-01, October 1988. As suggested in the comment above, no changes were made to the cost estimates.

8. **Section 4.1.3, Alternative Soil-4, Page 4-12.** For soil alternatives 3b, 4b and 6b, please clarify how the excavated soil is assumed to be managed (i.e., will it be a RCRA-hazardous waste, a TSCA waste or a non-hazardous waste)? With polycyclic aromatic hydrocarbons (PAH) being the primary contaminant, it appears likely that most of the excavated soil could be managed as non-hazardous waste. Most importantly, we need to know clearly how the excavation scenarios will be verified. Do you propose sampling during/after excavation to verify clean up numbers or do you propose digging to a set depth. Please make this clear in the FSA.

Response: Based on the waste characterization results of the remedial investigation derived waste, it is assumed that excavated soils would be managed as non-hazardous waste. Verification sampling is not planned for the excavation scenarios presented in the draft FS or the FSA, as the excavation depth is defined (i.e., up to five feet for Soil Alternatives – 4a/b and 6a/b; and the depth of water table for Soil Alternative – 5). This statement is also included in the FSA.

9. **Section 4.2.2.3, Long-Term Effectiveness and Permanence, Page 4-24.** The long-term effectiveness and permanence of any institutional control relies on the institutional control being followed. Therefore, institutional controls have a lesser degree of long-term effectiveness and permanence than a remedy which removes the contamination from the site. Please note this where it applies in the FSA. Additionally, the fact that Honeywell controls much of the site likely makes it easier to implement the necessary institutional controls. However, the extent of contamination at the south end of the site has not been defined, and the contamination extends onto property which is presently not owned by Honeywell. Any institutional control implemented for any alternative for any media will have to address off-site areas not owned by Honeywell.

Response: Honeywell agrees that any institutional control implemented for any alternative for any media will have to address, to the extent applicable, offsite areas not owned by Honeywell. With regard to the long-term effectiveness and permanence of various remedies, Honeywell has made clear in the FSA those elements of the excavation remedies that promote long-term effectiveness and permanence.

COMMENTS ON COST ESTIMATES

1. A separate appendix describing the cost estimating process, including the software and/or procedures used to develop the cost estimates and assumptions is strongly encouraged. The existing cost sheets are suitable for use as a summary cost tables.

Response: Appendix A contains cost sheets with assumed quantities for each alternative. A discussion of how the cost estimates were developed has also been enclosed in Appendix A.

2. There seems to be an inconsistency in the unit cost for backfill/compaction. On Alternative 6, \$2/cubic yard is used while \$17/cubic yard is used elsewhere. Please correct the inconsistency.

Response: This inconsistency has been corrected, and a unit cost of \$17/cubic yard was used.
