EA Engineering, Science, and Technology

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13 July 1993

TO: Fields Brook COC & ROC Selection Panel

FROM: Phil Clifford, EA Engineering, Science, and Technology, Inc.

RE: Part I of COC and ROC Selection Process Using the PCT

This memorandum constitutes the first part of the COC and ROC selection process using the Paired Comparison Technique. It should be completed and returned to Phil Clifford at the above address no later than 26 July 1993. The next mailing will attempt final resolution on the lists of factors. At that time, if there are outstanding issue, a telephone conference will be arranged. If this is not necessary, the next mailing will arrive within approximately two weeks of resolution of the factors lists. Subsequent mailings will consist of the information and forms necessary to weight and document the decision factors established. If all goes smoothly, this entire exercise can be conducted on paper and phone conferences should not be necessary. We request that you work alone and address all questions to Phil Clifford at EA because direct communication between panel members at this stage in the process defeats the purpose of obtaining un-biased, honest, individual professional opinions upon which this process is predicated. Thank you for participating in this process.

The preliminary factors for ROC selection are listed below. Please add up to three more for consideration and justify (in a short paragraph) why you believe that these are appropriate factors for ROC selection. Remember that for a factor to be useful it must: (1) be possible to obtain the information required, (2) possess some degree of discriminatory power between various alternatives (ROCs or COCs), and (3) be amenable to expression on either a numerical or nominal scale. If you feel that any of the factors listed should be discarded or modified, indicate this in the space provided. Finally, please assign ranks (1 to a maximum of 8 with 1 as the most preferred) to each factor. You may choose to assign a rank of zero to factors you wish to see discarded. ROC Selection with the PCT - Mailing #1, Page 2

- Seasonality of Site Use: Time during which organisms are present on site.
- \_\_\_\_ Trophic Status: Level in food-web and propensity to bioaccumulate contaminants, and relative individual importance in overall ecosystem function.
- <u>Habitat Type: Degree of direct contact with potentially contaminated</u> environmental media.
- Regulatory Status: Includes level of regulatory protection (for example, protection under the Endangered Species Act, 16 U.S.C.A. *et seq.*) and potential for recreational and commercial harvest.

Practicality: Usefulness in risk assessment/management, availability of toxicological or ecological information, obtainability of specimens or appropriate surrogates, difficulty in handling samples or interpreting results.

\_\_\_ (Additional #1)

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\_\_\_\_ (Additional #2)

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(Additional #3)

## COC Selection with the PCT - Mailing #1, Page 4

The preliminary factors for COC selection are listed below. Please add up to three more for consideration, justify (in a short paragraph) why you believe that these are appropriate factors for ROC selection. Remember that for a factor to be useful it must: (1) be possible to obtain the information required, (2) possess some degree of discriminatory power between various alternatives (ROCs or COCs), and (3) be amenable to expression on either a numerical or nominal scale. If you feel that any of the factors listed should be discarded or modified, indicate this in the space provided. Finally, please assign ranks (1 to a maximum of 7 with 1 as the most preferred) to each factor. You may choose to assign a rank of zero to factors you wish to see discarded.

Toxicity Quotient: The ratio of the toxicity of the compound at a generic screening level to observed concentrations.

Bioaccumulation Potential: Tendency of the chemical to bioaccumulate in tissues of ROCs. Octanol-water partition coefficient (Kow) for organic compounds and bioconcentration factors (BCF) for metals and metal-based compounds are proposed. Note that contaminants such as mercury will be dealt with on a Kow basis rather than a BCF basis because it is the organo-mercury which is of greatest concern.

Ubiquity: Detection frequencies from flood-plain samples (SQDI Phase I will be used for preliminary assessment, Phase II data will be used for the complete assessment).

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Ratio of mean concentration of materials on-site to mean concentration in background for each sampling matrix (soil/sediment, water, biota). If contaminants are not detected in background samples, 1/2 the detection limit is proposed.

(Additional #1)

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At the conclusion of the process the top 5 factors will be used for selection of ROCs and the top 4 factors will be used for selection of COCs.

Additional comments:

Fields Brook Superfund Site COC & ROC Selection Panel Members:

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