

**Responses to Hazwrap Comments
Summer 1992 Environmental Evaluations Surveillance**

Responses to HAZWRAP "Final Field Assessment Report on Ecological Sampling Activities at the RFP" dated August 6, 1992.

Specifically, these responses are correlated with Section 3.2 Findings and Section 3.3 Observations from the HAZWRAP Report.

3.2 Findings

3.2.1 Environmental Evaluation Work Plan/Sampling and Analysis Plan

Recommendations - The Data Quality Objective (DQO) process should be revisited, first on a generic (sitewide) basis, and then for each OU, and a firm generic methodology should be developed as recommended by the EPA Quality Assurance Management Staff (Neptune et al., 1990; Neptune and Blacker, 1990; Fairless, 1990; Ryti, 1990). The DQO process should provide the framework for development of statistically-based tools and data of sufficient quality to permit the making of decisions critical to environmental restoration within known bounds of uncertainty. EG&G should revise section 3.0 of the QAPjP to accommodate the statistical aspects of the sampling design, including the development of the decision, the specific hypotheses to be tested, and the optimization of the design for testing these hypotheses.

Response: The comments on the EEWP/SAP are helpful and will be considered in future RFP work plans. The OU 3 Work Plan was approved by EPA and CDH on March 17, 1992 and DOE on April 13, 1992. At this point in the OU 3 project, with field work more than half complete; revisiting the work plan would adversely impact the attainment of scheduled milestone deliverables.

3.2.2 Quantitative and Qualitative Songbird Surveys

Observed Condition: The field sampling personnel conducted the quantitative songbird survey after the specified nesting season (June 30, 1992) and daily time interval (10:15 - 10:40 am). Each quantitative songbird plot was surveyed only once on June 30, 1992. During the qualitative songbird survey, the field sampling personnel recorded only raptor species and failed to record other species, behavior, habitats, and nesting sites.

Response: Jill Stoecker was only demonstrating songbird surveys on 6/30/92 to the Hazwrap team because no actual songbird surveys were scheduled during their visit and they had requested to see a survey performed.

3.3 Observations

3.3.1 Vegetation

1. Point-intercept Transects - Observed Condition: SOP EE.10 (EG&G, May 1991) states that a 50 m tape measure will be stretched and each end will be marked with flagging. SOP EE.10 further states that each plant species intercepted by the tape measure at 1 m intervals will be recorded. An approved Document Change Notice (DCN) reducing the point intercept interval from 1 m to 0.5 m was available onsite. Transects were not marked with flagging material and the 50 m tape measure was allowed to drape over the higher vegetation, effectively shortening the overall length of the transect and 0.5 m point intercepts. Field personnel recorded only the first and second plant species intercepted at 0.5 m intervals. SOP EE.10 should be updated to reflect the change in the sampling protocol for removing the use of flagging material and the recording of the first and second plant species intercepted by the tape measure at 0.5 m intervals. A method should be implemented to retain the 50 m measuring tape in a stretched position.

Response: SOP will be updated to not require flagging as transects are not intended to be permanent. Stretching the measuring tape is not necessary as this is a statistical estimate of cover; 0.5 meter interval points are only to eliminate bias.

2. Belt Transects - Observed Conditions: SOP EE.10 (EG&G, May 1991) states that a 50 m tape measure will be stretched and each end will be marked with flagging. Transects were not marked with flagging material and the 50 m tape measure was allowed to drape over the higher vegetation, effectively shortening the overall length (and area) of the transect. Personnel performing the belt-transect survey preceded the point-intercept sampling team. This activity could potentially result in the trampling of vegetation and interfere with point-intercept transect results. SOP EE.10 should be updated to reflect the change in the sampling protocol for removing the use of flagging material. A method should be implemented to retain the 50 m measuring tape in a stretched position. Belt transect surveys should be performed after the point-intercept transect surveys have been completed.

Response: No flagging of transects is required. (See 3.3.1, number 1). It is not necessary to require the belt transects to be performed after the point-intercept as field crews are well aware that it is necessary to avoid trampling vegetation.

3. Production Plots - Observed Conditions: A production plot sample was obtained at a proposed soil sampling location. This production plot sampling effort was not located on a transect line, but co-located to coincide with soil samples. SOP EE.10 (EG&G, May 1991) states that production plots will be located every 10 m along a 50 m tape measure. SOP EE.10 should be updated to include this sampling strategy.

Response: The observed production plot sampling was conducted to coordinate synoptically the abiotic data with biotic data. SOP EE.10 will be updated to include this sampling strategy.

3.3.2 Birds

1. Sampling Equipment and Materials - Observed Conditions: SOP EE.07 (EG&G, May 1991) states the following equipment should be available to field personnel: binoculars, 50 m fiberglass measuring tape, field thermometer, flagging material, field identification guide, bound field notebook, water proof pens, and field data forms. Field personnel did not have the necessary equipment (field thermometer, bound field notebook, waterproof pens, and field data forms) available in the field. Field personnel recorded the observations into a 3" x 5" spiral notebook in pencil for subsequent transcription onto data forms. All field personnel should have access to the SOP in the field (for reference) and be thoroughly familiar with the SOP to ensure that the proper equipment and data collection forms are available in the field. The use of the proper data collection forms precludes transcription errors and errors of omission. The SOP should be updated to delete the requirement for recording weather conditions. RFP weather station data should be referenced.

Response: As stated in 3.2.2, this was only a demonstration and no data was actually collected at the time. It is not necessary to use the field forms for initial data collection in the field as the data will be retranscribed to other forms and then to a computer data base allowing numerous opportunities for errors of transcription and omission. The SOP will not be updated to delete recording of weather conditions as there may be considerable variations in conditions locally, and location-specific conditions may be absolutely necessary to interpret the field data.

2. Health and Safety - Observed Conditions: SOP EE.07 states that field personnel must have met OSHA training requirements (40 CFR 1910.120). Field personnel did not have the required SARA/OSHA training (29 CFR 1910.120) and were not familiar with the site Health and Safety plan. All field personnel should receive required SARA/OSHA training prior to field assignments. The Health and Safety Plan must be available on-site for reference.

Response: Due to time constraints, the initial qualitative ecology survey personnel were working under a Memorandum of Agreement with EG&G Industrial Hygiene while the HSP was being approved. The HSP was approved on June 25, 1992. The field personnel were in the process of HSP Training during the HAZWRAP field visit. Field personnel are OSHA trained and expected to be familiar with their HSP and required to have the plan available to them in the field.

3. Quantitative Songbird Survey - Observed Conditions: SOP EE.07 states that quantitative songbird plots will be either 50 m by 50 m or 100 m by 50 m. The SOP further states that surveyors should approach the plot slowly and stand quietly for one minute at the midpoint of the side which provides the best lighting. The quantitative songbird plot size was 100 m by 100 m. Field personnel did not stand quietly for one minute prior to entering the plot. Field personnel should comply with the procedures stated in the SOP.

Response: As stated in 3.3.2, no data was collected during the field demonstration provided to HAZWRAP. The plot size is being evaluated for conformance with the SOP. If necessary, the SOP will be changed.

3.3.3 Benthic Macroinvertebrates

1..4 Sampling Equipment and Materials - Observed Conditions: SOP EE.02 (EG&G, May 1991) states that water quality parameters will be measured according to SOP 4.2 (EG&G, August 30, 1992), Field Measurement of Surface Water Field Parameters. SOP 4.2 indicates the need for standardization of equipment by calibration against known standards or equipment. A temperature calibration log was not established for calibration of the temperature meter. A NIST traceable thermometer should be obtained and the necessary 3 point calibration of the temperature meter performed as soon as possible.

Response: The accuracy of the thermometers being used is well within the requirements of the study. However, the SOP will be evaluated against the requirements of SW.2 and changed if necessary.

3.3.4 Fishes

1. Sampling Equipment and Materials - Observed Conditions: SOP EE.02 (EG&G, May 1991) states that water quality parameters will be measured according to SOP 4.2 (EG&G, August 30, 1991), Field Measurement of Surface Water Field Parameters. SOP 4.2 indicates the need for standardization of equipment by calibration against known standards or equipment. A temperature calibration log was not established for calibration of the temperature meter. A NIST traceable thermometer should be obtained and the necessary 3 point calibration of the temperature meter performed as soon as possible.

Response: The accuracy of the thermometers being used is well within the requirements of the study. However, the SOP will be evaluated against the requirements of SW.2 and changed if necessary.

2. General Considerations and Limitations - Observed Conditions: SOP EE.02 (EG&G, May 1991) states that the Field Sampling Plan (FSP) will indicate the species and number of specimens required for specified analysis. Species retained for tissue analysis included Longnosed Suckers, Carp, and Minnows. Longnosed Suckers and Carp were not on the FSP target list of species for tissue analysis (FSP Table 8.8) and should be added. The FSP should address the use of surrogate species when target list species are not available.

Response: SOP EE.02 will be evaluated to include sampling of surrogate species when target species are not available.

3. Handling of Samples - Observed Conditions: SOP EE.02 (EG&G, May 1991) states that fish collected for tissue analysis should be placed in a cooler with Blue-Ice or dry ice. SOP EE.02 further states that fish will be maintained in the cooler for no more than four hours prior to being placed in a freezer at 20° C. Fish were retained on regular ice in the field and held under refrigerated conditions overnight prior to dissection for tissue samples. The SOP should be updated to reflect these handling procedures.

Response: The SOP will be updated to reflect these handling procedures.

3.3.5 Small Mammals

1. Baiting and Setting the Traps - Observed Conditions: SOP EE.06 (EG&G, May 1991) states that bait may consist of either peanut butter plus rolled oats or cornmeal, or a commercial feed. SOP EE.06 further states that a single polyester ball is to be added to each trap to provide bedding material. The bait used was rolled oats and polyester bedding material was not added to each trap. The SOP should be updated to reflect the current practices regarding bait and bedding material.

Response: The SOP will be updated to reflect the current practices.

2. Weighing, Inspecting and Marking the Animals - Observed Conditions: SOP EE.06 states that each captured animal should be marked with a pelage dye so that recapture can be used to estimate population size. The captured animals were hair clipped for identification purposes. The SOP should be updated to reflect current identification practices.

Response: The SOP will be updated to reflect the current practices.

3. Documentation - Observed Conditions: SOP EE.06 states that data collected during the trapping of small mammals should be recorded on the Small Mammal Live-trapping Data Form (Form 5.6B). Data was collected on the Small Mammal Live-trapping Data Form EE.6A (Draft). The SOP should be updated to reflect the current version of all field data collection forms. Data collection forms should be in final form prior to field data collection activities.

Response: The SOP will be updated to reflect the current version of all field data forms.

3.3.6 Corrective Actions - Observed Conditions: A corrective actions report was issued by EG&G addressing the findings of the October 1-3, 1991 ecological field sampling assessment. The recommendation to more closely integrate the abiotic and biotic sampling activities has been followed for the RFI/RI WP developed for OU 3. The recommendation for the development and implementation of an SOP describing protocols for the prevention and minimization of the potential for cross contamination of fish tissue samples during field processing and handling apparently has not been developed. The observed procedures utilized to minimize cross contamination during the processing of fish tissue samples included changing the paper covering the cutting board and rinsing of equipment and gloves. The recommendation for the addition of protocols for sample containers, preservation, handling, and shipping of all biological samples to SOP FO.13 apparently has not been implemented. The ecological sampling efforts observed did not include containerization, preservations, or shipment of biological samples.

Response: There is not a separate SOP being developed describing "protocols for the prevention and minimization of the potential for cross contamination for fish tissue

samples during field processing and handling" however the Ecology SOP will be updated to include the suggested procedures.

3.4 Additional Recommendations

- 3.4.1 Fishes - Observed Conditions: The decontamination procedures utilized during the processing of fish appear adequate to minimize the potential for cross contamination. These procedures (changing the paper covering the cutting board and rinsing of equipment and gloves) should be incorporated into SOP EE.04.

Response: The SOP will be update and these procedures will be incorporated (see 3.3.6).

- 3.4.2 Small Mammals - Observed Conditions: A new, clean plastic bag for containing specimens during processing should be used on every sampling site to minimize the potential for cross contamination between sampling stations. This procedures should be incorporated into SOP EE.06.

Response: The SOP will be updated and this procedure will be incorporated.

- 3.4.3 Health and Safety - Observed Conditions: The current, approved site-specific Health and Safety Plan (HSP) must be available to all field personnel and maintained on-site for reference (29 CFR 1910.120). Field personnel should be thoroughly familiar with the site HSP and the documentation should be established that indicates field sampling personnel have read and understood the HSP.

Response: All field personnel are required to have the site HSP available (see 3.3.2). In addition we are considering establishing formal documentation.

- 3.4.4 Sampling and Analysis Plan - Observed Conditions: The current, approved site-specific Sampling and Analysis Plan (SAP) should be available to all field personnel and maintained on-site for reference. Contract personnel involved in the sampling efforts and EG&G management, responsible for contractor performance should be thoroughly familiar with the SAP prior to initiation of sampling efforts.

Response: The SAP is part of the Work Plan and is required to be available to field personnel at all times.

- 3.4.5 Standard Operating Procedures - Observed Conditions: Revisions to the SOPs should be in place well before the sampling efforts are scheduled. At a minimum, all DCNs must be available in the field to reference current procedures. A mechanism should be instituted by EG&G to ensure that DCNs are incorporated into the SOP and distributed in a timely manner. All changes to the SOPs which impact the FSP should be incorporated into the periodic updates to the FSP. These documents are critical to the collection of data, and they should in no way contradict each other regarding data collection procedures.

Response: We are currently attempting to streamline this system.

3.4.6 Management Procedures - Observed Conditions: The coordination and management of the ecological sampling efforts needs improvement. This may be accomplished under the existing contractual structure by providing additional support personnel to monitor the efforts and schedules of the myriad of contractors and subcontractors. The preferred method to improve the management of the sampling efforts would be to place the Environmental Evaluation sampling under one contract.

Response: The most recently contracted sampling efforts are under a single contract. We are anticipating that this will improve coordination and management of the ecological sampling efforts.