

**SUBLETTE COUNTY
HUMAN HEALTH RISK ASSESSMENT
AIR TOXICS INHALATION**

DRAFT WORK PLAN

JULY 25, 2008

Overall Plan

This work plan, as requested by the Sublette County Commissioners, is intended to describe a proposed study of the risks to human health for citizens of Sublette County who are exposed to air toxics and ozone as they live and work in the County. The work plan is intended to be responsive to a citizen petition submitted in March 22, 2008, to a number of agencies including the office of Governor Dave Freudenthal, the Sublette County Commission, the Wyoming Department of Health, and the Wyoming Department of Environmental Quality.

The process of conducting an air toxics risk assessment will start by selection of chemicals of potential concern to be evaluated. These chemicals will include chemicals known to be produced and emitted during drilling, completion and production of natural gas and from activities ancillary to such industrial processes. Most air samples collected during the study will be analyzed for the identified chemicals of potential concern, and a subset of samples will be analyzed for a broader range of constituents to ensure that the study does not miss a particular air toxic. Samples will also be collected for ozone for evaluation in the risk assessment.

The study will also determine the exposure patterns for residents and sensitive subpopulations, and will then assess the expected human health risk resulting from exposure of those residents to air toxics and ozone measured in the ambient air throughout the County. The risk assessment will be conducted in accord with EPA guidance for how screening level air toxics risk assessments should be performed, and will also consider the risk assessment methods used in a recently completed risk assessment which evaluated residents' risks due to exposure to similar air contaminants in Garfield County, Colorado.

Air sampling will be performed using a combination of efforts on the part of the Sublette County Conservation District for placement and retrieval of sample collection canisters, and a contractor who will provide the prepared collection canisters and analyze the samples. The sampling program objectives are to collect samples sufficient to describe the exposure of the general population of Sublette County to air toxics and ozone—requiring sampling generally in the towns and other populated areas of the County—and to evaluate whether air contaminants are being transported into the County.

Once authorization is received from Sublette County, the technical committee will seek proposals from contractors to provide sample collection equipment, to analyze samples, and to report on sampling results. Sampling is intended to occur over a one-year period for this screening level air toxics risk assessment. Depending upon the results of this assessment, additional sampling and/or risk assessment may be recommended. Contractors would be expected to supply canisters and other equipment sufficient to collect 24-hour samples, once per week, for analysis of air toxics; separate portable collection samplers to collect 24-hour formaldehyde samples; and portable non-reference method ozone monitors to collect ozone data. Consultation with risk assessors at EPA and officials at the Colorado Department of Health and the Environment (responsible for the Garfield County assessment) indicates that collection of 24-hour samples, once per week over a year-long period, will provide sufficient data to allow a rigorous evaluation of risk from exposure to air toxics.

This work plan does not specify exact sampling locations or frequency, but describes the intent of sample collection. It is anticipated that the technical committee will seek proposals from contractors for a sampling program which collects adequate data to support this risk assessment. The intent of the sampling program is to collect samples sufficient to describe the exposure of the general population of Sublette County to air toxics and ozone—requiring sampling generally in the towns and other populated areas of the County—and to evaluate whether air contaminants are being transported into the County. The study budget was developed by assuming that once per week sampling over a one year period would occur in up to ten population-based locations

throughout the county, and that sampling on a less frequent basis would occur in up to five locations during the year to evaluate transport into the County. Exact sample locations and sampling frequency for each location would be specified in a contract with an air toxics analytic firm, following evaluation of proposals.

This work plan anticipates that the Sublette County Commission has agreed to allow personnel from the Sublette County Conservation District to deploy and retrieve sample containers. This work plan also acknowledges that the Wyoming Department of Environmental Quality and the Department of Health will collaborate in the evaluation of air quality data, in the conduct of the risk assessment, and in preparation of the final report. Use of existing personnel in these agencies will significantly reduce the overall costs of conducting this risk assessment.

Project Schedule

- June 2008 – Memorandum Of Understanding (MOU) signed
- 7/1/08 - Project Management & Technical Committee prepares a draft work plan
- 7/7/08 to 9/2/08 – Project Management & Technical Committee provides draft work plan to Steering Committee for initial review; public review as determined by Steering Committee
- 9/2/08 – Issue request for proposals
- 11/2/08 - Select air monitoring contract & begin air monitoring
- 12/1/08 - Interim risk assessment based upon existing DEQ-AQD data provided to Sublette County & its citizens; public review of interim assessment
- 12/1/09 – Finish data collection & evaluate exposures to COPC's

- 12/1/09 - Perform toxicity assessment & obtain public input on the assessment
- 6/1/10 - Characterize risk & obtain public input on the risk characterization
- 8/1/10 - Issue draft final report for public review
- 9/1/10 - Issue final report