

Protocol for ORAU Medical Screenings for Citizens Living Near the Kingston Fly Ash Spill Of December 22, 2008

The purpose of the medical screening is to provide concerned residents of Roane County with targeted medical testing to screen for adverse health effects potentially related to the fly ash spill.

The screening examinations have been designed by the medical toxicologists (Seger, Benitez, and Williams) from the Tennessee Poison Center at Vanderbilt University Medical Center in consultation with Michael Kosnett, MD, a medical toxicologist, and Lee Newman, MD, a pulmonologist with the University of Denver Health Sciences Center in Denver, CO.

The selection of specific evaluations is based on the analysis of the coal ash performed by the Tennessee Department of Environment and Conservation performed on January 6-7, 2009 on residential property in the spill area. (Column one on the Matricies) These tests were chosen based on a comparison of the constituents of the coal ash and normal values for soil in the surrounding area.

The protocol is intended to ensure consistency of approach in the medical evaluation of the participants.

This protocol is not intended to dictate the clinical practice of medicine.

This protocol is not intended to substitute for periodic health maintenance/disease screening examinations by the participant's person physician. However, a secondary benefit may be the assessments contribution to general health information.

Provisions for follow up examinations are provided for in the ORAU-Vanderbilt contract. The need and scheduling of these will be determined after the first round of testing in completed. Possible follow up is envisioned at six month and one year which would be one year and 18 months after the spill.

Based on the exposure matricies (attached), the following examinations will be offered:

- Health History/Questionnaire - attached
- Physical Examination- follows
- Spirometry
- Chest x ray with interpretation
- Routine urinalysis
- Complete Blood Count (CBC)
- Blood Chemistry to include:

Chemistry Panel
Sodium
Potassium
Chloride

Bicarbonate (sometimes reported as CO ₂)
Glucose
Blood Urea Nitrogen
Creatinine
Aspartate Transaminase
Alanine Transaminase
Alkaline Phosphatase
Total Bilirubin

Biological Monitoring tests will include:

Test	Specimen Type	CPT Code
Aluminum	Serum	82108
Arsenic	Whole Blood	82175
Arsenic	Urine	82175
Barium	Urine	83018
Beryllium	Urine	83018
Chromium	Serum	82495
Cobalt	Whole Blood	83018
Copper	Serum	82525
Nickel	Serum	83885
Selenium	Serum	84255
Thallium	Urine	83018
Vanadium	Urine	82570, 83018

Note: Uranium values initially reported by TDEC are erroneous, so testing for uranium exposure is not recommended.

Participants will have all testing completed prior to their physical examination by the medical toxicologists. Participants will receive results at the time of their physical examination. A summary of the results and the findings of the examination will be sent in a letter to the participant by the Vanderbilt physicians.