- **Overview of first C8 Science Panel results from Study 1, October 15, 2008**

- **Our charge:** C8 Science Panel is charged with determining if there is a 'probable link' between C8 and any disease

- We will conduct 11 studies. Some involve analyzing existing data, others new data. Some will provide a piece of the evidence, but will not allow a conclusion about a probable link. Some will be more conclusive.

- Our first and second studies involve analyses of data from the C8 Health Project conducted in 2005-2006. These data do not allow conclusions about a 'probable link'. Today I present results from Study 1.

- C8 Health Project:
- 69,000 participants in 6 contaminated water districts. Many self-reported diseases, test of C8, and tests of many medical markers in blood.
- Many different reports will be generated based on these data.

- Our analyses of C8 Health Project data are being done in collaboration with researchers from WVU
- Later studies involve new data collection and are independent of WVU.

- Study 1 involves several different reports. Today I am presenting three of them. All three have been summarized and filed yesterday with the Wood Count Court.
- All have been done in collaboration with WVU

- Report 1. Factors associated with C8 levels in C8 Health Project participants
- Report 2. Relation between cholesterol and other lipids and C8 among C8 Health Project participants
- Report 3. Relation between diabetes and C8 among C8 Health Project participants.

Report 1

- Median (mid-value) C8 level: 28 parts per billion (ppb)
- US population average of about 5 ppb
- Current residents: median level of 38 ppb
- Little Hocking: 224 ppb, Lubeck 70 ppb, Tuppers Plains 37 ppb, Belpre 35 ppb, Pomeroy 12 ppb, Mason 12 ppb
- Past residents: 18 ppb

Other important factors were working at Dupont and gender

- Current Dupont workers: 148 ppb
- Past Dupont workers: 75 ppb
- Males 34 ppb
- Females 24 ppb

- Report 2. Blood C8 levels and cholesterol levels in adults at the time of the C8 Health Project

- Those with higher C8 had higher cholesterol
- 11-point increase in total cholesterol between those with lowest C8 levels to those with highest C8 levels
- similar increase was seen for C8 sulfonate (C8S)
- C8S was not released from the DuPont plant

Risk of High Cholesterol (> 240 mg/dl):

About 50 % higher among those in the top 25 % of C8 or C8S in the blood, vs the bottom 25 %

Other lipids, such as LDL and triglycerides, were also positively related to C8 and C8S levels.

Cannot draw conclusion that C8 (or C8S) causes higher cholesterol from these data, because we cannot tell whether high C8 levels came before or after high cholesterol levels.

For example, it is possible that both substances increase in blood together because both are linked to some other chemical in the body.

Report 3

Adult-onset (Type II) diabetes, both self-reported and medically-verified, among C8 Health Project participants in relation to C8 blood levels

The Science Panel found no relationship between blood C8 levels in 2005-2006 and either self-reported or medically-validated diabetes.

Furthermore, we found no relation between fasting glucose levels (a marker of increased risk of future diabetes) and C8 in C8 Health Project participants who did not have diabetes.

Again, however, it is not possible from these data to say there is no relation between C8 and diabetes, because again we cannot be sure which came first, the diabetes or the C8.

Future science panel studies will be able to make this distinction.

Summary of first reports from Study 1 for health effects

- Among C8 Health Project participants, C8 and C8S are positively related in the blood to cholesterol and other lipids (LDL, triglycerides).
- C8 is not related to Type II diabetes or fasting glucose
- Both reports add a piece of evidence, but neither is conclusive

Future studies (studies 2-11)

The Cancer, Immune Function, Liver and Hormone Disorders Study based on the C8 Health Project

- First Results 2009
- Completion 2010

The Community Follow-up Study

- First results 2011
- Completion 2011

Followup study, 40,000 people

The Worker Follow-up Study

- First results 2011
- Completion 2011

•Followup study, 6000 workers

The Study of Birth Outcomes in the Whole Community

- First results 2010
- Completion 2010

•Based on vital records of births in Ohio and W Virginia in the 1980s-2004

•Pre-term birth, low birth weight, stillbirths

The Study of Birth Outcomes among C8 Health Project Participants

- First results 2009
- Completion 2010

Low birth weight, pre-term births, still birth, miscarriage

The Geographic Patterns of Cancer Study

- First results 2009
- Completion 2010

•Based on cancer occurrence in Ohio and W Virginia in the 1990s until 2004, related to C8 levels in drinking water

Follow-up Study on Immune Function, Liver and Hormone Disorders

- First results 2010
- Completion 2011

•Follow up study with blood sample of 800 participants in the C8 Health Project, looking at change in C8 and immune, liver and hormone test from 2005 to 2009

The Exposure Study

- First results 2009
- Completion 2010

- Estimates blood C8 levels in the past for 40,000 people in the community followup time – uses yearly plant C8 emissions, distance of residence from plant

The Half-life Study

- First results 2009
- Completion 2011

•Measures C8 in blood for 200 people repeatedly from 2007-2011, after filters placed in water districts, to estimate rate of disappearance of C8 from the body

Neurobehavioral Development in Children

First results 2011

- Completion 2011

- Test of learning and behavior in 550 children aged 6-11, in relation to blood C8 levels