Testimony Concerning a Proposed Study of Oil and Chemical Spills on the Fort Berthold Reservation:

As a concerned faculty member of the Nueta Hidatsa Sahnish College, I would like to introduce myself- Audrey LaVallie, Ph.D. (Chemistry)- and offer some background on research endeavors and capabilities at NHS College. I am not a member of the MHA Nation, but I work closely with tribal members every day, and have done some environmental investigative research during the past four years with the college, which has been related to the local land base in terms of air, water and soil quality. Dr. Kerry Hartman, myself and Amber Finley have worked together to establish soil sampling, and air/water monitoring on a very large reservation in order to assist the tribe in protecting its land base.

The Ft. Berthold Reservation at 1530 square miles (998,000 acres) is the largest reservation in North Dakota (after the Standing Rock Reservation which spans both North and South Dakota). Because of the size of the reservation and the presence of anthropogenic activities including oil field operations and agriculture, there is a concern for the MHA land base, which has been ongoing for some time. The college is in an excellent position to conduct soil and water research and disseminate results to the community and tribal offices. NHS College has conducted soil, water and air particulate testing in the last few years with an increased laboratory capacity and would like to expand the scope and number of testing sites.

Fort Berthold is in the midst of one of the largest oil exploration and fracking operations nationally (the third largest U.S. shale oil field in millions of barrels per day) and one of the ten top producers globally.[1] Drilling and production of oil is regulated by several agencies[2], generally through collaboration with the MHA Nation and Tribal EPA office, but the MHA Nation has a relatively small population and limited personnel trained in monitoring of pollutants. A local environmental group has worked with the college to install seven air monitoring systems on the reservation, although more are needed.

However, water and soil monitoring tend to be more sporadic; the last major groundwater and surface water testing on the reservation was during 2014-2017 when the USGS tested a number of wells. An impetus for the water testing at that time was the series of approximately 700 spills of produced (waste) water from drilling operations, entailing over four million gallons over several years, which "were not always accidental."[3]

Additionally, a nonprofit organization called Earthworks reported in 2020 that one barrel of wastewater was produced for every barrel of crude oil (a million barrels a day) and that there is "spreading of wastewater on roads, on-site burial, and the storage in often-leaky pits rather than more secure holding tanks." Moreover, "regulatory loopholes exempt the industry from hazardous waste laws and hide the ingredients in fracking waste."[4]

Soil and radioactivity testing has been less consistent on the reservation compared to emissions testing, but should continue to be implemented in order to locate not only spill sites, but illegal

dumping of any kind, as well as sampling for nitrates, sulfates, soot, incinerated metals or other type of deposition from emissions, particularly near flare sites.

Unfortunately, there seems to be concern not only on a local level, but also nationally and even globally, as evidenced by publications which report unfavorable statistics and environmental concerns about our region. I would greatly encourage and support any actions that would increase our ability to gather data and monitor contaminants, many of which may have far-reaching implications for local people for many years to come. Communication of findings is integral to allowing the MHA Nation to make decisions and form policy. Thank you for your consideration.

Sincerely,

Audrey LaVallie, Ph.D.
Chemistry instructor/DOKA Grant director
Nueta Hidatsa Sahnish College
PO Box 490, New Town, ND, 58763
alavallie@nhsc.edu

References:

1. Nicholson, Matt (NES Fircroft), "From Black Gold to Boomtowns: Discovering America's Most Profitable Oil Fields," https://www.nesfircroft.com/resources/blog/from-black-gold-to-boomtowns--discovering-america-s-most-profitable-oil-fields/. (Accessed April 2024).
2. Global Flaring and Methane Reduction Partnership, "Global Flaring and Venting Regulations, U.S: North Dakota," https://flaringventingregulations.worldbank.org/united-states-north-Dakota#:~:text=Regulatory%20Authority,on%20federal%20and%20Indian%20lands. (Accessed April 2024).
3. USGS, "Characterization of Surface-Water and Groundwater Quality on the Fort Berthold Reservation, North Dakota, 2014–17," https://pubs.usgs.gov/sir/2020/5020/sir20205020.pdf (Accessed April 2024).
4. Wasser, Justin (Earthworks Nonprofit), "New Report Finds Increased Threat from Radioactive Oil and Gas Release in North Dakota (2020)," https://earthworks.org/releases/new-report-finds-increased-threat-from-radioactive-oil-gas-waste-in-north-dakota/ (Accessed April 2024).