

Letter Health Consultation

ARKANSAS STATE PLANT BOARD
FOR IRRIGATION WELL JACKSON-01

NEWPORT, ARKANSAS

**Prepared by the
Arkansas Department of Health**

DECEMBER 3, 2009

Prepared under a Cooperative Agreement with the
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Agency for Toxic Substances and Disease Registry
Division of Health Assessment and Consultation
Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

A health consultation is a verbal or written response from ATSDR or ATSDR's Cooperative Agreement Partners to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR or ATSDR's Cooperative Agreement Partner which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

You May Contact ATSDR Toll Free at
1-800-CDC-INFO

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LETTER HEALTH CONSULTATION

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Prepared By:

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Arkansas Department of Health

4815 West Markham Street • Little Rock, Arkansas 72205-3867 • Telephone (501) 661-2000

Governor Mike Beebe

Paul K. Halverson, DrPH, FACHE, Director and State Health Officer

October 14, 2009

Jason Robertson
Assistant Director, Pesticide Division
Arkansas State Plant Board
P.O. Box 1069
Little Rock, AR 72203

Dear Mr. Robertson:

On the basis of a review of the sampling data collected on June 17, 2009 and August 3, 2009, by the Arkansas State Plant Board (ASPB) for irrigation well Jackson-01 in Newport, AR, the Arkansas Department of Health (ADH), in a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), has prepared this letter health consultation to address public health issues related to detected levels of bentazon from the data submitted to our offices on September 29, 2009.

Background and Statement of Issues

In accordance with the "Arkansas Agricultural Chemical Ground Water Management Plan Memorandum of Understanding" (MOU) between the ASPB and ADH, water sample results taken from irrigation well in Newport, AR, were sent to our offices for evaluation of possible effects from consumption of a detected pesticide in water from this irrigation well. This evaluation is intended to be precautionary, in that the Jackson-01 well, owned by a private citizen, is used solely for agricultural purposes. According to the ASPB documentation, the depth of the well is 280 feet with an 8-inch steel casing, and there is no pad around the well. The specific crops in which this well was used for in the past were: rice in 2008, soybean in 2007, and rice in 2006.

The Jackson-01 well was first sampled by the ASPB on June 17, 2009, and tested positive for the presence of the pesticide bentazon in the pre-purge and post-purge water. The well was subsequently resampled by the ASPB on August 3, 2009, and the water sample again tested positive for the presence of bentazon in the post-purge results.

Discussion

Exposure to a contaminant of concern is determined by examining human exposure pathways. An exposure pathway has five parts:

1. A source of contamination (e.g., contaminated well),
2. An environmental medium such as water, soil, or air that can hold or move the contamination,
3. A point at which people come in contact with a contaminated medium (e.g., irrigation well water in soil),
4. An exposure route, such as skin contact with water or soil, and
5. A population who could come in contact with the contaminants.

An exposure pathway is eliminated if at least one of the five parts is missing and will not occur in the future. For a completed pathway, all five parts must exist and exposure to a contaminant must have occurred, is occurring, or will occur. For this evaluation, the pathway identified is consumption of water from the well, since the irrigation well Jackson-01 is known to contain the pesticide bentazon.

The pesticide detected in the water samples were screened using ATSDR Health Comparison Values. Health Comparison Values are doses or substance concentrations set well below levels that are known or anticipated to result in adverse health effects. These values help health assessors make consistent decisions about what substance concentrations or dose levels require a closer look. The ATSDR Health Comparison Value for bentazon is 300 micrograms per liter, or parts per billion (ppb), for a child and 1,000 ppb for an adult. The highest reported values of bentazon (1.03 ppb and 0.73 ppb in June, and 0.68 ppb in August) fall well below these comparison values. It was determined that the concentrations of bentazon in all samples submitted were below the Health Comparison Value, and no further evaluation was required.

Conclusions

ADH/ATSDR conclude that contact with the bentazon concentrations found in the Jackson-01 irrigation well water are not expected to harm people's health because levels were below regulatory Health Comparison Values, and no further action is required at this time.

Recommendations

No recommendations for this well are needed at this time. Should future tests detect levels of pesticides at higher concentrations for the Jackson-01 well or surrounding wells, please do not hesitate to contact us again with the new data.

Thank you for allowing ADH/ATSDR the opportunity to work with your agency on this site. Please feel free to contact me at 501-280-4041 or ashley.whitlow@arkansas.gov, if you have any questions.

Sincerely,



Ashley Whitlow, M.S.
ADH Epidemiologist
ATSDR Health Assessor
Environmental Epidemiology

cc: Lori Simmons, M.S., Epidemiologist, ATSDR Program Manager, ADH
Carrie Poston, B.S., CHES, Epidemiologist, ATSDR Health Outreach Coordinator, ADH
Jeff Kellam, M.S., Division of Health Assessment and Consultation, Technical Project Officer, ATSDR

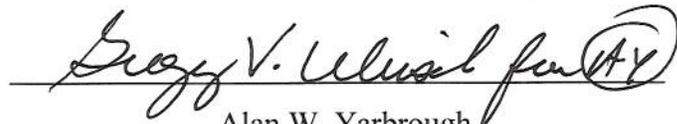
Certification

The Arkansas Department of Health prepared this letter health consultation for irrigation well Jackson-01 in Newport, AR under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It was completed in accordance with approved methodology and procedure existing at the time the health consultation was initiated. Editorial review was completed by the cooperative agreement partner.



Jeff Kellam, M.S.
Technical Project Officer
Division of Health Assessment and Consultation (DHAC)
ATSDR

The Division of Health Assessment and Consultation (DHAC), ATSDR, has reviewed this health consultation and concurs with its findings.



Alan W. Yarbrough
Cooperative Agreement Team Leader, DHAC, ATSDR