

# Letter Health Consultation

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MASON CITY COAL GASIFICATION PLANT SITE

MASON CITY, IOWA

EPA FACILITY ID: IAD980969190

JUNE 13, 2008

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

Agency for Toxic Substances and Disease Registry

Division of Health Assessment and Consultation

Atlanta, Georgia 30333

## **Health Consultation: A Note of Explanation**

An ATSDR health consultation is a verbal or written response from ATSDR 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 which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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LETTER HEALTH CONSULTATION

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EPA FACILITY ID: IAD980969190

Prepared By:

Iowa Department of Public Health  
Under Cooperative Agreement with the  
U.S. Department of Health and Human Services  
Agency for Toxic Substances and Disease Registry



Thomas Newton, MPP, REHS  
Director

Chester J. Culver  
Governor

Patty Judge  
Lt. Governor

June 29, 2008

Diana Engeman, Project Manager  
US Environmental Protection Agency, Region VII  
901 North 5<sup>th</sup> Street  
Kansas City, KS 66101

RE: Mason City Coal Gasification Plant Site, Mason City, Iowa  
EPA First Five-Year Review

Dear Ms. Engeman:

This letter has been prepared as a consultation to EPA regarding the first five-year review of the Mason City Coal Gasification Plant Site, located in Mason City, Iowa to provide an evaluation of the public health status of the site.

## **Background**

Beginning in the early 1900's, the site was occupied by a manufactured gas plant which generated "town gas" for lighting and heating purposes in the Mason City area. Following the availability of natural gas, the plant was decommissioned and subsequently demolished. Residues from the gas manufacturing processes, commonly referred to as coal tar, were left on site and resulted in soil and groundwater contamination. In June 1984 the city began excavation on the site for the installation of a new sewer line. During this excavation, coal tar was discovered in the subsurface soil and in subsurface structures. Approximately 1,000 to 1,500 gallons of coal tar was mixed with inert material, such as sand, and deposited in an above-ground waste pile on site awaiting disposal.

Following discovery of coal tar during the installation of a new sewer line, Interstate Power Company, currently known as Alliant Energy Corporation (Alliant), entered into an Administrative Order on Consent with the EPA. As a result of this Order, Interstate conducted three phases of field investigation and preliminary assessment of the site.

After initial site investigation activities were completed responsible parties for site contamination completed the following removal actions:

- excavation of soil exceeding risk-based action levels;
- off site treatment by thermal desorption of soil and waste pile materials to below risk-based action levels;
- placement of treated soil back into the area of excavation; and
- groundwater monitoring.

An institutional control in the form of restrictions on the property has been implemented and filed with the Cerro Gordo County Recorder. The deed restrictions include prohibition of future residential development; prohibition of the construction of basements in any non-residential buildings which might be constructed on the site in the future; and prohibition of the installation of any water supply wells on the site which might be used for municipal, industrial, or domestic purposes.

### **The First Five-Year Review Process**

Alliant and Kansas City Power and Light were notified of the initiation of the five-year review on September 19, 2007. The five-year review was conducted by Diana Engeman, EPA Remedial Project Manager for the Mason City Coal Gasification Plant site, with assistance by other members of the regional technical staff including a regional toxicologist.

On November 1, 2007, a notice was placed in the Mason City Globe Gazette that a five-year review was to be conducted and provided information on how to contact the EPA to provide input. A letter stating the same, as well as a history of the site, was sent to elected officials, members of the media, and community members. The letter invited the recipients to submit any comments they might have to the EPA. No comments have been received. On November 5 and 6, 2007, a limited number of community interviews were conducted by the EPA Remedial Project Manager and the Community Involvement Coordinator. None of the people interviewed expressed any concerns or issues related to the site.

During the five-year review process the condition of the site was inspected. According to EPA the site has no problems with soil erosion and there is good vegetation established (1). The site continues to be fenced to control access to the site.

During the five-year review process the results of the groundwater and surface water monitoring were also reviewed. This monitoring has been conducted quarterly since March of 2003. The results of the monitoring indicate that groundwater contamination is remaining stable and that processes indicating natural lowering of contamination over time is occurring (1).

### **Contaminants of Concern**

The contaminants of concern at the site at the time it was initially discovered were the benzene, toluene, ethylbenzene, total xylenes, polynuclear aromatic hydrocarbons, and lead in groundwater and soils. It was determined that exposure to soils on site presented a risk to site workers and occasional trespassers. As a result soil with elevated levels of contaminants of concern were removed from the site and treated prior to being deposited again at the site. Groundwater contamination would present a risk if the site groundwater was found to be utilized for municipal, industrial, or domestic purposes.

### **Exposure Pathways**

Prior to removal of highly contaminated soil, there was an exposure pathway from oral and dermal exposure to site soils. Completion of site remedial activities in 1996 eliminated the exposure pathway to contaminated site soils. Control of access to the site through the site fence continues to eliminate the exposure pathway to contaminated site soils. There are no current exposure pathways to contaminated groundwater or surface water and the institutional controls implemented assure that there will be no future exposures to the contaminated groundwater or surface water.

## Community Health Concerns

The community was given opportunity to comment on the site during the 5-year review process. No comments from the public or local community have been received as of the writing of this health consultation.

## Conclusions

The current status of Mason City Coal Gasification Plant site has been reviewed to evaluate the long-term effectiveness of the remediation. The IDPH reviewed the site information and exposure pathways and concluded that the site poses **No Public Health Hazard** at the present time and is not expected to in the future as long as site assess is restricted and the institutional controls remain in place.

## Recommendations

- The EPA and Alliant should maintain and enforce restricted site access and the existing institutional controls to protect public health.
- Continued groundwater and surface monitoring of the site should be maintained to ensure that groundwater contamination is remaining stable or decreasing. Less frequent than quarterly monitoring of the groundwater and surface water is recommended.

## Public Health Action Plan

- IDPH will review results of site inspections and groundwater monitoring at the next 5-year review.
- IDPH will respond to any community concerns that may arise.

## References

1. U.S. Environmental Protection Agency, Superfund Five-Year Review Report for the Mason City Coal Gasification Plant Site, February 2008.

If you have any questions regarding the information in this letter please contact me at (515) 281-5894 or by e-mail at [sschmitz@idph.state.ia.us](mailto:sschmitz@idph.state.ia.us).

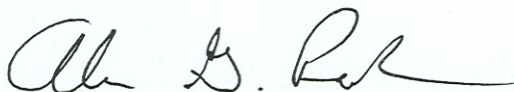
Sincerely,

Stuart C. Schmitz, M.S., P.E.  
Principal Investigator, Environmental Toxicologist  
Hazardous Waste Site Health Assessment Program



## CERTIFICATION

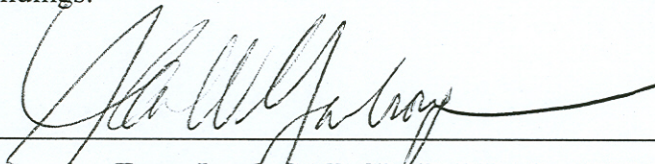
The Iowa Department of Public Health, Hazardous Waste Site Health Assessment Program, has prepared this letter health consultation for the evaluation of the Mason City Coal Gasification Plant Site in Mason, Iowa under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). The document is in accordance with approved methodology and procedures existing when the health consultation was being prepared.



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Technical Project Officer, CAT, SPAB, DHAC, ATSDR

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



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Team Lead, CAT, SPAB, DHAC, ATSDR