

October 21, 2024

MR PAUL CARLSON  
IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES  
109 SE 13<sup>TH</sup> STREET  
DES MOINES IOWA 50319  
[PAUL.CARLSON@IOWA.GOV](mailto:PAUL.CARLSON@IOWA.GOV)

**Re: Iowa Mental Health Institute Independence Unpermitted Landfill (2277 Iowa Ave, Independence, Iowa 50644)  
Contaminated Sites Database Site ID No. 2820  
Limited Phase II Subsurface Investigation Results**

Dear Mr. Carlson:

The Iowa Department of Natural Resources, Solid Waste and Contaminated Sites Section (DNR) has reviewed the September 25, 2024 Limited Phase II Subsurface Investigation Results Report ([Doc #42009](#)) for the site located in Independence, Iowa. The DNR understands that the investigation was conducted in order to sell the land for reuse.

The report details sampling activities conducted at the site in order to investigate potential soil and groundwater contamination related to the former use of the site as an unpermitted landfill for medical waste from the neighboring mental health institute, which was built in 1873 and is located approximately 0.25 mile to the east of the site. A total of 6 borings were advanced at the site to depths of 12-16 feet below ground surface (BGS) and two soil samples, one from 0-4 feet BGS and one from the interval just above the saturation zone, were collected from each boring for analysis of resource conservation and recovery act (RCRA) metals, polynuclear aromatic hydrocarbons (PAHs), pesticides, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), and/or total extractable hydrocarbons (TEHs). Additionally, a composite soil sample was collected from fill materials encountered during boring activities for analysis of Cesium 137 and other gamma emitters related to medical waste. Following the collection of soil samples, all six borings were converted into temporary monitoring wells and a groundwater sample was collected from each well for analysis of VOCs, RCRA metals, TEHs, and PAHs.

Of the soil samples analyzed multiple PAHs, RCRA metals, pesticides, and gamma emitters were detected above laboratory reporting limits with benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, and lead detected at concentrations exceeding applicable statewide standards (SWS). Arsenic was also detected at concentrations that exceed SWS in soil, but are consistent with typical background levels in the area. Multiple gamma emitters were detected in the soil, but all detections were at trace concentrations that did not exceed applicable EPA cleanup levels. Overall, the current risk presented to Site Residents, Site Workers, and Construction Workers is unacceptable through exposure to soil and the risks will need to be addressed before the site can be reused.

Of the groundwater samples analyzed multiple VOCs, barium, arsenic, and chromium were detected at concentrations in excess of laboratory reporting limits with benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and indeno(1,2,3-cd)pyrene detected at concentrations exceeding SWS for a protected

groundwater source. Although some contaminants were detected in groundwater, this exposure route does not appear to be a significant risk to potential receptors based on the currently known data.

DNR has reviewed the risks associated with the chemicals and associated detected concentrations at the site. The review suggests that the risks associated with known concentrations of contaminants in soil are unacceptable for Site Residents, Site Workers, and Construction Workers. As a result, ***additional assessment is required***. The contamination in soil at the site needs to be delineated both vertically and horizontally and the associated risks need to be addressed before the site can be reused safely.

The site information and report has been reviewed as part of the Initial Site Screening (ISS) program. The site has been assigned a **Priority 2**, which constitutes a moderate level of concern.

Please submit a work plan for additional assessment to provide horizontal and vertical delineation of contamination at the site by **December 31, 2024**. If you have any questions or if we may be of further assistance, please contact me at [\(515\) 415-0889](tel:5154150889) or [jake.bucklin@dnr.iowa.gov](mailto:jake.bucklin@dnr.iowa.gov).

Sincerely,

Jake Bucklin  
Environmental Specialist  
Land Quality Bureau

cc: James Goodrich  
Atlas Technical Consultants LLC  
328 Laporte Road  
Waterloo, IA 50702  
[James.Goodrich@oneatlas.com](mailto:James.Goodrich@oneatlas.com)

Michael Sullivan  
Iowa DNR  
6200 Park Avenue, Suite 200  
Des Moines, IA 50319  
[michael.sullivan@dnr.iowa.gov](mailto:michael.sullivan@dnr.iowa.gov)

Manuel Schmaedick  
US EPA Region 7 RCRA  
11201 Renner Boulevard  
Lenexa, KS 66219  
[schmaedick.manuel@epa.gov](mailto:schmaedick.manuel@epa.gov)

Iowa DNR Field Office #1, Manchester  
[fo1.notify@dnr.iowa.gov](mailto:fo1.notify@dnr.iowa.gov)