

SCOPE OF PROJECT

BARKER LEMAR provides a number of annual services, field work, and reporting for compliance items including landfill inspections, methane monitoring, financial assurance, groundwater sampling, annual water quality evaluation, and leachate control system performance evaluation for over 30 solid waste facilities throughout Iowa. The annual water quality reports (AWQR) include what effects to the vicinity groundwater, if any, are being caused from the existence of the solid waste. The leachate control system performance evaluation (LCSPE) reports evaluate the effectiveness of the control system and how the control system is maintaining adequate groundwater quality.



IMPLEMENTATION AND SERVICES

Landfill Inspections: Landfill inspection services include a semi-annual site visit and report. The report contents include conclusions from the site visit with regard to plan requirements, operating procedures, hydrogeologic monitoring system plan, leachate control, maintenance activities, non-conformance items, miscellaneous requirements, and general observations.

Methane Monitoring: Quarterly methane monitoring and annual reporting is required for most solid waste facilities in Iowa. Field services include metering for methane lower explosive limits in structures and along the boundary of the facility. The annual reports include the recorded lower explosive limits and oxygen contents of the tested locations.

Financial Assurance: Annual financial assurance review services are performed to determine that a facility has the necessary amount of closure and post closure finances set aside in the event that closure occurs. Review and reporting of waste tonnage, remaining permitted capacity, closure and post closure estimates, and payment are required for financial assurance compliance.

Groundwater Sampling and Reporting: Groundwater sampling and water quality reporting services are performed for over 30 facilities throughout Iowa. A water quality report includes groundwater sampling data from the facility which is most commonly collected from on-

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**SOLID WASTE ANNUAL SERVICES -
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site groundwater monitoring wells on a semi-annual basis. Each facility has an approved hydrogeological monitoring system plan (HMSP) which includes the sampling points around the perimeter of the solid waste fill area boundary. Statistical comparison and evaluations of groundwater chemistry from the sampling data is used in order to determine if any contamination is occurring outside of the solid waste boundary.

Other items which are addressed in the AWQR typically include site history, geology and hydrogeology of the site, previous land use, solid waste streams, monitoring system performance evaluations, water level measurement data, groundwater flow determination, well performance, discussion of potential groundwater mounding from leachate, monitoring system recommendations, data evaluation methods, evaluation of water quality parameters, monitoring well summaries, potential leachate migration evaluation, potential receptors, and conclusions and recommendations for future monitoring.

Leachate Control System Performance Evaluation (LCSPE): Leachate control system performance analysis and evaluation reporting services are required for facilities that operate a leachate control system. Reports are submitted as part of the AWQR. The LCSPE typically include a description of the leachate collection system components and storage areas, the volume of leachate collected, re-circulated, or transported, historic leachate column thickness, and the overall effectiveness of the collection system.

TIMELINE

Project Start Date: 1995

Project Completed: Ongoing