**RFP 23-72798**

**TECHNICAL PROPOSAL**

**ATTACHMENT F**

**Instructions: Please supply all requested information in the areas shaded yellow and indicate any attachments that have been included to support your responses.**

* + 1. **General Requirements and Definitions**
       1. Please list any additional terms and definitions used by your company or industry that you would like the State to consider incorporating in the contract. The State will not accept terms and definitions introduced after award during contract finalization and implementation.

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| NA |

* + - 1. Please confirm you have carefully reviewed all requirements listed in RFP Section 1.4. Should your company have any exceptions, substitutions, or conditions for the State’s consideration, please list them below. The State will not accept exceptions, substitutions, or conditions introduced after award, during contract finalization and implementation.

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| KERAMIDA has carefully reviewed all requirements listed and has no exceptions, substitutions or conditions for the State’s consideration. KERAMIDA has experience with both solid waste and hazardous waste landfills. |

* + 1. **Overall Company Experience** 
       1. Please describe in detail your company’s experience providing Operations and Maintenance services for closed landfill sites. Provide specific examples and references of any experience managing Operations and Maintenance activities for such sites, especially those requiring landfill leachate management activities.

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| KERAMIDA has extensive experience in conducting similar Superfund work and has assembled an outstanding team for the Site. In addition to Dr. Keramida, KERAMIDA has other senior-level technical associates who have volumes of experience with landfills. Ms. Sara Guss, Senior Engineer/Project Manager with KERAMIDA, has over 25 years of experience in landfills, including landfill leachate disposal services as outlined in the RFP. Ms. Guss previously currently serves as the Project Manager under the current contract with IDEM for management of the Site. Two additional members of the KERAMIDA project team, Mr. Brian Harrington, Senior Vice President, Land Services and Mr. Mike Devir, P.E., M.S., Senior Engineer, bring over 20 years of technical expertise each to the project. Mr. Harrington will serve as the Alternate Project Manager. He is familiar with the Site and has been involved with various tasks at the Site over the years.  **Tippecanoe Sanitary Landfill Superfund Site**  *Site Investigation/Remediation/Groundwater Sampling and Analysis/Operations and Maintenance/Cap Inspections and Maintenance*  *Remedial Investigation/Feasibility Study*  KERAMIDA provided project oversight on behalf of the Potentially Responsible Parties (PRPs), including oversight management and technical consulting services with regard to Remedial Investigation/Feasibility Study (RI/FS) work performed by the PRPs at the site. This included: development and negotiation of RI/FS scope of work; implementation of the RI/FS; supervision of the work - hired contractor for direction, quality, accuracy and cost-effectiveness and review, revise and approve his work product and reports prior to submission to the PRP committee and to the USEPA/IDEM (including the Quality Assurance Project Plan (QAPP) and other work plan documents); receiving, reviewing and recommending action on contractor's invoices; maintaining cost accounting records, files and systems for contractor on behalf of PRPs; producing and submitting progress reports to PRPs, as required; serving as the liaison between the contractor and the PRP remediation committee; representing the PRPs and negotiate on technical issues on their behalf in meetings with the U.S. EPA, Region 5, the USEPA Headquarters, the U.S. Department of Justice, the IDEM, the Indiana Attorney General's Office, and the Indiana Department of Natural Resources; representing the PRPs in public hearings; identifying and advising the PRPs of potential cost savings or cost reduction opportunities; assisting PRPs in PRP search and allocation issues.  *Remedial Design/Remedial Action*  KERAMIDA is the Project Coordinator for the Remedial Design/Remedial Action (RD/RA), under contract with the Tippecanoe County Local Environmental Response Finance (TERF) Board and serves as the TERF Board’s agent. KERAMIDA is responsible for all technical negotiations with IDEM and U.S. EPA, the drafting of the technical portions of the Consent Decree, and the drafting of the Statement of Work*.* Due to timing demands, the RD/RA Consent Decree and Statement of Work were drafted, negotiated, and signed in the record time of 60 days.  *Operation and Maintenance*  *G:\CLIENTS\T\Terf\2601B-I & 14246-B\Photos\2003 April - Site Photos\Disk 1\MVC-002S.JPGG:\CLIENTS\T\Terf\2601B-I & 14246-B\Photos\2003 April - Site Photos\Disk 2\MVC-013S.JPG*KERAMIDA was retained by the TERF Board to perform all O&M Services, following completion of the remedial construction activities. The remedy included a cap, leachate and gas extraction and management, groundwater monitoring, wetlands construction and fencing. The scope of services includes the management of the leachate collection system, management of the passive and active gas system, cap inspections and maintenance, groundwater monitoring and well maintenance, groundwater regulatory reporting and statistical analysis, annul reporting to IDEM/USEPA. (2002-Present)  *Reuse Planning and Implementation*  Based on the current contaminant data coming from leachate and methane monitoring wells, KERAMIDA believed the TSL Superfund Site was an appropriate NPL site to be allowed for reuse. KERAMIDA was retained by the TERF Board to petition the USEPA and IDEM for considering TSL for Reuse, and to perform the Reuse Study. KERAMIDA conducted a Reuse Specific Risk Assessment and prepared a comprehensive Reuse Study, which was approved by both USEPA and IDEM. The next step of the Reuse process is the amendment of the Consent Decree and ROD. Additionally, KERAMIDA is working on a conceptual site design that will include revenue producing elements, including renewable energy, and will focus on reuse options that provide space for public enjoyment. This conceptual design takes into account all of the major risk factors of building on a superfund site, ensuring that the future uses of the site are protective to human health. (2014-present)  **Lake Sandy Jo Superfund Site**  *Groundwater Sampling and Reporting/Post-Remediation Operations and Maintenance/Cap Inspections and Maintenance*  G:\CLIENTS\I\IDEM\15332 - Lake Sandy Jo Superfund Site - O&M Field Services\15332C\Fall Report\Photos\IMG_9701.JPGThe Lake Sandy Jo Superfund site is a former landfill situated between West 25th Avenue on the north and Interstate 80 on the south in Gary, Indiana. The Site was originally a sand and gravel pit excavated to provide materials for highway construction in the 1960’s that was gradually filled with groundwater and used as a recreational lake for a short time. Lake Sandy Jo was placed on the National Priorities List in 1982. U.S. EPA conducted remediation at the Site from 1988-1993.  KERAMIDA previously provided operation and maintenance services at the Superfund site under contract with IDEM. KERAMIDA’s activities included:   * Maintaining the groundwater monitoring wells * Semi-annual groundwater monitoring and reporting * Site mowing * Site security measures, including fence replacement and repairs   **Four County Landfill Superfund Site**  G:\CLIENTS\F\Four County Landfill\Photos\MVC-002F.JPG*Post-Remediation Operations and Maintenance/Cap Inspections and Maintenance*  KERAMIDA has provided operation and maintenance since the site was closed. The Site must be in compliance with applicable Resource Conservation and Recovery Act (RCRA) Large Quantity Generator (LQG) state and federal rules and regulations. Activities include weekly inspections, management of leachate from the outside holding tanks and inside storage tank, maintenance of the cap, equipment maintenance, fence repairs, monthly reporting, and annual hazardous waste reporting. In addition, KERAMIDA coordinates with contractors for the transportation of the leachate to a permitted disposal facility.  **Purdue University - Thomas Farm Landfill**  *Cap Maintenance and Repair/Remediation Design/Implementation*  Purdue University contracted with KERAMIDA to provide technical assistance for slope failure at Thomas Farm Landfill located in West Lafayette, Indiana. KERAMIDA prepared designs bid documents for the stabilization of the south and east sides of Thomas Farm Landfill. Both sides of the landfill had stability concerns due to the steep slope and drainage issues. KERAMIDA developed designs for each area to remediate the issues associated with the erosion and slope instability, and prepared bid documents for the work.  An innovative design was implemented on the east slope due to limited space and concerns with a drainage pipe between the property line and the toe of the slope. HydroTurf® Z was installed which consists of one piece synthetic liner that contains an engineered polypropylene woven geotextile polyethylene laminated backing with the engineered turf and the Hydrobinder™ infill.  KERAMIDA was responsible for the oversight of the repair work and submission of certification reports verifying the work had been completed according to the design documents. KERAMIDA also developed the monthly inspection form and requirements for compliance, operation and maintenance, and warranty coverage.  KERAMIDA approached the product provider about the project and was able to save Purdue University on the cost of the product and technical services for the installation. It was the first application of HydroTurf® Z in Indiana. KERAMIDA worked closely with the product provider to ensure the liner was installed according to the specifications.  **Greentown Landfill, Greentown, Indiana**  *Remediation Design/Implementation/Gas Sampling and Reporting*  The Town of Greenwood retained KERAMIDA to provide assistance with the post-closure requirements for Greentown Landfill located in Greentown, Indiana. KERAMIDA has performed inspections, groundwater monitoring, landfill gas monitoring, and regulatory reporting. Corrective action plans to address landfill gas exceedances were developed and submitted to the Indiana Department of Environmental Management (IDEM) for review and approval. KERAMIDA implemented corrective action measures at several locations which included the installation of collection piping and gas vent flares.  KERAMIDA was able to reduce the monitoring costs for the by petitioning IDEM to eliminate the groundwater monitoring by demonstrating compliance with post-closure requirements and to eliminate off-site landfill and on-site gas monitoring through the implementation of corrective action. KERAMIDA completed reporting for documentation of the fulfillment of the post-closure requirements. A post-closure use was also prepared by KERAMIDA and approved by IDEM.    **Center Hill Landfill, Cincinnati, Ohio**  *Remediation Design/Implementation/Gas Sampling and Reporting*  KERAMIDA provided to provide technical assistance for the closed Center Hill Landfill located in Cincinnati, Ohio under contract with the City of Cincinnati. The landfill was closed under the Ohio Environmental Protection Agency (OEPA) Voluntary Action Program (VAP). In addition to providing technical services, KERAMIDA conducted inspections and performed operation and maintenance (O&M) on the leachate collection system, landfill gas extraction and candle flare system, landfill gas monitoring probes, groundwater monitoring well network, and polychlorinated biphenyls (PCBs) recovery system.  KERAMIDA was responsible for conducting landfill gas monitoring, groundwater monitoring, and compliance reporting. In order to address landfill gas exceedance and to prevent off-site migration, KERAMIDA designed and implemented corrective active action measures at several locations at the landfill. Corrective action measures included the installation of additional landfill gas extraction and flare systems as well as solar powered passive flares.  Repairs were also made to the original candle flare and extraction wells. KERAMIDA designed and implemented remedial action for groundwater contaminated with polychlorinated biphenyls (PCBs). Remediation consisted of a series of injections and installation of a recovery system. KERAMIDA also installed groundwater monitoring wells.  *KERAMIDA was able to decrease the cost of operation and maintenance by managing the project more efficiently and through the use of new technologies.*  **Douglas Road Landfill Superfund Site, Mishawaka, St. Joseph County, Indiana**  *Remediation Design/Implementation/Gas Sampling and Reporting/Operation and Maintenance/Cap Inspections and Maintenance*  KERAMIDA was previously retained the Indiana Department of Environmental Management (IDEM) to oversee and implement post-closure activities at Douglas Road Landfill Superfund Site located in Mishawaka, St. Joseph County, Indiana. KERAMIDA’s activities included:   * Operation, maintenance, and monitoring of the landfill gas collection system * Operation, maintenance, and monitoring of the landfill gas monitoring probes * Operation, maintenance, and monitoring of the groundwater extraction system * Operation and maintenance of the remedial pumping system * Operation, maintenance, and monitoring of the wetlands system * Operation, maintenance, and monitoring of the groundwater monitoring well network * Groundwater sampling * Inspection and repairs to the landfill cap * Quarterly and annual reporting * Revisions to the Quality Assurance Project Plan (QAPP) * Revisions to Sampling and Analysis Plan (SAP)   **United Plastics Hazardous Waste Landfill, Medora, Indiana**  *Operation and Maintenance/Cap Inspections and Maintenance*  C:\Users\sgg\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Word\38720.jpeg  The Indiana Department of Environmental Management contracted with KERAMIDA to manage the United Plastics hazardous waste site located in Medora, Indiana. KERAMIDA was responsible for conducting cap inspections and making any repairs to the cap to ensure compliance with closure rules and regulations. Other activities included operations and maintenance tasks such as mowing, fence clearing and maintenance, groundwater monitoring well repairs and installation, and security inspections.  **Sandorf Park – Repurpose and Reuse of Landfill**  KERAMIDA served as the Turnkey General Manager for this multimillion-dollar project resulting in a beautiful park and playground with environmentally protective features. Sandorf Park had historically been an old landfill in Indianapolis, Indiana. The City of Indianapolis was interested in finding a new purpose for the old landfill and ultimately modernizing the Park’s amenities to benefit the neighborhood and adjacent public middle school and encourage the larger community to use the Park – the only one in the area. The City hired KERAMIDA to support the Park’s revitalization. KERAMIDA envisioned how the old landfill’s environmental concerns could be addressed, remediated the landfill, and managed construction activities to build the park and innovative playground area. The result is a beautiful six-acre park, with an acre and a half of updated children’s playground equipment, two multi-use courts, a pump track, and other striking features. The project was part of the National Recreation and Parks Association’s (NPRA) Parks Build Community initiative ([Sandorf Park - Repurpose and Reuse of Old Landfill | KERAMIDA Inc.](https://www.keramida.com/projects/sandorf-park-repurpose-and-reuse-of-old-landfill))  KERAMIDA activities included waste delineation and investigation, development of a closure plan, remediation, construction of a clay cap, installation of groundwater monitoring wells, quarterly groundwater monitoring, developed of a long-term stewardship plan, and the preparation an Environmental Restrictive Covenant. |

* + 1. **Team Structure / Qualifications and Experience** 
       1. The State requests detailed information about the team that would work with the State during the transition and implementation of a resulting contract.

Please describe in detail your company’s proposed team and leadership structure. Additionally, please describe in detail the qualifications and experience of the anticipated staff for the following:

* Landfill Cap Maintenance
* Routine Site Inspections
* Landfill Leachate On-Site Management
* Leachate Transportation and Disposal
* General Subcontractor Management

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| KERAMIDA has qualified professionals with substantial landfill experience available to work on this project and to provide technical assistance. Details regarding some of the key personnel are provided below.  **Dr. Keramida, Ph.D., the CEO, Chief Technical Officer** and founder of KERAMIDA. She holds M.S. and Ph.D. degrees in Environmental Engineering from Purdue University and a B.S. also from Purdue University. She is a nationally recognized expert in investigation/remediation, waste and wastewater management, water quality, sustainability strategies, and toxicology and the impacts of chemicals on human health. Dr. Keramida has extensive landfill experience. She worked with City of Indianapolis to identify potentially responsible parties for the Northside Landfill Superfund site located in Zionsville in the 1980s and was instrumental in the remedial design and implementation at Tippecanoe Sanitary Landfill Superfund site located in Lafayette, Indiana when it was closed.  **Mr. Mike Devir, P.E.** has a B.S. and M.S. in Civil Engineering. Mr. Devir is a Professional Engineer in 11 states with over 27 years of experience in project management, site characterization, remedial strategy development, and construction management. He specializes in remediation design, installation, operation, maintenance, and monitoring; facilities demolition; site engineering; and investigation programs. He has served as the Senior Engineer/ Project Manager for major, multi-year projects, as well as, for projects involving the tasks outlined in the scope of work.  **Ms. Sara Guss** has extensive landfill and solid waste management experience. Ms. Guss has a B.S. in Natural Resource and Environmental Science and B.S.E. in Environmental Engineering, both from Purdue University. As a Solid Waste Engineer for the City of Indianapolis she was responsible for the management of all solid waste programs. She manages projects that include the operation and maintenance oversight of closed landfills that include Superfund sites. These projects have included the design and construction of landfill caps, cap inspections and maintenance, groundwater monitoring, landfill gas monitoring as well as other closure and post closure required tasks.  **Ms. Kristen Belcredi, P.E.** has been providing consulting services to industry for over 25 years in the areas of engineering, compliance and environmental management systems. She provides engineering and permitting services pertaining to wastewater, stormwater, waste management, and air emissions for industrial, energy, and municipal facilities. Ms. Belcredi holds a B.S. in Chemical Engineering from Purdue University and is a registered professional engineer in several states, including a U.S. registration with the National Council of Engineering Examiners (NCEES) allowing licensing in all 50 states. Ms. Belcredi is a Certified Hazardous Materials Manager, a certified ISO 14001 and ISO 45001 Lead Auditor, and a Certified RAB/QSA Auditor.  **Mr. Bruce Winningham** is a Licensed Professional Geologist in the State of Indiana and has extensive experience supervising projects that involve geologic investigations and hydrogeologic assessments at Superfund sites. Mr. Winningham has overseen the construction of the clay caps, installation of the groundwater monitoring well networks, and methane monitoring and extraction wells. Mr. Winningham performs groundwater sampling, data validation, and report writing duties for other Superfund sites and mandated remedial projects.  **Mr. Clinton Poynter** is an Indiana Licensed Well Driller and has extensive experience in drilling, well abandonment, groundwater sampling, soil gas/sub-slab vapor/indoor air sampling, and operation and maintenance activities at industrial, commercial, landfills (Superfund), and petroleum sites. Mr. Poynter has performed the required operation and maintenance tasks at various closed landfills and Superfund sites in addition to groundwater sampling. |

* + - 1. Please describe your company’s on the job training requirements to ensure personnel are familiar with proper hazardous waste management and emergency procedures for the wastes handled at the Site.

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| KERAMIDA has Project Manager, Security, Safety & Health responsible for training employees based on the required tasks. She has developed a training program specific to Four County Landfill to ensure compliance with the hazardous waste regulations. A safety module for the use of the tractor has been developed due to the complexity of the site. Employees are trained on an annual basis. |

* + 1. **Customer Service** 
       1. Please describe in detail your company’s capacity to respond to situations requiring immediate attention on a short notice.

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| KERAMIDA acts swiftly to communicate with our clients whenever there is a need that requires immediate attention. The mode of communication matches the urgency of the matter as well as the Client's preference for how we communicate during the project. Domestic projects such as this will include face-to-face meetings, phone calls and video conferences with the designated point of contact. |

* + - 1. Please describe how your company would coordinate a leachate transport event with the IDEM environmental manager.

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| Transportation events must be scheduled in advance. KERAMIDA will provide a list of the scheduled events to the IDEM Project Manager and also include the dates in the monthly report. |

* + 1. **Problem Resolution** 
       1. Please describe your company’s standard process for problem resolution, including standard response time. Please describe the escalation process if the standard resolution process cannot resolve an issue.

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| During the project, the Project Manager, Client representative or any other stakeholders can raise questions at any time. This can be via verbal dialogue or email and questions can be discussed during the scheduled project/organizational meetings or as necessary. The Project Manager will keep the Principal-in-Charge appraised of any challenges, issues or impediments to success. The Principal-in-Charge will be available to the client for any questions, problems or issues. |

* + - 1. Please describe your company’s Hazardous Waste Contingency Plan and Emergency Procedures during unplanned major events. Additionally, please describe how this information would be communicated to required agencies.

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| KERAMIDA has developed a Hazardous Waste Contingency Plan for the site which includes the emergency procedures and process. The plan details the communication and reporting requirements. The plan has been provided to the applicable agencies such as the hospital, fire, police, local emergency response and planning, etc. The plan will be revised as needed. The plan and revisions will be provided to IDEM. |

* + 1. **Project Documents and Reports** 
       1. Please describe in detail your company’s reporting capabilities. What are the standard reports that your company provides to your customer for landfill sites? Please include report examples as an attachment.

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| KERAMIDA professionals are experts in preparing a variety of Environmental, Health and Safety and Sustainability Reports. The type of report varies by client and project type. The following list is not exhaustive, but it includes a sample of the type of reports we regularly provide:  • Ground Water Monitoring Reports  • Sampling And Analysis Plans (SAP)  • Quality Assurance Project Plans (QAPP)  • Detailed Plans and Specifications for Permitting  • Closure And Post Closure Plans  • Post Closure Use Plans  • Emergency Response Plans  • Contingency Action Plans  • Operations And Management Plans  • Annual Hazardous Waste Reporting  • Hazardous Waste Contingency Plans  • Initial Site Investigations  • Further Site Investigations  For many of our landfills and other projects we have conducted quarterly and annual reporting and were responsible for revisions to Quality Assurance Project Plans (QAPP) and to Sampling and Analysis Plans (SAP). A report example is attached. |

* + 1. **Implementation and Schedule** 
       1. Please submit a detailed description of the implementation process and schedule.

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| The detailed approach provided to complete the tasks specified in the Scope or Work provided in the RFP is based on our working knowledge of the Site. The implementation schedule is specified in the RFP and KERAMIDA will ensure compliance with the required timeframes.  KERAMIDA has the experience, expertise, and internal work force capability to perform all activities required under this task, and to ensure effective communications for the efficient completion of the overall project Scope of Work. The Project Manager, Ms. Sara Guss will be directly involved in all aspects of the project. Mr. Brian Harrington, Senior Vice President, Land Services, will serve as the Alternative Project Manager to provide seamless support in the event Ms. Guss is not available.  **RCRA Compliance**  The Scope of Work requires ongoing compliance with state and federal regulations for a large quantity generator of hazardous waste. KERAMIDA will maintain compliance with these requirements throughout the contract period. KERAMIDA will conduct inspections within the required seven-day timeframe. Leachate accumulation will not exceed the 90-day waste accumulation period. Manifests will be reconciled within 45 days. Leak detection alarm will be maintained. Training will be conducted per the regulations at least annually. Records and reports will be maintained.  **Kick-Off Meeting**  KERAMIDA is familiar with the site and will coordinate with the IDEM Project Manager Within five (5) business days of selection.  **Initial Site Visit**  KERAMIDA is familiar with the site and will coordinate with the IDEM Project Manager to conduct a site visit within thirty (30) days of Contract execution.  **Site Perimeter Fence and Landfill Cap Inspections**  KERAMIDA will conduct an inspection of the site perimeter fence and associated security requirements monthly. In addition, a cap inspection will be conducted once a month. The cost associated with this task is included in the leachate management task referenced below.  **Leachate Management and Inspection of Leachate Collection System Structures**  KERAMIDA will manage the leachate weekly. The leachate from the cells will be pumped into the temporary above ground storage tanks and then transferred to the indoor storage tank. Arrangements will be made for the waste transporter to collect the leachate when the indoor tank has 5,000 gallons to reduce costs. The hoses, pumps, locks, and containment will be maintained.  **Leachate Pickup and Disposal**  KERAMIDA will contract with a licensed transporter to transport the leachate to a permitted disposal facility. Arrangements will be made for the waste transporter to collect the leachate when the indoor tank has 5,000 gallons to reduce costs. The schedule for leachate pickup and disposal varies depending upon the quantity of leachate generated. The schedule is approximately every three weeks.  **Landfill Cap Mowing**  KERAMIDA has a WBE subcontractor that will mow the landfill twice a year. The mowing will be conducted twice a year during the spring and fall. Photographic documentation will be provided to the IDEM Project Manager in the monthly report as part of the reporting requirements.  **Monthly Progress Reports**  KERAMIDA will prepare monthly reports to summarize the activities conducted at the site. Reports will be provided by the 15th of the following month. Reports will include the quantity of leachate pumped and transported for disposal, copies of manifests and disposal tickets, any issues noted at the site, and photographs of completed tasks or concerns as needed.  Hazardous waste reporting will be completed by March 1 each year in accordance with the regulations. |