Dr. Olu Iwakun,
71 Hidden Hills Road,
NW Calgary, AB. T3A 5y2.
March 4, 2019

The Recruitment Manager,

Dear Sir:

Application for "Principal Geotechnical Engineer" Position (Job Number: 19000276)

Please consider my qualifications for the "Principal Geotechnical Engineer" position as advertised in the career section of your website. I have extensive experience in large mining and tailings civil earthworks projects, which include, design, construction, and operations. Highlights of my background include project management; dam and dyke designs, construction management; geotechnical assessments; mining, oil sands, site investigation; instrumentation; tailings design; pipelines, roadway, and foundation recommendations; slope stability and seepage analyses; soil liquefaction, modeling, and geo-hazard assessments.

I have designed and supervised the construction of large dykes, dams, and levees. I have performed dam safety reviews for large dykes and dykes, including tailings and water retaining dykes and dams in mining environment.

I have experience in the management, training and mentoring of junior and intermediate staff. I am a team player, resourceful, and result-oriented. I have excellent interpersonal and engagement skills and proven ability to provide effective leadership. I have engaged and fostered alignment with multidiscipline and cross-functional teams, and I have strong analytical, critical thinking, and problem solving skills.

I believe that my experience, qualifications, enthusiasm, energy, and determination, will make me an excellent candidate for the advertised position. An opportunity to discuss my credentials at a mutually convenient time with you will be appreciated. Thanks for your consideration.

Yours faithfully,

Olumide Iwakun, PhD., P.Eng.
Tel: 780 264 3550/587 400 5471
Email: oiwakun@gmail.com

Olumide IWAKUN, Ph.D., P.Eng.

Principal/Senior Geotechnical and Tailings Engineer

oiwakun@gmail.com

71 Hidden Hills Road, NW
Calgary, AB. T3A 5Y2
Tel: 780 264 3550

Professional summary

I am a seasoned professional engineer with over 17 years' diverse experience in civil engineering practice. I have extensive experience in large mining and tailings civil earthworks projects, which include, design, construction, and operations. I have evaluated different geological conditions, including permafrost environment, and I have performed geotechnical assessments for mine sites, tailings dams and dykes, shallow and deep foundations, geological hazards, retaining walls, earthworks, and major constructions. I have an excellent all-round academic and practical knowledge of geotechnical engineering practice.

I have an in-depth knowledge of the design and construction process of large structural and earthwork facilities, especially those in the mining and oi-sands environment. I am knowledgeable in the regulatory approval process, closure and decommissioning of mine infrastructures, including reporting requirements for ongoing construction.

I have authored over fourteen peer-reviewed paper publications and numerous technical reports that include engineering reports, design memos, material specifications, inspection and testing plan, performance reports, OMS (operation, maintenance, and surveillance) manual, data report, etc. I have prepared and won proposals for simple and complex engineering projects that involved multi-disciplinary support. I am an excellent communicator (both oral and written) and I am experienced in the use of various task-specific engineering software.

During my career, I have mentored and provided guidance to junior and intermediate engineers, including other senior engineers in the team to achieve organizational goal. I am a team player, resourceful, and result-oriented. I have extensive permafrost and seismic design experience. Besides, I have extensive experience in slope stability and seepage analyses and the use of related software such as GeoStudio, Slide, etc. I am competent in the use of CAD programs and other task-specific engineering software. I am a member of the Canadian Dam Association (CDA) and have excellent understanding of dam safety regulations.

Skills Highlight

- Experienced in project management involving different disciplines. I have successfully managed groups of more than 10 people, including professional engineers and geologists, trainee engineers, geoscientists, technicians, and technologists;
- Extensive experience in engineering material specifications and quality assurance for heavy civil construction;
- Experienced in tailings characterization and mine reclamation;
- Experienced in dam and dyke designs, slope stability analyses, and seepage assessments;
- In-depth technical knowledge of Canadian Dam Association (CDA) guidelines and dam safety practice in Canada; Experienced in the application of regulations and legislation that apply to water retaining structures in Alberta;
- Experienced in equipment risk assessment and dam conditions assessment practices and methodologies;
- Extensive permafrost design experience; Experienced in soil liquefaction assessment and seismic design;
- Experienced in site investigations, geo-hazard assessments, geochemical characterization, groundwater remediation and dewatering, soil reclamation and stabilization, and forensic investigations of foundations, dams, and landslides;
- Experienced in shallow and deep foundation designs and recommendations, which include piling and tank pad foundations; Experienced in road and highway design and evaluation;
- Experienced in instrumentation monitoring and data interpretation;
- Proven project management skills and leadership abilities, including skills in developing and managing technical performance and effective engineering work processes.

- Seasoned modeler with experience in the use of different application software, such as: GEO-Studio suite of programs (e.g. Slope/W, Sigma/W, Seep/W, Temp/W, etc.), Visual Modflow, SV-Office suite of programs, LPILE, Settle 3D, SLIDE, Global Mapper, Primavera, Microsoft Office Suite, etc.;
- Effective communicator that is capable of understanding, anticipating and responding to the ongoing needs of mining, tailings and reclamation engineering and operations groups.
- I have strong technical, oral and written communication skills.
- Well-developed critical thinking, with an ability to apply logic and challenge assumptions, conclusions and make appropriate recommendations.
- I can contribute to a team environment while at times working independently. Thus, I hold others accountable and expect others to do the same.
- Knowledgeable in different ASTM test standards, CSA specifications, regulatory practices and assessment policies in Alberta and British Columbia (BC), in addition to federal regulations;
- Seasoned report writer with over 14 peer-reviewed publications and numerous technical reports.

Employment history

WSP Canada Inc., Senior Mining Engineer and Tailings Specialist, ON. 2015 - 2019
Coffey Geotechnics, Project Manager/Senior Geotechnical Engineer, AB. 2014 – 2015
AMEC Earth and Infrastructure, Senior Geotechnical Engineer/Project Manager, Calgary, AB., 2011 – 2014
Geomedia Engineering Ltd. (Metro Group), Geo-environmental Engineer, Abbotsford, BC, 2011-2011
CT and Associates Engineering Ltd., Geo-environmental Engineer, Edmonton, AB., 2010 – 2010
University of Alberta, Research Assistant, Edmonton, AB., 2004 – 2010
Shell Petroleum Development Commission, Management Trainee, Warri, Delta, 2003 – 2003
Reid Crowther Consulting Engineers, Project Engineer, Lagos, 2001 – 2002
Reid Crowther Consulting Engineers, Trainee Engineer, Lagos, 1999 – 2000

Work experience

Project Management

Altalink Pegasus Lake 659s Upgrade Geotechnical Investigation, Whitecourt, AB (2015): Project Manager and technical lead. Expansion of the existing substation to accommodate a new 69/25kV power transformer. Project Value: >$15K. Client: Rising Edge Technologies Ltd.

Edwards Lake Substation and Transmission Line Geotechnical Investigation, 20 km south of Conklin, AB (2015): Project Manager and technical lead. Project involved construction of two new 10 km long - 240 kV transmission lines and a substation. Project Value: >$120K.
Client: Burns and McDonnell.

Syncrude Closure Dam Design, North of Fort McMurray, AB (2013)*: Discipline Project Manager. Stage 2 design of closure dam. Project Value: >$1M
Client: Syncrude Canada Ltd.

Langdon Construction Services, Langdon, AB (2014-2015) : Project Manager. Material testing and construction supervision. Project Value :>$150K.
Client: SNC Lavalin

Hardisty Substation Driven Piles Installation and Monitoring, Hardisty, AB, (2014): Project Manager and technical lead. PDA testing and supervision of driven piles. Project Value: >$100K. Client: Husky Energy

Reclamation of Colomac Mine Site. Yellowknife, NT (2005 – 2010). The work was done as part of the Ph.D. research work with the University of Alberta. Project Value: >$5M over 5 years. Client: Directorate of Indian and Northern Affairs Canada

Design and Evaluation of Dams and Dykes

Castellanos Tailings Dam Design, Cuba. Reviewed the feasibility study and available geological and geotechnical data for the Castellanos Mine site. Modified additional site investigation plan mine site and successfully designed a downstream tailings dam for the mine. Performed risk analyses and developed OMS manual and construction specifications for the rock fill dam. Client: Trafigura/EMINCAR.

Dam Safety Review (DSR), AB. Successfully performed a DSR for Suncor Ponds 1A, 2, and 3 in partial fulfilment of the regulatory requirements, evaluated the safety of the containment dykes, and identified opportunities for improvement so as to minimize the risks associated with the tailings facility. Client: Suncor.
Dam Safety Review (DSR), AB. Reviewed the design, construction, annual performance reports, emergency response and preparedness plans, as well as the OMS (operation, maintenance, and surveillance) manual for the Aurora Settling Basin (ASB) in support of the DSR for the containment dyke.
Client: Syncrude
Closure Dam Design, AB. Successfully managed Stage 2 design of the North Mine South Pond –South East Closure Dam (NMSP-SECD) for Syncrude Canada. Managed a team of six engineers in completing the Stage 2 deliverables for the client. Client: Syncrude
Tailings Dyke Design, AB: Geotechnical engineer. Was part of the engineering team that designed the North Perimeter Tailings Dyke at the west external tailings area (ETA) for the Kearl Oil Sands Project (KOSP). Performed the seepage analyses and designed the dry Dyke for the North Pad and the Perimeter Dyke. Wrote sections of the report, including conclusions and recommendations for the detailed design report. Client: Imperial Oil
Lagoon Berm Design, Dawson Creek, AB: Geo-environmental engineer. Wrote the proposal and performed seepage and stability assessment of the existing lagoon berm at Dawson Creek that was under distress. Redesigned a new berm and provided recommendations for the offset of the berm from the top of bank (TOB). Client: Urban Systems
Clay Cofferdam, AB. Successfully designed a clay cofferdam for temporary dewatering of lagoon for the hamlet of Cynthia. Client: Pidherney's Inc.
Maple Ridge Dyke Upgrade, BC: Project engineer. Was responsible for the seepage and stability assessment of the existing levee at the District of Maple Ridge, BC, which had local instabilities in some sections of the Dyke. Responsibilities included field investigation to determine the engineering parameters required for the analysis. Client: District of Maple Ridge
Operation Improvement Study of Water Supply Schemes, Western Nigeria: Project engineer. Was part of the engineering team that visited the existing dams in western Nigeria to evaluate the conditions of the dams, performed water audits, flow measurements, and reviewed operations and maintenance records. The study aided in assessing the need for additional dams and the required operational improvements so as to meet the water demands of the region, and make the agencies in charge of the water schemes self-sustaining.
Client: World Bank

Material Specifications and Quality Assurance

Kearl Tailings Dyke, Imperial Oil, Canada: Construction management. Successfully managed the construction of the Starter Dyke at the External Tailings Area (ETA) at Kearl site. Responsibilities included the following:

- Materials specifications and quality assurance;
- Coordination and responses to "request for information";
- Evaluation and approval of "specification deviation request" and "non-conformance report";
- Developed testing procedures and work assessment guidelines;
- Performed risk analyses associated with the use of alternative materials;
- Managed the processes associated with materials acceptance;
- Issuance of design reports; and
- Review of instrumentation data

Castellanos Tailings Dam, EMINCAR, Cuba: Developed earthworks material specifications for the downstream tailings dam at the site. Developed specifications for the HDPE liner, instrumentation, filter materials, geotextile, and drainage pipes for the tailings storage facility.

Geotechnical Assessment and Forensic Investigation

Geotechnical Assessment, Calgary, AB: Geotechnical engineer. Evaluated the existing ground conditions and slopes adjacent to the Main Hall at the University to ensure safety of the structure, and provided recommendations to improve the safety of the structure. Client: University of Lloydminster

Kearl Fine Tailings Thickener (KFTT) Plant Foundation, Calgary, AB: Geotechnical engineer. Evaluated suitable ground preparation options for the thickeners due to thick underlying muskeg layers at the site. Also evaluated pre-loading options compared to excavation of the muskegs. Client: Imperial Oil

Tank Pad Geotechnical Assessment, Richmond, BC: Project engineer and Manager. Was responsible for geotechnical investigation of the tank pad at the Air Liquide facility that was undergoing settlement due to the presence of peat layer in the underlying formation. Client: Air Liquide

Geotechnical Assessment of 13 Lots Residential Subdivision, Surrey, BC: Project engineer. Responsible for the geotechnical investigation of the proposed subdivision that covers an area of 9.1 hectares. Provided recommendations for suitable types of foundation, soil classification for seismic response, design parameters, and general construction guidelines. Client: Gadhri Holdings

Slope Stability and Geo-Hazard Assessment

North Pad Dry Dyke Assessment, AB: Geotechnical engineer. Performed the stability analyses and designed the dry Dyke for the North Pad for the imperial oil KOSP. Client: Imperial Oil

Geotechnical Hazard Assessment, Rosedale, BC: Geo-environmental engineer. Responsible for geological hazard assessment of the subject site, which covered approximately 30 acres of land. Hazards considered included landslide, flood and erosion, snow avalanche, debris flow, and soil liquefaction potential. Provided recommendations for additional developments at the site. Client: Bridal Falls Gold Course

Reesor Lake Access Road Embankment Stabilization, AB. Evaluated the distressed embankment by performing both seepage and stability assessments. Designed soldier pile wall and revised slope configuration to stabilize the the roadway embankment.

Lakefront Property Slope Assessment, Canim Lake, BC: Project engineer. Responsible for site characterization and slope stability assessment for the property. I used seismic displacement method to evaluate the response of the slope under earthquake loading. Client: Rick Eustace

Jagare East Land Development Project, Edmonton, AB: Geo-environmental engineer. Responsible for the site characterization and slope stability assessment for the proposed development. Client: Melcor Developments Ltd.

Instrumentation

West ETA Performance Evaluation, Calgary, AB. Analysed the instrumentation data from piezometers, inclinometers, and settlement cells at the west ETA for the KOSP. Wrote weekly and monthly instrumentation review for the instrumentation performance. Also wrote the annual performance report for the West ETA starter Dyke. Client: Imperial Oil

North Pad, Calgary, AB. Designed the North Pad instrumentation and supervised the construction of the North Pad Dyke. Client: Imperial Oil

Castellanos Mine, Cuba. Designed the tailings dam instrumentation and developed the specification for the instruments. Client: EMINCAR

Environmental Site Assessment (ESA)

Phase I Environmental Site Assessment, Spruce Grove, AB. Performed Phase I ESA so as to identify and evaluate potential environmental concerns at the subject site that covers 56 acres of land. Client: WAM Development Group

Phase II Environmental Site Assessment, Edmonton, AB. Performed Phase II ESA at the subject site so as to identify, quantify, and determine the locations of the contaminants of interest. Client: Fountain Tire

Phase III Environmental Site Assessment, AB. Performed Phase III ESA for WMC tunnel tie-in-area, at the University of Alberta Hospital. The purpose of Phase III was to delineate the spatial extent of contamination, and recommendations for remediation. Client: Alberta Health Services

Hydrogeological Assessment

Groundwater Resource Hydrogeological Assessment, Horse Lake, AB. Evaluated the aquifer characteristics and groundwater conditions at the Horse Lake Indian Reserve 152B to determine the need for additional water resource to meet the growing demand of the First Nation Indian Reserve.
Client: Urban Systems

Waste Piles Assessment, Richmond, BC. Performed the toxicity characteristic leachate test on the waste piles to determine potential leachate of hazardous substances from the waste piles at the subject site. Client: Richvan Holdings Ltd.

Municipal Design

Long-Term Sediment Control Measures, Richmond. Used the hydrological and topographical survey data of the subject site to develop a long-term control of sediment discharge from the subject site in compliance with the City of Richmond Bylaws 7551, 8441, and 8475, which stipulate zero sediment discharge to public water ways.
Client: Richvan Holdings Ltd.

Construction Supervision

Micropiles and Footings Installation, Yellowknife, NT. Supervised micropiles and footings installations for a 48-unit multi-storey apartment complex in Yellowknife. The site was located in a discontinuous permafrost environment. Client: Traine Construction Ltd.

Driven Piles Installation Monitoring, Ardrosan, AB. Monitored and assessed over 180 driven piles so as to ensure design capacities were achieved and proper installation guidelines were followed. Client: Protostatix Engineering Consultant.

Research

Subsurface Behaviour of Spilled Fuel in a Permafrost Environment, Edmonton, AB Doctoral Project that involved spending four years at an abandoned mine site (Colomac) in the Northwest Territories (NT), researching subsurface behaviour of spilled fuel and its successful remediation.

Evaluation of Concepts for Stabilizing Mature Fine Tailings, Edmonton, AB. As a research assistant at the University of Alberta, I conducted a study on the optimum combination of additives that would yield minimum undrained shear strength of 5 kPa. The results showed that a combination of 3% high solidifying material (HSM), 25% tailings sand, and other additives such as lime, would produce the minimum strength requirement.

The Use of Dialysis Sampler for Monitored Natural Attenuation Assessment, Edmonton, AB. Masters of Science Project that involved evaluation of dialysis sampler for passive sampling so as to reduce associated costs with conventional sampling devices.

Education

Ph.D., Geo-environmental Engineering, University of Alberta, Edmonton, AB., 2010
M.Sc., Geo-environmental Engineering, University of Alberta, Edmonton, AB., 2006
B.Sc., Civil Engineering, Obafemi Awolowo University, Ile Ife, Osun, 2001

Languages

English, French (basic), Yoruba

Honors and awards

AMEC-IORVL certificate for exceptional performance in answering responses regarding the ETA starter Dyke for the KEARL oil sands project, Oct. 2012
WorleyParsons Infrastructure and Environment Graduate Award, University of Alberta, Feb. 2009
Queen Elizabeth II Graduate Scholarship, University of Alberta, Sep. 2008 to Apr. 2009
Provost Entrance Award, University of Alberta, Jan. 2006 to Jan. 2007
Gordon Kaplan Graduate Scholarship, Sept. 2005
Overall best graduating student in civil engineering, Obafemi Awolowo University, Sep. 2001
Best graduating student in geotechnical engineering, Obafemi Awolowo University, Sep. 2001
Best graduating student in transportation engineering, Obafemi Awolowo University, Sep. 2001

Professional qualifications/registration(s)

Professional Member, Professsional Engineers of Ontario
Professional Member, Association of Professional Engineer and Geoscientists of Alberta
Professional Member, Association of Professional Engineer and Geoscientists of British Columbia Professional Member, Association of Professional Engineer and Geoscientists of Saskatchewan Member, Canadian Dam Association
Member, National Groundwater Association

Certifications and training

H2S Alive
First Aid with level C CPR
Bear Awareness Training
Construction Safety Training System (CSTS)
Ground disturbance safety level II
Permit-required confined spaces – 29 CFR 1910.146
Respiratory protection OSHA 29 CFR 1910.134
Fatigue accident prevention
Excavations safety – 29CFR1926P
Work Hazardous Materials Information System (WHMIS)

Selected publications

"Geochemical Characterization of a fuel contaminated fractured bedrock in a permafrost environment." Journal of Environmental Engineering, 2011.
"Influence of cyclic freeze-thaw on the mobilization of LNAPL and Soluble oil in porous media." Cold Region 2010, 60:212-220.
"Estimation of actual LNAPL thickness in a fuel-contaminated mine site." Cold Region Science and Technology, Science and Technology, 2010, 64:9-18.