

Date: 01/28/2026

To: Whom It May Concern

From: Personnel Records

Subject: **Employment Verification for Jorge Alberto Penaloza Giraldo**

This is to confirm that Jorge Alberto Penaloza Giraldo has been employed with UT-Battelle at Oak Ridge National Laboratory since 06/17/2024. Jorge holds the position of Postdoctoral Research Associate - Integrated Measurements & Modeling of Coastal Terrestrial-aquatic in the Environmental Sciences Division and employment status is Temporary Full-Time.

Major Duties/Responsibilities:

- Advance the Energy Exascale Earth System Model (E3SM) Land Model (ELM) codebase by implementing new formulations for lateral subsurface flow.
- Analyze and document core hydrology subroutines to enhance model transparency, reproducibility, and support future model development.
- Conduct verification, validation, and sensitivity analyses to assess model stability, physical consistency, and the role of key parameters.
- Apply these developments to evaluate vegetation responses to salinity gradients, topographic controls, tidal variability, and coupled hydrological processes.
- Engage with local stakeholders and subject-matter experts to improve understanding of transformation processes and flux exchanges across the coastal terrestrial-aquatic interface.
- Prepare and author peer-reviewed scientific manuscripts supported by funded research activities, ensuring alignment with project objectives, reporting requirements, and sponsor expectations.
- Contribute to Oak Ridge National Laboratory's mission by aligning professional conduct with its core values of impact, integrity, teamwork, safety, and service, while actively promoting diversity, equity, inclusion, and accessibility through the cultivation of a respectful and inclusive work environment.

If further assistance is needed, please contact our Personnel Records Office at (865) 574-4415.

Regards,



Brandy Reed
HR Records Associate