October 28, 2022

RFI-2022-10-07-Martin Design Build Integrate and Deliver Automated Platform for Soil Extractions and Analyses

Subject: Questions & Answers

1. Can you confirm that this is the software you are referring to: <u>Welcome to NexusLIMS! — NexusLIMS 1.1.0 documentation (nist.gov)</u>?
    a. No, it is not EMSL's LIMS system. NEXUS is the name of PNNL's Environmental Molecular Sciences Laboratory's (EMSL's) LIMS solution, which is currently under development, follows a distributed system design utilizing a cloud-native architecture allowing flexibility in the deployment of distinct analytical workflows, including data processing and analysis software and helping orchestrate data storage and archiving process. At the core of the EMSL system are multiple REST APIs (Flask, FastAPI, etc) interfacing with Relational databases such as Postgres and MySQL. These serve to manage experimental design, analysis, and data processing metadata and use cloud-based storage (MinIO) to store instrument and data processing and analysis results.

        NEXUS is the face of the EMSL user program, allowing researchers to access their sample metadata, projects, and analytical results, but it also provides staff-level access to scheduling tools for managing instrumentation and resources within the facility. In addition to the outward facing user interface, NEXUS also provides lower-level RESTful APIs which can be used by other systems and workflows to move and store information. These APIs were architected in a modular fashion so that new facets can be added to the system as the need presents itself.

2. Page 1 of the RFI states that the vendors '*completed system would include a software platform to schedule and implement the automated workflow*'. Page 5 of the RFI, under 'Integration Needs', states that the vendor control software should '*allow remote access to another Vendor's scheduling software that will manage operation of the integrated system, as necessary.*' Is the intent that there are two different sets of scheduling software?
    a. No. One scheduling software, linked to LIMS and associated instruments.