HRSD

Position Description: Laboratory Environmental Data Management System (EDMS) Administrator

Section I.   **Position Reference Information**

a.	Department	Water Quality
b.	Division	Central Environmental Laboratory
c.	Position Title	Laboratory EDMS Administrator
d.	Immediate Supervisor	Laboratory Manager
e.	Work Center	Central Environmental Laboratory
f.	Grade	8d-8

Section II.   **Position Summary**

Under broad guidance, the Laboratory EDMS Administrator is responsible for:

a. Daily operation and administration of the inter-department Environmental Data Management System (EDMS), comprised of the Laboratory Information Management System (LIMS), Integration Manager (IM) for instrumentation interfaces

b. Serving as the primary contact, the technical expert, and the liaison to the IT Department as LIMS Administrator

c. Ensuring continuous system functionality, system security, traceability and data integrity; EDMS systems support critical data management and regulatory reporting functions of the Water Quality and Operations Department to ensure permit compliance. Ensure systems are properly interfaced with other HRSD, DEQ, and vendor information management systems and software

d. Working with laboratory management to maintain Virginia Environmental Laboratory Accreditation Program (VELAP) compliance for data management systems, traceability and ensuring all work is performed in alignment with HRSD information technology long-term strategies

e. Maintaining system security integrity including user accounts and hierarchy of functions/roles; development of security plans and disaster recovery procedures; and maintaining LIMS asset management to ensure software licensing compliance

f. Ensuring uninterrupted and accurate transfer of data from and within EDMS systems; electronic data files meet user specifications and can be imported into other data information management systems or software; and proper data archiving and data migration from legacy systems

g. Developing, troubleshooting, configuring and modifying Plant Operational Reports and electronic Discharge Monitoring Reports (eDMRs); working with Environmental Scientist to ensure accuracy of information on eDMRs; and developing management and data reports from system to meet regulatory and customer requirements

h. Supervising and overseeing work of the Data Management Section including Laboratory EDMS Analyst and Laboratory Data Technician regarding implementation, operation and support of LIMS and IM; ensuring customer needs and requirements are met regarding LIMS and IM functionalities and other issues

i. Working with system users to ensure efficient workflows and troubleshooting and providing solutions to operational problems

j. Developing system documentation and instructional/ procedural manuals and providing training to HRSD staff in relation to use of LIMS

k. Providing support for future expansion of Water Quality, Operations and other Departments data management and connectivity needs

l. Developing and maintaining productive internal and external working relationships

Section III. Examples of Position Duties

    a. Leads/supervises section staff in ensuring continuous and efficient operations of LIMS and IM and on-time reports; prioritizes work, manages scheduling, human resource management, budget, equipment inventory, lab protocols, procurement, and compliance processes; monitors performance of section staff and provides effective feedback

    b. Administers monitors, configures, programs, and maintains EDMS systems including LIMS and IM, to ensure critical data management and regulatory reporting functions of EDMS and continuous system functionality, security and data integrity

    c. Configures, maintains, troubleshoots, modifies LIMS and IM software to provide necessary functionality through program development , data parsing routines, automated scripts/program execution and interface modifications while ensuring efficient workflows, best practices and data integrity; writes, programs, supports and modifies Windows Scripts and VGL programs to ensure auto-execution of critical system events

    d. Configures and maintains automated sample log-in, electronic chain of custody, data triggers, systems alerts, customized reports, sample and test schedules, analyses codes and specifications and field test codes and specifications

    e. Configures system to efficiently manage and maintain all aspects of analytical information including analytical specifications, reagent handling and preparation, training records, analyst demonstration of capability, Proficiency testing data, QA/QC data, document tracking and instrument records to meet VELAP traceability requirements

    f. Configures, supports, troubleshoots, modifies and maintains system interfaces such as LIMS/iPACs, LIMS/ EDS and LIMS/DEQ eDMR; maintains IM software for instrument interfaces for bi-directional data integration; maintains and develops Electronic Data Deliverable (EDD) requirements for importing/exporting data to contract laboratories and customers; and maintains systems to support integration of data with remote devices

    g. Oversees development, support, maintenance, troubleshooting, configuration and modification of data reports to ensure uninterrupted transfer of operational data between Treatment EDS and LIMS and , other users such as SWIFT; develops, supports, modifies, and maintains complex reports such as MPORs, eDMRs, and YPORs; generates management reports and statistics; develops and modifies analytical reports meeting VELAP and customer requirements; ensures electronic files meet user specifications and can be imported into other systems or software; and performs and oversees data migration for all EDMS component systems

    h. Supervises EDMS Analyst and Laboratory Data Technician: assigns and reviews work; provides training and mentoring and assesses training needs; provides feedback; approves leave and overtime;

    i. Mentors and develops staff technical and leadership skills for current position and future career opportunities; supports an environment of inclusion; leads team decision-making

    j. Communicates regularly with staff and Managers informally, in writing, one-on-one, and in meetings, on various topics, to include policies and procedures, operations, and upcoming projects

    k. Maintains LIMS security integrity including user accounts, passwords, roles, hierarchy of permissions and/or functions and works with IT on development of security and disaster recovery plans

    l. Ensures efficient flow of information and electronic data management; works with EDMS users (field and laboratory) to evaluate workflows, configure and manage system in most efficient manner including use of remote devices; works with Treatment Plant staff to configure, modify data input interface that is user friendly and efficient

m. Prepares and maintains documentation for operational, maintenance and audit purposes; develops procedures for conducting testing and change control including software versioning and maintenance of historical information; documents software validation; and maintains historical files of software releases, programs and documentation.

n. Monitors LIMS related servers and provides maintenance and troubleshoots software on servers; performs routine server administration duties in support of LIMS requirements; configures, maintains, troubleshoots, and modifies web portals to provide necessary functionality for electronic transfer or manual input of data. Works with IT as needed to maintain optimum performance of servers.

o. Installs, configures, troubleshoots, repairs and maintains label printers, barcode readers across HRSD Departments; provides initial troubleshooting where possible; evaluates potential use of new types of technology and makes recommendations for implementation

p. Identifies training needs, develops documentation; coordinates and conducts training for EDMS systems for multiple HRSD departments

q. Provides input for monthly report

r. Leads Division and Department wide teams

s. Testifies in a court of law concerning the security of analytical data

t. Continues to build own technical and leadership skills

u. Performs other duties as assigned

Section IV. Position Contacts

A. Standing Committees, Boards, and Organizations
   1. Desired
      a) Member – HRSD, Department and/or Division Level Team

B. Internal Contacts

Contact	Purpose	Frequency
EDMS Analyst	Communication regarding EDMS system operations, needs and projects; provide supervision, guidance and feedback; assign and review ; troubleshooting;	Daily
Laboratory Manager	Status Updates, provide recommendations, personnel issues, major purchases, strategic planning	Weekly
Chief, Laboratory Division	Status Updates, provide recommendations	Weekly
Laboratory Management and Staff	Resolve LIMS operation, reporting, and interface issues; provide training ; development and documentation of workflows; determine user and customer needs; develop and modify reports; maintain system security, address regulatory requirements	Daily
Operations Management and Staff	Resolve EDS/LIMS data transfer issues; modify MPORs; develop customized reports for SWIFT; provide training; make recommendations.	Daily

TSD Management and Staff	Develop and modify reports including eDMRs; resolve sample and analytical request and schedule issues; provide training; maintain system security; develop work processes and configure system for field activities; address issues with remote devices	Weekly
P3 Management and Staff	Resolve reporting issues; provide training; development of new workflows; determine user needs; development of new and modification of existing reports; maintain web portal accessibility; system security settings and issues; provide training	Weekly
WQ QST	EDMS updates and recommendations	Quarterly
IT Database Administrators	Oracle issues; database level queries and reports; database set-up, backups, configuration and functioning; user access and roles for Oracle database; database posting, events and triggers	As needed
IT Help Desk Staff	Troubleshoot software/hardware problems; order new/replacement computers; desktop support;	As needed
IT Senior Programmer Analyst & Programmer Analyst	SQL questions; write database queries for historical data; write SQL reports to export data to .csv or Excel file; write Interfaces between programs; project related issues	As needed
IT Senior Systems Analyst	Project related issues	As needed
IT Senior Systems Engineer	Network problems; server connectivity; system backups; system level hardware needs; wireless and VPN connections	As needed
Procurement Division	Service contracts and purchasing issues	Quarterly
Other HRSD Departments and Divisions	Discuss information transfer issues; determine user needs; resolve problems; coordinate training; develop and generate reports	As needed

C.   External Contacts

Contact	Purpose	Frequency
DEQ	Maintain LIMS/eDMR system compatibility and eDMR requirements; ensure accurate/reliable transfer of regulatory data to e-DMR	As needed
Municipalities	Address customer requirements; training, resolve web portal issues, EDD requirements	Quarterly

EDMS Vendors	System implementation, programming and configuration; resolve system and connectivity problems, service and support issues	Weekly
Software Vendors	Obtain product information, resolve problems, licensing, service and support	As needed
EDMS Consultants	System development, project coordination, testing and validation, data migration	As needed
Field Equipment Vendors	Instrument Interface configuration, programming issues	As needed
Instrument Vendors	Instrument interface configuration, programming issues	As needed
EDS Engineers	Emerson EDS Support	As needed

Section V. Position Accountabilities and Expectations

   a.   Compliance – EDMS data management processes and systems comply with HRSD guidelines, federal, state, and local government regulations and standards including VPDES, SDWA and VELAP;   ensures and enforces compliance with all software copyright and licensing laws and requirements for HRSD

   b.   Operations and Maintenance – Reliable and uninterrupted operation of EDMS which conforms to HRSD standards, practices, policies and procedures; supports and maintains HRSD equipment and software in accordance with relevant policies, procedures and guidelines

   c.   Financial Management – EDMS expenditures are in alignment with budget projections and HRSD policies

   d.   Process Management – Systems are configured to provide efficient data workflow, to meet customer's needs and regulatory requirements

   e.   System security and data integrity – User roles, passwords, hierarchies are properly configured and procedures are in place to provide for proper access to ensure data integrity and system security

   f.   Customer Satisfaction – Customer feedback regarding system use and output among various work centers and external customers is positive and meets or exceeds expectations; and acts collaboratively in assessing, evaluating and providing support services within and across organization

   g.   Timeliness – Effectively performs tasks to ensure systems and interfaces are implemented, modified and maintained for reliable operation; performs all tasks to meet established deadlines and milestones; provides timely response to customer requests

   h.   Human Resource Management –Effectively utilizes employees; coaches employees in current performance and develops employees to take on more responsible roles; makes effective hiring decisions; visibly supports and provides training and development ; motivates employees to contribute ideas to improve quality and services; ensures all personnel actions comply with current state and federal regulations

   i.   Communication - Informs direct supervisor and HRSD leadership of any issues/problems and makes recommendations

   j.   Expectations- Consistently demonstrates WQ Expectations

Section VI. Working Conditions

a. Must be able to manage workload with minimal supervision in a team/customer oriented culture
b. Must be able to make decisions based upon large amounts of technical and non-technical information from multiple sources in order to remediate EDMS issues/problems
c. Must be able to work in a complex, problem solving environment with demonstrated ability to handle multiple competing tasks and demands simultaneously, while maintaining composure and providing effective customer service
d. Must be available to work overtime, weekends, holidays and/or unusual hours as necessary
e. Nature of work requires employee to carry a cell phone and be accessible by phone in order to respond to emergencies; must be able to work in an industrial environment under various conditions which may include: varying climatic conditions outdoors, indoor work environments which may be routinely hot, cold, misty, unventilated, be exposed to chemicals, fumes, vapors, gases, noise, odor, wastewater and wastewater products
f. Must be able to travel within and outside HRSD's service area and to meetings and conferences

Section VII. Physical Requirements
a. Must have the physical dexterity to accomplish the duties defined herein
b. Work may involve long periods of excessive standing or sitting
c. Over 50% of work involves walking, climbing, standing, or bending
d. Must be able to operate mechanical tools and machinery
e. Must be able to operate keyboard and computer
f. Must be able to lift 30 pounds
g. Works at times in an OSHA designated noise environment (>85 decibels)
h. Must be able to drive to various work centers, jurisdictional offices and sites within and outside of HRSD's service area

Section VIII. Other
a. Medical certification of physical requirements may be required
b. Must be currently authorized to work for any U.S. employer
c. Must be able to secure and maintain any security clearance required

Section IX. Qualification Standards
a. Education
   1. Required

      Bachelor's degree in Computer Science, Management Information Systems or related discipline or a combination of education and/or certifications that provide necessary technical competencies to perform in this position.

   2. Desired

      Knowledge of Wastewater Treatment Processes
b. Experience
   1. Required

      Five years systems administration experience in an environmental laboratory or wastewater agency with a working knowledge of automated data management, reporting, system testing and validation, problem solving, report writing, legacy system data migration, and system interfacing and integration.

2. Desired
a) Five years as a LIMS administrator for a wastewater laboratory.
b) Five years developing customized operational reports and eDMR reports from LIMS

c. Training Levels
Personnel in this category are fully qualified at Grade 8 with a Bachelor's degree in Computer Science or related discipline or a combination of education, and/or certifications that provide the necessary technical competencies to perform this position and five years of experience as stated above. While a fully qualified selection is desired, the following training levels are established for personnel who are not fully qualified:

Grade 8a – Bachelor's degree in Computer Science or related discipline or a combination of education, and/or certifications that provide the necessary technical competencies to perform this position and four years of experience as stated above.

Grade 8b – Bachelor's degree in Computer Science or related discipline or a combination of education, and/or certifications that provide the necessary technical competencies to perform this position and three years of experience as stated above.

Grade 8c- Bachelor's degree in Computer Science or related discipline or a combination of education, and/or certifications that provide the necessary technical competencies to perform this position and two years of experience as stated above.

Grade 8d- Bachelor's degree in Computer Science or related discipline or a combination of education, and/or certifications that provide the necessary technical competencies to perform this position and one year of experience as stated above.

An advanced degree in an appropriate discipline will be evaluated for additional experience and further advancement in training levels.

d. Job-specific Technical Competencies
1. Required
a) Broad functional knowledge of LIMS, IM , , Enterprise Data Systems (EDS) and related computer and peripheral hardware and software
b) Ability to Administer and configure information management systems (LIMS, IM) and device interfaces
c) Knowledge of Oracle Databases and operating system software
d) Knowledge of programming such as Visual Basic,.net, C#, SQL or VGL
e) Strong working knowledge of MS Office Suite, including Advanced Excel
f) Ability to use a variety of profession-specific programs software at an intermediate level of proficiency; ability to implement new software and data management systems
g) Working knowledge of laws and regulations pertaining to wastewater treatment, field and analytical procedures, regulatory reporting, and laboratory accreditation

h) Working knowledge of water and wastewater treatment processes, terminology and data interpretation
i) Basic understanding of chemistry and acronyms
j) Research solutions, employ critical thinking, and use judgment in troubleshooting and developing new practices and workflows
k) General understanding of budget and bookkeeping processes and billing, invoicing and procurement procedures
l) Ability to multitask w/strong attention to detail; manage/coordinate multiple projects and assignments; prioritize and assign work; and establish deadlines for delivery of results
m) Knowledge of data analysis routines including graphical and statistical representation of data
n) Understanding of Human Resources policies and procedures
o) Able to develop highly effective working relationships with all HRSD employees and customers
p) Communicate effectively, both orally and in writing
q) Knowledge of various sampling and analytical methods, chain of custody and data management procedures and issues

e. Special Licenses
Required
a) Valid driver's license from state of residence
b) Completion of vendor training courses will be required upon appointment to this position

f. Water Quality Expectations