Department of Natural Resources
Position Description

Classification: Hydro Program Coordinator
Working Title: Vapor Intrusion Expert

Position Summary: This project position provides geologic and hydrogeologic expertise and oversight for inventory, assessment and remediation of dry cleaner and vapor contamination sites, focusing on vapor intrusion risk assessment and reduction of volatile compound contamination statewide. The position serves as a Remediation and Redevelopment (RR) Program technical resource coordinating the work of a multi-disciplinary team involved in hydrogeology program related activities specific to vapor intrusion mitigation and remedial action, in addition to performing hydrogeologist duties identified at the advanced level of the hydrogeologist classification. The position will provide direction for agency staff and external parties on assessment of vapor intrusion, evaluation of mitigation plans, approval, notification and tracking methods, and long-term stewardship for locations with mitigation systems installed or other protective measures in place. The position requires knowledge of mechanical systems (HVAC) and project management principles to provide services relating to the design, construction, operation, and maintenance of vapor intrusion systems. The Hydro Program Coordinator will be responsible for providing site-specific, engineering evaluations and project reviews for remediation sites with vapor intrusion concerns, including evaluating, troubleshooting, and optimizing support for vapor mitigation systems. In addition, this position will provide expertise to the RR Program related to vapor intrusion in the areas of building mechanical systems design, construction, remodeling, and maintenance.

This position works independently and with other DNR Program staff, as well as staff from other state and federal agencies, tribal entities, and other external partners and consultant engineers to provide expertise, guidance and consistency with regards to vapor intrusion assessment, mitigation and cleanup actions. The position will work with external customers in determining program approaches, will develop work plans for team initiatives, will set goals, objectives and strategies for the RR program in cooperation with Dry Cleaner and Vapor Intrusion team members and Management Team and function as a regional or department expert providing specific program knowledge relative to hydrogeology and vapor intrusion. This position will also require interaction with other DNR programs and stakeholders through participation and leadership in technical workgroups, communication and outreach.

Geographic Scope and Travel Requirements: The position will have responsibility for sites with environmental contamination across the state. The position will also participate in regional and statewide RR Program meetings and activities and may serve on regional or statewide standing or ad hoc teams. Regular travel to sites across the state and occasional night meetings will be expected, as well as infrequent statewide overnight travel.

Scope of Authority:
This position reports to and is under general supervision by the RR Policy and Technical Resources Section Chief and has responsibility for providing oversight and technical expertise to consultants and responsible parties for assigned sites statewide. The position will work closely with Central Office and regional staff throughout the state.

Goals and Activities:

25% A. Vapor Intrusion Assessment Expert

A1. Collect and integrate data relevant to vapor risk in order to ensure that state funds and staff time are efficiently applied to minimize public health risks.
A2. Identify open and closed NR700 cases where trichloroethylene (TCE) is present and direct RR Program efforts on these sites as they pose the greatest potential for significant human health risk.
A3. Support the use of tools that allow comparison of vapor intrusion risk on regional and

statewide basis so sites posing the greatest potential risk can be identified. This includes the execution of the "Vapor Intrusion Priority Evaluation and Ranking" or VIPER tool. The VIPER tool allows for the combined assessment of multiple contributing factors that affect risk posed by known or potential vapor intrusion into occupied buildings. The tool can be used to determine which sites have both a high risk for vapor intrusion and high social vulnerability index. The tool can also be used to rank sites in order of highest potential risk, looking at which sites have high concentrations of TCE and also building use that may result in the most people potentially exposed to vapor risk.

A4. Create a comprehensive inventory of sites where chlorinated solvents were likely used, including sites that are not in the DNR's database of contaminated sites.

A5. Verify compliance with vapor intrusion continuing obligations at closed sites and effectiveness of those systems. Develop work plans for Vapor Intrusion Team initiatives, including setting goals, objectives and strategies for the RR Program in cooperation with program management.

A6. Coordinate with external customers, regional staff and Central Office in determining program approaches and developing and maintaining long-term stewardship procedures and guidance and lead the state's work in conducting audits and monitoring compliance with continuing obligations imposed by the state on sites using vapor mitigation and/or HVAC systems to control the risk associated with contaminant vapors.

50% B. Review and Evaluation of Vapor Mitigation and/or HVAC Systems at Remediation Sites

B1. Serve as a statewide technical expert for vapor mitigation systems and/or HVAC systems installed to address the vapor contaminant pathway at contaminated properties. Review and approve designs and analysis work done by consultants and agency staff. Provide specialized technical support for system design requirements.

B2. Provide engineering evaluation and mechanical design requirements for vapor mitigation and/or HVAC systems following review of technical reports and submittals describing the extent of environmental contamination and potential remedial options. Provide approval of a remedial approach and subsequent oversight and assistance during the construction, installation, operation, and maintenance of vapor mitigation and/or HVAC systems. Review and develop engineering calculations for energy conservation measures. Assist and promote new/innovative and scientifically sound approaches for the remediation of contaminated sites.

B3. Monitor approved construction of vapor mitigation and/or HVAC systems to ensure the quality of work and compliance with state codes, and departmental and federal regulations. Eliminate system deficiencies, failures, and code violations related to the required mechanical system requirements. As needed, provide on-site monitoring to review the installation and perform troubleshooting where necessary.

B4. Analyze and evaluate systems performance and needs assessment of vapor mitigation and/or HVAC systems, which include both mechanical and electrical system components. Evaluate processes and software packages currently used and coordinate with staff on the implementation of approved plans and programs.

B5. Provide expertise to other staff, external customers including consultants, property owners, developers, and communities regarding the design, construction, operation, and maintenance of vapor mitigation and HVAC systems. Identify methods for integrating existing programs into a new maintenance management system and develop specific recommendations for implementation.

B6. Review and evaluate current programs and procedures related to the operation of vapor mitigation and/or HVAC systems at remediation sites. Disseminate technical and procedural information to DNR staff and interested external parties on review and evaluation of vapor mitigation and/or HVAC systems at remediation sites.

B7. Function as the Department expert within RR and in cooperation with other program experts and staff, including DHS staff, to provide engineering expertise and ensure consistency within multiple programs and cross-program issues to address vapor mitigation at remediation sites.

B8. Determine project approaches, develop workplans for team initiatives and set goals, objectives and strategies supporting long term stewardship of mitigation systems.

20% C. State-funded Remedial Investigations and Clean-ups

C1. Serve as project manager for State-funded remedial investigations and clean ups. Develop a scope of work for the project, identifying project tasks and expected outcomes. Evaluate consultant proposals and select contractor to further develop and complete the project.

C2. Provide support to other RR Program Project Managers with scoping, budgeting, coordination, and oversight of state lead sites, including engineered systems at state-owned/state-managed sites.

C3. Provide oversight and technical direction to department contractors to ensure field work is properly conducted, that all reports are written and submitted on time, and that the data collected is properly evaluated within submitted reports.

C4. Process and approve or deny all billings and change order requests and, at end of project work, complete contractor evaluations.

C5. Provide formal responses to submittals and ensure contractual work is performed as specified and in accordance with code and guidance. Adhere to all procurement requirements.

5% D. Professional Development & Organizational Responsiveness

D1. Review and keep abreast of changes in scientific knowledge of position-related activities and in technology and management practices for vapor intrusion.

D2. Develop and maintain technical references, case studies and information related to the design, construction, operation, and maintenance of vapor mitigation and HVAC systems in a variety of situations and methods to assess protective conditions.

D3. Participate in job-related training as directed by supervisor.

D4. Prepare forms and reports as necessary and in a timely manner.

D5. Perform other position-related duties as assigned.

D6. Follow all general and position-related safety requirements.

Knowledge, Skills and Abilities:

- Knowledge of hydrogeology, geology, hydrology, soil science, and vapor intrusion, including soil morphology, mechanics, chemistry and classification, as related to remediation and redevelopment.
- Knowledge of hydrogeologic and chemical principles controlling the fate and transport of contaminants in the environment from spills and/or unauthorized disposal of hazardous substances and wastes.
- Knowledge of and experience with vapor intrusion characterization and management procedures and related requirements of NR 700 WAC.
- Knowledge of building science, HVAC and ventilation systems, and indoor air quality testing.
- Knowledge of environmental remediation and redevelopment concepts.
- Knowledge of well and groundwater hydraulics.
- Knowledge of environmental monitoring, sampling techniques and groundwater quality standards.
- Knowledge of hydrogeologic and applicable engineering concepts relating to the investigation and clean-up of contamination incidents, spills and/or unauthorized disposal of waste.
- Knowledge of and experience with hazardous substance spill laws, codes, regulations, policies and guidance and their applicability to hazardous substance discharges and/or unauthorized waste disposal.
- Knowledge of and experience with clean-up requirements in NR 700 WAC series.
- Knowledge of program processes, policies, and procedures.
- Skill in using hydrogeologic and engineering concepts to recommend or require action at clean-up sites.
- Ability to understand a complex situation, issue, or problem by breaking it down into smaller pieces and trace implications or consequences.
- Ability to work well independently and be self-motivated to take action to meet critical organizational/program/unit goals.
- Ability to demonstrate personal integrity and high ethical standards in all transactions.
- Ability to present a good professional image through dress, speech and actions with a demeanor that inspires confidence in the individual and the organization.
- Skill in employing analytical abilities, pragmatism and other tools to resolve complex problems in a variety of situations.
- Ability to work cooperatively, collaboratively and facilitate others toward accomplishment of a shared goal.
- Strong leadership and interpersonal skills.
- Excellent oral and written communication skills.
- Knowledge of cross-program, multi-agency and other regulatory requirements.
- Ability to adapt to change.