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Melissa Kleven, P.E.

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Professional Profile

Ms. Kleven has 30 years of experience with projects involving multi-party site cleanup and cost allocation, natural resource damage assessment (NRDA), complex site investigation and historical research, due diligence, standard of care, treatability study design and implementation, remediation of soil, groundwater and surface water utilizing innovative approaches, and sustainability evaluation of waste treatment and remediation. She has provided expert testimony on handling and management of hazardous waste and other hazardous materials.

Ms. Kleven's expertise in regulatory compliance makes her a valuable strategic advisor to clients with serious environmental issues, violations, and enforcement proceedings that require timely resolution. She has succeeded in resolving issues arising from unexpected environmental and other conditions for large construction companies on major redevelopment projects involving multiple parties and disciplines. She has also served on confidential expert panels to evaluate and improve investigation and remediation strategies for complex sites across the U.S.

Ms. Kleven is also an accomplished project manager with extensive experience as an owner’s representative and managing complex, multi-disciplinary, and high profile projects on time and within budget.

Ms. Kleven has expertise in many regulatory programs, including NPDES, RCRA, CERCLA, MTCA, and state and regional environmental and health programs. Her projects have included Superfund sites with environmental analysis supporting cost allocation for both upland and in-water/nearshore areas (e.g., rivers and waterways). Her focus is complex environmental analysis, including sites situated in complex hydrogeologic areas (e.g., fractured bedrock), residential areas, and ecologically sensitive areas.

Ms. Kleven advises a diverse clientele that has included other environmental engineering companies, construction companies, oil and gas companies, chemical companies, materials manufacturing companies (e.g., cement, aluminum, alloys), coal and sand mines, coal-fired power plants, computer and information technology companies, scientific research and technology companies, analytical laboratories, liquid waste facilities, industrial landfills, municipal solid waste landfills, and other waste management facilities.

Ms. Kleven has worked on projects involving impacts from a variety of contaminants, including petroleum hydrocarbons, PAHs, PCBs, pesticides, herbicides (e.g., dinoseb), insecticides, peroxide, cement kiln dust (CKD), smelter slag (arsenic, lead), resins, aluminum reduction waste (e.g., dross, spent potliner), fly ash, scrubber slurry, radionuclides (e.g., uranium), chlorinated solvents, ethanol, siloxanes, metals, and minerals/nutrients. A focus of her work has been developing baseline conditions for naturally occurring and area-wide contaminants (e.g., arsenic, iron and manganese). Select example project experience is summarized below.

Academic Credentials & Professional Honors

B.S., Chemical Engineering, University of Washington, 1992

Licenses and Certifications

40-Hour Hazardous Waste Operation and Emergency Response Certification (HAZWOPER)

Prior Experience

Principal Engineer, ARCADIS, 2000–2009

Designated Engineer in Responsible Charge, ARCADIS, 2005–2009

Engineer, Foster Wheeler Environmental Corporation, 1998–2000

Scientist, ARCADIS Geraghty & Miller, 1993–1998

Project Experience

Litigation Support

Ms. Kleven has provided strategic management and technical support for a variety of matters, including the example cases described below.

Duane & Carol Ankney, et al. v. PPL Montana LLC, et al., Montana 16th Judicial District Court, Rosebud County. Case involved alleged groundwater contamination from coal-fired power plant operations.

Sotero Carrillo, et al, v. Reichhold, Inc. et al., District Court of Travis County Texas, 98th Judicial District. Case involved evaluation of environmental due diligence and adequacy of same.

Harbor Square Associates, LLC v. Port of Edmonds v. Union Oil Company of California, Superior Court of the State of Washington, Snohomish County. Case involved remediation of petroleum-contaminated soils underlying a commercial establishment.

State of California v. Underwriters at Lloyd's London and other London Market Insurers, et al., Superior Court of the State of California for the County of Riverside. Case involved timing and nature of property damage resulting from waste disposal on the Stringfellow site in southern California.

Proctor v. Lockheed, California Superior Court, Santa Clara County. Case involved cost recovery litigation on a large manufacturing plant in southern California. Principal constituents of concern were PCE and TCE.

Natural Resource Damage Assessment - BP Gulf of Mexico Deepwater Horizon Oil Spill

Program manager for multi-million dollar natural resource damage assessment (NRDA) science projects related to the 2010 Gulf of Mexico Deepwater Horizon oil spill for BP's Gulf Coast Restoration Organization (GCRO). Provided primary support to BP senior management on technical and financial planning and management of complex, multiple, concurrent scientific projects and tasks. This included management of multiple internal BP groups and outside contractors. Worked with BP to design and

publish a vast array of data on BP's public website, www.gulfsciencedata.bp.com (now available at the Gulf of Mexico Research Initiative [GoMRI] data discovery site).

Investigation/Remediation

Engineer of record and project manager for environmental work at a U.S. Postal Service processing and distribution facility located in Oregon. An RI/FS was completed to investigate potential impacts from past railyard activities, including a Pintsch Gas Plant that formerly operated on the site. The RI/FS project was conducted under an agreement with the Oregon Department of Environmental Quality (DEQ) and included a site-specific risk assessment to evaluate current and potential redeveloped uses. This was the first RI/FS project in Oregon to include a sustainability analysis of proposed remedies.

Engineer of record and project manager for an aluminum black dross landfill in the western U.S. to determine the nature and extent of contamination and to evaluate and select a remedial alternative. Work performed under an Agreed Order with the Washington State Department of Ecology included soil, groundwater, air, and dross characterization, historical research, preparation of an RI/FS, and public communications.

Project manager for environmental work at a former resin and ink manufacturing site in New Jersey. Conducted groundwater remediation for a localized VOC plume. Work performed under a Remediation Agreement with the New Jersey Department of Environmental Protection (NJDEP) included evaluation and presentation of Site conditions described in multiple historical reports in a Remedial Action Workplan addendum, demonstrating area-wide impacts of minerals (arsenic, iron, and manganese) and ammonia in the aquifer, groundwater remediation via anaerobic reductive dechlorination, NJDEP permitting, developing a strategic plan for Site closure, preparing a deed restriction, and facilitating Site closure with the NJDEP and the Licensed Site Remediation Professional (LSRP).

Conducted an environmental investigation for a national brewing company in the western U.S. to determine the extent of and impact from a suspected ethanol release. Work included soil, surface water, and groundwater characterization under the Washington State Department of Ecology's Voluntary Cleanup Program (VCP). The investigations were focused downgradient from the suspected release at a storm drain outfall and a nearby tributary.

Project manager for environmental work at a former printing press and ink manufacturing site in New Jersey. Work included evaluation and presentation of Site conditions described in multiple historical reports in a Remedial Action Workplan addendum, evaluating area-wide conditions related to PCBs along a rail line, determination of an alternative PCB-source offsite, developing a plan for Site closure, preparing a deed restriction, and facilitating Site closure with the NJDEP and the LSRP.

Evaluated multiple Superfund projects located in a harbor area in the western U.S. Work included historical research related to Site operations and spills/releases, chemical and product evaluation, evaluation of upland and outfall conditions, and related activities.

Evaluated groundwater impacts at a coal-fired power plant in the western U.S. Work included evaluation of sources and potential impacts, groundwater characterization, human health and ecological risk assessment, facilitation of a medical review to evaluate potential human affects, statistical analysis to determine natural background nutrient levels in multiple aquifers, and served as a technical expert in mediation with local homeowners. Contaminants included boron and other minerals.

Project manager for state-lead (MTCA) RI/FS activities for a bulk fuels terminal located on a river within a CERCLA site in Washington. Constituents of concern included petroleum hydrocarbons and metals. Soil, groundwater, and sediment investigations were designed and completed, including "hot spot" soils characterization and treatability studies for soils. Sediment study was presented to EPA and demonstrated that no further investigation or remedial action was needed for that medium. A product recovery system was installed, operated, and maintained, including soil vapor extraction, air sparging,

and free product recovery with groundwater treatment. The approved RI/FS incorporated MTCA risk assessment technologies for evaluating petroleum hydrocarbons.

Served as project manager for remedial post-closure activities to mitigate leachate outbreaks from CKD landfills at a mining site in Washington. This project included leachate and groundwater investigations and monitoring, subsurface investigations, hydrogeologic characteri-zation, agency negotiations, environmental permitting, treatability study, and remediation alternatives analysis.

Served as project manager for ongoing sediment characterization/remediation activities for a site located within a CERCLA site in the western U.S. Impacts to sediments included metals and PAHs. Sediment quality was evaluated in several investigations by other firms. Assisted in developing remediation strategies that focused on risk management. Managed ongoing uplands activities to address chlorinated solvent impacts to site soil and groundwater.

Served as project manager for environmental engineering support services related to historical impacts at a brewery in the western U.S. Activities completed under the state's Voluntary Cleanup Program included: evaluation of historical data, site investigation and characterization, determination of offsite sources, monitoring, agency negotiations, site closure activities, and placement of a deed restriction on the property.

Evaluated the appropriateness of environmental agency actions at a site impacted with the herbicide dinoseb.

Risk/Environmental Assessments

Prepared human health and environmental risk assessments for sites throughout the U.S. contaminated with hydrocarbons, chlorinated solvents, metals, PCBs, radionuclides, and minerals. The scope of these assessments included the preparation of exposure assessments, constituent characterizations, assisting in the development of toxicity assessments (for both carcinogenic and noncarcinogenic effects), and the derivation of risks, hazards, and/or health-based remediation goals for soil and groundwater. Select projects also included public involvement and litigation support. Successfully negotiated risk management solutions with regulatory agencies.

Conducted an endangerment assessment at an industrial research facility in Oregon for drainfield soils contaminated with depleted uranium. This endangerment assessment was completed for DEQ under the state's Voluntary Cleanup Program. The scope of the endangerment assessment was negotiated with the agencies involved, DEQ and the Oregon State Health Division. Designed and implemented a field investigation, which included preparation of a complex SAP. The field investigation included radiation monitoring and the collection of over 500 soil, sludge, and wipe samples at the site for radionuclide analyses (e.g., gross alpha, gross beta, total uranium, isotopic uranium). The investigation and assessment resulted in a determination of no current or future significant risk to human health or the environment. Following completion of the endangerment assessment, DEQ issued a letter providing a "no further action" ruling for the site.

Due Diligence

Managed due diligence projects in Washington and Oregon for national clients seeking acquisitions or divestitures. These projects typically involved several businesses/properties and were completed on a fast-track schedule. Clients include insurance companies, real estate developers, chemical distributors, manufacturers, and others.

Managed a variety of due diligence projects for a client with multiple facilities in the western U.S. area. Performed Phase I/II ESAs and property screening. Projects were conducted to meet environmental due diligence requirements associated with the acquisition, leasing, and disposal of real property, and site

development activities. Typical project elements included soils, groundwater, asbestos, lead, radon, and sensitive species/environments.

Permitting

Managed post-closure requirements for RCRA and CERCLA landfills at an aluminum reduction facility in the western U.S. The project included agency negotiations, site evaluations (e.g., hydrogeologic), RCRA and CERCLA agency inspections, operation, maintenance, and monitoring. Biotreatment of landfill leachate was pilot tested and implemented full-scale to reduce long-term operation and maintenance costs.

Managed preparation of key components of a RCRA Part B permit application for surface impoundments and container storage areas at a mixed-waste (hazardous and radioactive waste) facility in Richland, Washington. Developed monitoring plans, and completed groundwater monitoring and statistical evaluation to meet RCRA requirements.

Managed RCRA closure and permitting activities for six interim status treatment, storage, and disposal (TSD) facilities in western Washington and Oregon, including: preparation of site characterization work plans, closure plans, and closure and post-closure plans for inclusion in a RCRA Part B permit application; operation and maintenance of remediation systems (including compliance with NPDES permits); management of quarterly groundwater monitoring activities; and agency interaction/negotiations.

Managed environmental permitting for a large roadway construction project in Washington. The site is situated on a river and adjacent to a salmon stream. Prepared and coordinated permitting and approvals from several agencies including: Washington Department of Fish and Wildlife, U.S. Department of Fish and Wildlife, U.S. Army Corps of Engineers, National Marine Fisheries, and various local (city and county) agencies. Because of the presence of endangered salmon in the vicinity of the site, a biological assessment was prepared in accordance with Section 7 of the Endangered Species Act.

Managed a fast-track project for a TSD facility in the western U.S. for spent solvent impacts to a drinking water supply. This project included provisions for an alternate drinking water supply to tenants, a risk assessment to determine the magnitude of risk posed by the impacts, assistance in agency and public notification, implementation of a field investigation, installation of a carbon treatment system, operation and maintenance of the carbon treatment system (including development of sampling requirements), and quarterly reporting to the state regulatory agency.