



*Daniel B. Stephens
& Associates, Inc.*



Prepared for
City of Benicia
November 2010



MARTEN LAW



*Daniel B. Stephens
& Associates, Inc.*



FARELLA BRAUN+MARTEL LLP

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November 4, 2010

Via Messenger

Ms. Heather C. McLaughlin
City Attorney
City of Benicia
250 East L Street
Benicia, CA 94510

RE: *Benicia Arsenal Investigation and Cleanup Project*
Statement of Qualifications of Marten Law PLLC, Farella Braun + Martel LLP,
and Daniel B. Stephens & Associates, Inc.

Dear Ms. McLaughlin:

Marten Law PLLC, Farella Braun + Martel LLP, and Daniel B. Stephens & Associates, Inc. (“DBS&A”) are pleased to present their qualifications to assist the City of Benicia on the project management and legal services relating to the Benicia Arsenal Investigation and Cleanup Project. Each of our three firms brings particular expertise to this project. As a combined team, we offer the City a wealth of experience in dealing with FUDS and Brownfields sites such as the Benicia Arsenal, along with a proven track record of successfully representing municipal clients in the investigation and negotiation of cleanups of such sites with the Department of Defense (“DoD”) and the California Department of Toxic Substances Control (“DTSC”).

We have reviewed the City’s RFQ and the documents available on the City’s website. Based on that review and our analysis of the City’s situation, we are recommending an approach that is somewhat different from the one set out in the RFQ. Our rationale for doing so is our understanding of the City’s objectives, namely, to minimize the City’s costs and potential exposure, while still proceeding with a plan to allow for redevelopment of the Arsenal site. Based on those objectives, we recommend a multi-faceted approach described in detail below, an approach that we have successfully employed on behalf of other municipal clients, and which we anticipate would address the City’s needs here for the investigation, remediation and redevelopment of the former Arsenal property.

RECOMMENDED APPROACH

Our recommended approach to the investigation, remediation and redevelopment of the Benicia Arsenal is guided by three primary objectives:

- (1) Maximize the City's available insurance coverage to fund the City's defense in the event the City is named a potentially responsible party ("PRP"), and to indemnify the City for its investigation and cleanup costs;
- (2) Minimize the City's exposure to future defense and remediation costs; and
- (3) Establish a process by which the City could facilitate both the cleanup and redevelopment of the former Arsenal site to accomplish its economic development objectives and implement its land use plans, while forcing the DoD and other PRPs at the site to bear their respective shares of investigation and cleanup costs.¹

As a means of achieving these objectives, we recommend the following five-step approach:

- (1) Secure Funding for Defense of Claims Against the City: We are not aware whether a comprehensive assessment of the City's available insurance has already been undertaken. An early assessment of the City's potential insurance coverage under its historical and current insurance policies is a critical first part of the process, which will inform the likelihood of the City's recovery and the approach for the step below. Upon evaluation, prompt tender of claims to the insurers is essential to avoid a denial of coverage for costs incurred prior to that notice. The required steps would include assessing what policy information (and evidence of insurance) the City has in its files; identifying and searching for other sources of information on historical coverage, if necessary; evaluating the coverage provided by the policies; and evaluating how to utilize that coverage for maximum benefit. A primary benefit would be to obtain complete or partial indemnity from insurers for some or all of our fees to perform our work, along with consultant fees and City Attorney fees. We have been able to accomplish such results in similar matters, although we are mindful that, under California law, whether coverage can be obtained depends upon the type of policy, the time period covered, the year of issuance, and the type of administrative order or lawsuit that is asserted against the City (among other things). A more in-depth analysis would be required before a specific assessment on this point could be provided.
- (2) Identify the Best Regulatory Mechanism: We will evaluate applicable administrative mechanisms of California's environmental agencies (DTSC, Regional Water Quality Control Board ("RWQCB"), local Certified Unified Program Agency ("CUPA")) that would best drive the investigation and cleanup and maximize contribution by other parties, including (a) Imminent and Substantial Endangerment Determination Order, (b) Consent Order, (c) Remedial Action Order, (d) Cleanup and Abatement Order, (e) Voluntary Cleanup

¹ We are not able to ascertain, based upon the information currently available to us, whether indemnity agreements exist between the City and DoD, the City and Benicia Industries and/or between the City and any other landowner/developer which owns property at the Arsenal site. Identification and review of such documents would be an important first step in developing a final strategy and recommendations.

Agreement, etc. To avoid inter-agency battles on sites where multiple state and local regulatory agencies (such as DTSC, the RWQCB or a local agency) are involved, California law (AB 2061) provides an opportunity for a regulated party to apply for designation of a lead agency for oversight of a cleanup. We would evaluate the advisability of pursuing such an option in this case.

- (3) Identify the City's Available Defenses: We will evaluate the City's defenses to liability as a PRP under the federal Comprehensive Environmental Response Compensation and Liability Act ("CERCLA") and parallel state Superfund law known as the Hazardous Substances Account Act ("HSAA"). Under CERCLA, the City may be able to assert a complete defense to liability if it could show that the release of hazardous substances at the Arsenal: (1) was caused solely by the act or omission of a third party, i.e., DoD; (2) that the third party was not the City's agent or in a contractual relationship with the City; (3) that the City exercised due care with respect to the hazardous substances; and (4) that the City took precautions against the foreseeable acts or omissions of the third party. In addition, because the City owns only a limited portion of the Arsenal site, the City should be able to assert a "divisibility" argument under CERCLA, an approach that has met with success under the most recent Supreme Court case law addressing this argument.² Under this argument, the City would accept responsibility for only those portions of the site that it owns, leaving the balance of the responsibility to other parties, including both DoD and other PRPs. Certain of these defenses also are available under the California HSAA law.
- (4) Explore Availability of an "Ability to Pay" Settlement: In 1997, EPA adopted a policy for evaluating the impact of a PRP's ability-to-pay settlements under CERCLA. Under this policy, EPA may enter into ability-to-pay-influenced settlements with PRPs for recovery of response costs and performance of cleanup work in appropriate cases. This process is reserved for PRPs who can demonstrate that payment of the amount sought for CERCLA cleanup costs is likely to impose an undue financial hardship or otherwise jeopardize the party's financial viability. We have previously submitted "ability to pay" documents on behalf of municipal clients, arguing that current economic conditions, existing resource commitments and the legal authorization to impose additional taxes restricted the municipality's ability to fund investigation or cleanups of CERCLA sites, including some where DoD or the National Guard were PRPs. We recommend that the City explore this possibility to minimize its exposure to cleanup costs.

² See *Burlington Northern & Santa Fe Railway Co. v. United States*, 129 S.Ct. 1870 (2009).

- (5) Ensure that the City Can Participate in Redevelopment, While Minimizing Investigation and Remediation Costs: CERCLA § 120 governs the investigation and remediation of federal facilities. The fact that the Corps of Engineers has already identified the Benicia Arsenal as a FUDS site should trigger the provisions of Section 120. Section 120(f) requires that “State and local officials [be provided] the opportunity to participate in the planning and selection of the remedial action.” We have successfully used this section to require DoD to allow municipalities affected by the cleanup of a FUDS site to be given access to all applicable data and to have their consultant (DBS&A) review and comment on DoD’s proposed remedial actions. In one case, this resulted in a twenty-fold increase in the level of cleanup, at DoD’s expense. *See City of Moses Lake v. United States*, 416 F. Supp. 2d 1015 (2005).

Our legal team has developed excellent working relationships with DTSC staff, who are often the linchpin to success in multi-party investigations and cleanups. If it is determined that DTSC is the best regulatory agency to oversee the investigation and cleanup, we propose an initial briefing with DTSC staff to discuss the site and explore the role we would advocate on behalf of the City of Benicia.

Due to the size of the Benicia Arsenal, the length of past DoD operations at the site, the number of active facilities and variety of operations that took place at the Arsenal, the range of potential contaminants of concern and release types is extensive. The RFQ identifies as many as 389 sites that could potentially require additional site characterization. Even under the conservative assumption that only a third of these sites require additional characterization and that an expedited site characterization strategy could be employed where feasible, likely dozens of monitoring wells and hundreds of surface and subsurface soil samples will be required by the lead regulatory agency. Taking into account the number of planning documents (quality assurance plans, field sampling plans, data management plans etc.) and interim and final reports required (remedial investigations, feasibility studies, remedial design, etc.), we anticipate that the cost of characterization will run into the many tens of millions of dollars before closure is achieved. We clearly understand that the City cannot – and should not – pay these costs, given that they result from the Army’s operations.

Our team’s goal is to maximize the City of Benicia’s participation on the technical components of its redevelopment plans and remedial investigations, while minimizing its costs. An excellent illustration of the merits for this approach is the *Granite Management Corp.* litigation. That case ultimately resulted in a settlement payment of \$50 million from the United States, but only after Granite first spent more than \$30 million of its own funds before the settlement. Our recommended approach is to pursue a strategy that avoids upfront expenditures of investigation and cleanup costs. In this way, the City will be able to ensure that investigations and remediation are complete and meet with their approval, without bearing the burden of what is sure to be a very costly endeavor.

TEAM ORGANIZATION AND RESPONSIBILITIES

Our proposed team consists of three firms, each of which has specific capabilities and experience that will benefit the City.

- Marten Law has extensive experience in federal superfund law (CERCLA) and in the representation of municipal clients in connection with the cleanup of sites where DoD is also a PRP.
- Farella has negotiated numerous agreements with DTSC on behalf of private and public clients, has extensive experience under the federal and state CERCLA statutes, and will assume the lead role with the California regulatory agencies. Farella also has substantial experience in the cleanup and redevelopment of closed military installations, Brownfields sites, and other contaminated properties on behalf of municipal agencies, developers, remediation contractors, institutional investors, lenders, and others. As needed, Farella's real estate and land use practice also has extensive development and entitlement experience to provide support to the redevelopment process.
- DBS&A's capabilities lie in the technical assessment of contamination and the development of cleanup plans to remediate such contamination, and it has represented a number of municipal clients where the primary source of the contamination is the result of prior military activity.

Representative Engagements and Qualifications of Team Members

This proposal identifies a team of several people in an effort to demonstrate the depth and breadth of our knowledge and experience in the relevant areas for your project. They are all available as a resource, but we are not proposing that all would be involved in all aspects of the work. Actual staffing for particular projects would be made depending upon specific needs of the project, and in close coordination with the City consistent with decisions on scope, timing and budget.

Marten Law – Marten Law practices exclusively in the fields of environmental and energy law and has one of the largest and most respected environmental practices in the nation. We represent clients throughout the United States on their most challenging cases and projects. Of particular relevance at this site is Marten Law's experience in representing municipal clients on the investigation and cleanup of FUDS and other military sites such as the following:

- Teaming with DBS&A, Marten Law negotiated a twenty-fold expansion of a DoD cleanup of contamination of the City of Moses Lake, Washington's drinking water system, arising from the operation of the former Larson Air Force Base. In connection with that work, we obtained a federal injunction requiring DoD to include the City in the development and implementation of the cleanup remedy, which

allowed DBS&A to review and comment on all of DoD's site characterization and remedial options, which we then used to force the adoption of more protective alternatives, at DoD expense.

- Marten Law currently represents the City of Las Cruces and Doña Ana County, New Mexico, in connection with EPA's cleanup of PCE contamination of the City's water system. Working with DBS&A, who provided the technical case regarding release timing and contaminant transport, Marten Law worked with the Department of Justice to recognize the National Guard as a PRP and limited the City's contribution through use of an "ability to pay" restriction under CERCLA.
- Marten Law successfully negotiated a settlement for the owner of Camp Bonneville, a former Army training base located near Vancouver, Washington. Camp Bonneville was used as a firing range and training ground for most of the 20th century and was contaminated with a range of hazardous substances and unexploded ordinance ("UXO"). The Army had assessed the condition of the site, and agreed to fund cleanup as part of an early transfer of the property. The property, once clean, will be transferred to the local county government for use as a park. Marten's client took title to the property for purposes of managing the cleanup funded by the Army. Disputes arose when UXO was found in areas not identified by the Army, and the State set more stringent cleanup requirements than the Army had anticipated. Marten negotiated a settlement that allowed our client to transfer the property to the County, resolved its obligations to the County and its potential liability to the State, and received payment for past work. This also paved the way for negotiating a new arrangement between the Army and the County to address remaining contamination on the site.
- Marten Law also has experience in pursuing insurance coverage on behalf of both private and municipal clients. Because insurance is primarily governed by state law, Farella will have lead responsibility in securing coverage from the City's carriers, with Marten Law supporting that effort.

Marten Law proposes Steven Jones as the attorney with primary responsibility for this work, supported by Brad Marten and Jessica Ferrell. All of these attorneys have extensive experience representing municipal clients at FUDS sites; Mr. Jones obtained the 120(f) order referred to above, which required DoD to include the City of Moses Lake in the assessment and development of remedies at a FUDS site. Mr. Jones also has extensive experience in insurance coverage work on behalf of both private and municipal clients. Ms. Ferrell currently represents the City of Las Cruces and Doña Ana County in negotiating a consent decree and remedial action plan with EPA.

Mr. Marten negotiated the final consent decree with the United States, under which the City of Moses Lake obtained a release at the site, based on its existing investigation and remedial activity. Mr. Marten worked extensively on the Camp Bonneville cleanup, work which has

direct relevance to the City's RFQ in that it involved the allocation of responsibility and costs of cleanup for a former military base between the State of Washington, Clark County and a private third party, as a precursor to a transfer of that property to a municipality (Clark County) for reuse.

Copies of a C.V. for each attorney are enclosed. We have also included a recent article written by Ms. Ferrell which outlines the application of CERCLA Sec. 120(f) at FUDs sites, and highlights the tension between EPA and DoD in connection with cleanups undertaken at such sites.

Farella Braun + Martel LLP – Farella's Environmental Department is among the largest and most experienced in the country, and has substantial experience advising and representing clients in all areas involving hazardous substances and wastes, including regulatory site remediation and cost recovery, compliance counseling, and enforcement defense. We have successfully negotiated administrative and judicial consent orders, and cleanup and settlement agreements with DTSC and other regulatory agencies, including the U.S. EPA and California Regional Water Control Boards, and are adept in devising strategies for responding to administrative directives on matters involving investigation, remediation, corrective action, hazardous waste compliance and enforcement.

Our Brownfields work includes obtaining conditional cleanup liability immunity for real estate owners/developers of Federal and State Superfund Sites, RCRA corrective action sites, landfills, and a host of lesser-impacted sites under California's AB 2061 Unified Lead Agency program, the AB 389 program, DTSC's Voluntary Cleanup Program, Federal or State Prospective Purchaser Agreements, and the Polanco Act. We provide both strategic advice and environmental representation in complex private party negotiations for Brownfields acquisition and development; provide counseling with regard to the implementation of remediation, including sites complicated by vapor intrusion issues; negotiate and counsel in connection with the development of innovative remedial approaches involving guaranteed fixed price remediation contracts; and assist in obtaining multilayer environmental insurance policies providing coverage for remediation costs, third party liability, and business losses due to environmental conditions.³

Below is a brief sample of the work which illustrates Farella's experience, particularly in matters involving Brownfields redevelopment and the DTSC:⁴

³ Enclosed is an article entitled "Turning Brown into Green: Practical Considerations for Lenders and Buyers of Contaminated Property in a Red Economy" prepared by two of Farella's proposed team members, Deb Tellier and John Gregory, and published in the June 2009 "Green" edition of the State Bar of California Real Property Journal.

⁴ Although not highlighted in our list of representative projects because our work in the matter involves DTSC's sister agency, the RWQCB-San Francisco Bay Region, we note that Farella currently represents a commercial property company, EOP, as the current landowner, in connection with the investigation and remediation of a groundwater plume associated with historical releases of degreasing solvents at EOP's property within the Benicia Industrial Park located at 4186 Park Road. Although this property is located within the boundaries of the Benicia Arsenal, we understand our proposed work on behalf of the City of Benicia is not expected to involve or implicate

- Farella has represented a developer at the Fleet Industrial Supply Center (FISC) Annex in Alameda (US Navy) in establishing the regulatory framework for DTSC oversight and approval of the developer's mixed-use remedial plans, and a San Francisco Bay Area port in its legal efforts to obtain early transfer of the FISC from the US Navy to the port with special emphasis on structuring indemnification and environmental insurance requirements for the development of the project.
- Farella set up the AB 2061 liability-limiting framework for the 303-acre Mission Bay development, providing counsel to the property developer on a complicated risk management plan and deed restrictions, negotiating with both the DTSC and RWQCB on cleanup and hazardous waste management issues, and representing the developer in adversarial negotiations with oil companies for remediation of historic petroleum contamination and in subsequent negotiations with various purchasers of portions of the development.
- Farella has represented a national real estate investment company, as property owner, in connection with its purchase and redevelopment of a 26-acre industrial facility under a DTSC RCRA corrective action order in Torrance, California. Our work included negotiating with and successfully obtaining from the DTSC a RCRA Corrective Action Complete with Controls Determination and accompanying RCRA facility boundary modification and preparation of a land use covenant to address residual contamination and facilitate future redevelopment.
- Farella has worked with DTSC (Chatsworth and Sacramento offices) in its consultative capacity at an AB 2061 skeet and trap range investigation and cleanup where the local county health department is the designated lead agency. Our work included, among other things, various aspects of NCP compliance and ecological assessment in a biologically sensitive area.
- Farella has worked with DTSC (Sacramento office) regarding a negotiated Consent Order issued for a site adjacent to a 200+ acre Railyards Site in Sacramento. The Consent Order involves various elements of investigation and cleanup.
- Farella has worked with DTSC (Clovis office) regarding an Imminent or Substantial Endangerment Determination and Consent Order issued for South Fresno Regional Groundwater Plume. Multi-party site features negotiated allocation of responsibility with party obligations confined to specific operable units.
- Farella has represented a major environmental and engineering firm in the negotiation of guaranteed fixed price remediation contracts between the engineering firm and site

this property, and thus should not present a conflict situation for Farella given the RWQCB's current involvement with the EOP property.

redevelopment teams on two major Brownfields projects, one involving the remediation of the 157-acre Cal Compact landfill site in Carson, California, a State Superfund Site overseen by DTSC, and the other, involving the remediation of a 62-acre parcel at the former McClellan Air Force Base in Sacramento, California.

Farella's Insurance Coverage Group ("ICG") is one of the largest and oldest insurance recovery groups in California, employing fourteen lawyers and two risk management professionals who are committed to representing policyholders in coverage disputes and providing advice on insurance programs. The partners in the ICG average over 20 years of experience obtaining the insurance monies to which their clients are entitled. They understand their clients' interest in a cost effective and resolution-oriented approach that maximizes the effective recovery to the client, and they devote themselves to obtaining that result.

Relevant experience includes:

- Farella represented U.S. Borax (a Rio Tinto company) in multi-site environmental coverage litigation in San Francisco Superior Court involving their main mine in Boron, CA, and two former herbicide blending facilities in the Midwest. The suit involved 80 insurance policies issued by 7 different insurer defendants over 25 years, regarding polluting events occurring in the 1960's. Borax reached settlements on the eve of trial, bringing its total recovery in the case to more than 80% of the amount at issue.
- Farella has handled major environmental and construction insurance claims for the Port of Oakland for almost 20 years, securing many millions of dollars from the Port's historical and current insurance carriers. We have also helped the Port design and implement a major "owner controlled insurance program" for a \$1.1 billion+ capital improvement program.
- Farella has handled numerous other claims and suits seeking coverage for CERCLA and DTSC claims, and toxic tort suits by neighboring homeowners.

To the extent the City also would be interested in real estate and land use services, Farella's real estate and land use practice is comprised of talented lawyers with deep emphasis in San Francisco Bay Area and Northern California development and entitlement experience in connection with virtually all property types, including office buildings and parks, apartment and condominium buildings, shopping complexes, hotels and resorts, senior living/elder-care facilities, wineries, industrial buildings, agricultural land and mixed-use projects. We have extensive experience negotiating the complex political and regulatory processes of redevelopment disposition and owner participation agreements, city development agreements, ground leases with public entities, rezoning and general plan amendments, use permits and variances to environmental reviews under both CEQA and NEPA. Creativity and access are the major strengths of Farella's real estate and land use attorneys – from project inception through ground breaking ceremonies to occupancy – we focus on crafting pragmatic approaches and identifying creative "win-win" solutions.

Farella's proposed legal team would be directed by Jim Colopy, Chair of Farella's Environmental Department, supported by our remediation counseling attorneys, John Gregory, and Deb Tellier, depending on the needs of the project. Insurance coverage matters would be directed by John Green. Copies of a C.V. for each attorney are enclosed.

Daniel B. Stephens & Associates, Inc. – DBS&A is an employee-owned environmental and water resources consulting firm with expertise in hydrogeologic investigations, studies of contaminant transport in soil and groundwater, numerical modeling, remediation of soil and groundwater, and environmental litigation support. DBS&A has worked directly with public and private clients in California and elsewhere throughout the west on sites impacted by explosives, chlorinated and non-chlorinated solvents, petroleum hydrocarbons, PAHs, heavy metals, radionuclides, PCBs, dioxins and furans, herbicides, pesticides, and a variety of other inorganic compounds.

Examples of our experience and expertise include the following:

- Teaming with Marten Law as discussed above, DBS&A provided the technical basis to negotiate a twenty-fold expansion of a DoD cleanup of trichloroethylene contamination of the City of Moses Lake, Washington's drinking water system. DBS&A reviewed technical reports to evaluate hydrogeologic conditions and the effectiveness of characterization efforts and proposed remedies. DBS&A provided detailed comments on the EPA's draft Plan that were instrumental in forcing EPA to revise that Plan and in the adoption of an interim remedy.
- DBS&A serves as the prime contractor to the City of Las Cruces and Doña Ana County, New Mexico, in connection with EPA's cleanup of PCE contamination of the City's water system. Based in part on recommendations proposed by DBS&A, the City of Las Cruces was able to work cooperatively with the EPA in proposing a site remedy that meets EPA's remedial action objectives while relying heavily on existing infrastructure. DBS&A has also provided technical support to Marten Law during negotiation with the United States Department of Justice at this site. DBS&A was later selected by the City of Las Cruces and Doña Ana County to perform the ongoing Remedial Design.
- DBS&A provided hydrogeologic services and expert assistance related to a six-mile-long groundwater plume which resulted in seven of City of Rialto's 13 wells being removed from service. The sources of contamination were located at a FUDS site and included a number of revetments, bunkers and a landfill that were used for the development, manufacture, storage and disposal of munitions and/or pyrotechnic devices. On behalf of the City, DBS&A performed an evaluation of local and regional hydrogeology and historic operations to develop a solid conceptual model of contaminant migration. DBS&A evaluated potential contaminant sources, and made detailed recommendations regarding source investigations and basin-wide characterization and remedial actions. DBS&A also represented the City at a SWRCB hearing and public information meetings and by providing written

comments to Santa Ana RWQCB, EPA and DTSC on PRP work plans, site assessment reports, remedial action plans, and other relevant documents.

- At one of the largest Brownfields redevelopment projects in the nation, DBS&A manages, directs, and oversees the hydrogeologic characterization required to support the closure of 2,200 acres of effluent disposal ponds at a historic World War II era magnesium ore refining facility in Henderson, Nevada. DBS&A interpreted site and regional geologic, soil, groundwater, hydrologic, chemical, and geotechnical data to support the description of the conceptual site model, designed and oversaw extensive field investigations for the hydrologic characterization of multiple aquifers, conducted analytic and numerical groundwater flow and chemical transport modeling and designed the groundwater monitoring program. DBS&A participated in public accountability meetings with technical, legal, and public representatives of State, County, and City governments, other potentially responsible parties, and the local citizens' Remediation Advisory Board.

DBS&A proposes Jenny Sterling as the project manager and primary point of contact with the City of Benicia. Jenny works out of DBS&A's Bay Area office in Petaluma. Ms. Sterling has more than 11 years of experience working on complex sites similar to the Benicia Arsenal and served as Project Manager for DBS&A's work with the City of Rialto discussed above. Stephen J. Cullen, Ph.D., P.G., REA II, CPSS, will serve as Principal-in-Charge, providing senior oversight of all work to ensure that the City's expectations are met. Dr. Cullen has more than 33 years of experience in contaminant hydrogeology, primarily in California. Dr. Cullen's experience includes many years of work of technical project management, work on a variety of contamination sites throughout California and the Southwest. He has been the Lead Hydrogeologist at the Henderson facility discussed above and Dr. Cullen has provided expert opinions and testimony on a wide range of groundwater and vadose zone characterization, monitoring, and remediation problems.

Nicole T. Sweetland, Ph.D., Doug Reaber, P.G., and John Dodge, P.G. will provide senior technical support to the project and bring many years of experience and expertise related to FUDS, CERCLA and RCRA source identification, site investigation and remediation and agency negotiation and collaboration. Brief resumes for these individuals are enclosed.

SCOPE OF WORK FOR PROPOSED TASKS

Our proposed scope of work flows from the objectives and recommended approach identified above.

- Insurance coverage will be immediately investigated and assessed, and a strategy developed to obtain coverage so that the City's future defense obligations will be paid for by its insurers and future remediation costs will be reimbursable.

- Evaluation, recommendation and implementation of the necessary steps to obtain the best regulatory approach for the Site that will achieve the City's goals as set out above.
- Once insurance coverage had been obtained, developing an ability to pay letter with the objective of limiting the City's exposure to both investigative and remedial costs.
- Initiating discussions with DTSC or EPA under CERCLA Section 120(f) to allow the City to have access to all data collected as part of prior and future investigations of the Arsenal, as well as the Corps' recommendations for remediation at each of the relevant areas where contamination exists. It would be our objective to avoid litigation if possible, using authority from the statute itself and prior decisions implementing Section 120(f) in favor of local municipalities.
- Evaluate the City's potential third-party defenses and divisibility defenses under CERCLA and California's HSAA, attempting to limit the City's potential liability based on the fact that the contamination at the site is the legacy of DoD's activity, as well as the fact that the City owns only a limited amount of property at the site.
- At the appropriate time, DBS&A will assume responsibility for evaluating the completeness of the existing data set. Using available data, DBS&A will develop a conceptual site model for the Arsenal, which will summarize release mechanisms, likely contaminant sources and potentially impacted receptors. To the extent possible, release timings will be addressed. The primary objective of this effort is to summarize site conditions, including the known distribution of contamination in a manner that would support an argument that the City is an innocent party, and that any releases occurred prior to the City taking ownership of the property. All of this work will be undertaken with the objective of having DoD assume primary responsibility for any additional investigation and remediation of any contamination identified.
- Finally, if appropriate and possible, negotiating an order or consent decree with the lead regulatory agency which that will require DoD to fund additional cleanup and obtain a discharge of the City's responsibility as a PRP.

As a follow-up to these tasks, depending on the response of the City's insurers and other PRPs identified by the overseeing agency, it may be necessary to pursue cost-recovery or contribution actions in the event the City had a claim for reimbursement from other PRPs, or coverage actions against the City's insurers, depending on those insurers' responses to the City's demands for payment of its defense and indemnity costs.

The timing for each task will depend upon a host of factors, such as the availability of documents, cooperation of DTSC and other regulatory agencies, the voluntary or involuntary

participation of other PRPs, and the status of potential coverage and dealings with insurers. We can provide a more specific timeline after learning more information about the project.

PROPOSED BUDGET

Our proposed cost estimate assumes a different endpoint than the one envisioned in the RFQ. Our goal would be to provide the City of Benicia with the legal basis to trigger the City's insurance coverage, thereby providing funding for the defense of the City in the event it is named a PRP at the site. We believe the City should first ascertain whether insurance coverage could exist, and pursue a strategy that maximizes the likelihood of coverage, before initiating discussions with DTSC or other regulatory agencies regarding cleanup levels and a remedial plan.

For the legal services provided by Marten and Farella, we propose a quarterly budgetary system. Under this system, at the start of every quarter, the firms and the City would meet to discuss and develop a detailed set of agreed-upon tasks and milestones during the upcoming quarter, and an associated legal budget to conduct that work. Should the two firms incur fees and costs more than ten percent (10%) above the budgetary target, the City would only pay 50% of the amount of the fees and costs above the quarterly number. Conversely, should the two firms incur fees and costs more than ten percent (10%) below the budgetary target, the law firms retain 50% of the savings between the quarterly number and the actual amount incurred.

For all legal work, the City would receive the benefit of a ten percent (10%) discount below the standard hourly rates for all attorneys (see enclosed chart of discounted Marten/Farella attorney rates), and the City would not be charged for the time of the primary lawyers on the matter to meet with the City each quarter to discuss the status of the matter and develop that budget. We understand that budget projections are critical for the City, and we would communicate with the City outside of the quarterly budget process to the extent assumptions or matter requirements might change, resulting in the need to increase or decrease estimates.

The environmental consulting services provided by DBS&A are focused upon supporting the activities of the attorneys and will be controlled by the approach they take. We anticipate that DBS&A's work will be minimal prior to insurance coverage being obtained, although DBS&A may need to review existing site reports in support of the attorneys' work.

DBS&A will offer the City a discounted rate schedule for its services, and will apply its 2009 fee schedule for all work through the end of 2011. DBS&A's consulting services will be provided on a time and materials basis, pursuant to the enclosed fee schedule.

Each of our firms would invoice the City on a monthly basis.

REFERENCES

In evaluating this proposal, the best information the City can obtain is an assessment of our prior work for clients who have faced similar challenges. We recommend that the City contact the following individuals to obtain a candid assessment of our work:

City of Moses Lake

Joseph Gavinski, City Manager

South 321 Balsam Street

Moses Lake, WA 98837-0244

(509) 766-9201

jgavinski@ci.moses-lake.wa.us

Reference for both Marten Law PLLC and Daniel B. Stephens & Associates

City of Las Cruces

Jorge Garcia, Utilities Director

680 N. Motel Blvd.

Las Cruces, NM 88004

(575) 528-3511

jogarcia@las-cruces.org

Reference for both Marten Law PLLC and Daniel B. Stephens & Associates

Michael Dunning

Washington State Attorney General's Office

Assistant Attorney General, AGO Ecology Division

Post Office Box 40117

Olympia, WA 98504

(360) 586-6741

michaeld@atg.wa.gov

Reference for Marten Law related to Camp Bonneville

City of Rialto

Scott Sommer, Esq.

Pillsbury, Winthrop, Shaw & Pittman

50 Fremont Street

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Reference for Daniel B. Stephens & Associates

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Reference for Daniel B. Stephens & Associates

General Electric Company
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Reference for Farella Braun + Martel LLP (Environmental)

FMC Corporation
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Reference for Farella Braun + Martel LLP (Environmental)

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Richard Pierce
Vice President - Legal and General Counsel
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Reference for Farella Braun + Martel LLP (Insurance)

CONCLUSION

With our three firms, the City will be engaging a team with a proven track record of successfully representing municipal clients at FUDS sites, and in obtaining expanded cleanup of those sites while minimizing our clients' exposure. We think that the approach outlined above provides the



Daniel B. Stephens
& Associates, Inc.



City with the best opportunity of controlling its costs, while forcing DoD to fulfill its responsibility to clean up the contamination that is the legacy of its actions at the Benicia Arsenal, allowing the City to proceed with its development plans. We look forward to discussing our experience and capabilities with the City.

Very truly yours,

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Enclosures

1. Professional Biographies:
 - a. Bradley Marten (Marten)
 - b. Steven G. Jones (Marten)
 - c. Jessica K. Ferrell (Marten)
 - d. James H. Colopy (Farella)
 - e. John J. Gregory (Farella)
 - f. Deborah K. Tellier (Farella)
 - g. John Green (Farella)
 - h. Stephen J. Cullen, PhD, PG (CA), REA II, CPSS, CEM (NV) (DBS&A)
 - i. Jenny L. Sterling (DBS&A)
 - j. Nicole T. Sweetland, Ph.D., P.G. (DBS&A)
 - k. Douglas W. Reaber, P.G. (DBS&A)
 - l. John J. Dodge, P.G. (DBS&A)
2. Marten/Farella Discounted Attorney Hourly Rates
3. DBS&A Discounted Schedule of Fees
4. *Air Force Calls EPA's Bluff on Superfund Cleanup*, Jessica Ferrell, MARTEN LAW NEWSLETTER (October 8, 2010).
5. *Turning Brown Into Green: Practical Considerations For Lenders And Buyers Of Contaminated Property In A Red Economy*, Deborah Tellier & John Gregory, CALIFORNIA REAL PROPERTY JOURNAL, Vol. 27, No. 2 (Spring 2009).
6. DBS&A Project Descriptions
 - a. Moses Lake Contaminated Wellfield Superfund Site
 - b. City of Rialto: Evaluation of Perchlorate and Trichloroethylene Contamination
 - c. City of Las Cruces: Griggs and Walnut Groundwater Plume
 - d. Henderson, Nevada: CERCLA Investigation and Closure Plan
 - e. West Coast Home Builders, Inc.: Evaluation of Chlorinated Solvents Emanating from GBF/Pittsburg Landfill

Bradley M. Marten

Partner · Seattle · (206) 292-2604 · bmarten@martenlaw.com

Brad is the Managing Partner of Marten Law. He is consistently ranked by his peers as one of the nation's top environmental lawyers. He is President-Elect of the American College of Environmental Lawyers.



Brad is principal environmental counsel to over two dozen companies, state and local governments and NGOs. He represents Fortune 100 companies in the manufacturing, chemical, mining, paper, transportation, and real estate sectors. He currently serves as Special Counsel to the Attorney General of Louisiana in claims relating to the BP oil disaster in the Gulf of Mexico. He represented the State of Alaska in the Exxon Valdez oil spill litigation.

Chambers lists Brad in its top tier and has this to say about him:

Brad Marten is "better than anyone else in town" "He enjoys the healthy respect of peers and works well with regulatory authorities." Clients commented: "He always seems genuinely concerned about our issues and is willing to communicate and explain things."

Representative Experience

- Representing parties at over 80 federal and state Superfund sites, in negotiation with EPA, state agencies, the Justice Department, and Indian Tribes. Brad represents clients at urban waterways, mining sites, manufacturing facilities, landfills, commercial developments, airports, railyards, and many other facilities. He has successfully negotiated dozens of agreements to resolve his clients' cleanup and natural resource damage exposure, including consent decrees, administrative orders, prospective purchaser agreements, ability to pay agreements, and de minimis agreements. He has served as lead or common counsel at sites in over a dozen states, in matters sometimes involving more than one hundred parties, and over \$1 billion.

- Representing developers in addressing environmental concerns at projects involving over 20 million square feet of office space, as well as with residential developments, commercial areas, transit facilities, golf, courses, and timberlands.
- Advising clients on emerging issues relating to climate change law and regulation, including reporting requirements, SEC disclosure, permitting under the Clean Air Act, and litigation.
- Representing clients in air quality, clean water, and RCRA enforcement proceedings, including resolving enforcement actions and penalties.
- Conducting environmental due diligence for dozens of companies in the manufacturing, real estate, food processing, and solid waste industries.

Professional History

- Founder and Managing Partner, Marten Law PLLC, Seattle, WA (since 2002)
- Marten & Brown LLP, Seattle, WA (1996 - 2002)
- Morrison & Foerster, Seattle, WA; co-founder of the Seattle office and member of the firm's Land Use and Environmental Law Group (1992 - 1996)
- Preston Gates & Ellis (now K&L Gates), Seattle, WA. Member and chair of the firm's Environmental and Land Use Group (1983 - 1992)
- Law Clerk for United States District Court Judge Donald S. Voorhees (W.D. WA) (1981 - 1983)

Education

- J.D., Harvard Law School (1981)
- M.A., Yale University (1977)
- B.A., Cornell University, *magna cum laude* (1975)



MARTEN LAW

Bradley M. Marten (Continued)

Admitted to Practice

- State Bar of Washington, #13582 (1983)
- District of Columbia Bar, #359276 (1981)

Professional Activities and Honors

- American College of Environmental Lawyers
 - President-Elect
 - Secretary, Member of the Executive Board, Member of the Board of Regents and Head of the Policy Committee
- Band One Ranking, *Chambers USA—American Leading Lawyers*
- Listed in *International Who's Who of Environmental Lawyers*, listed in *Best Lawyers in America* (2000 – present)
- Named one of the “Top 100” “Super Lawyers” in Washington state (2005-2010)
- Martindale Hubbell AV® Preeminent™ Rated

Publications

- General Editor, *LexisNexis Climate Change Series* (12 volumes).
- General Editor, *Marten Law News*
- Contributor, *ABA Brownfields Handbook* (3rd Ed. 2009)
- Co-author, “EPA Proposes Regulating Greenhouse Gases Under Clean Air Act; 2 Public Hearings Scheduled In May,” *LexisNexis Environmental Law & Climate Change Center* (May 5, 2009)
- “*Burlington Northern & Santa Fe Railway Co. v. United States*,” *LexisNexis Emerging Issues Analysis* (April, 2009)
- Contributor, *Brownfields Handbook* (Third ed. 2010)
- Editor, *Washington Environmental Compliance Handbook*, AWB (2005)
- *Litigating CERCLA Natural Resource Damage Claims*, BNA, 22 Environmental Reporter 670
- Co-Author, *Model Toxics Control Act Handbook*

Recent Speeches and Webinars

- Moderator: “Lessons Learned from Managing Complex Natural Resource Damage Cases,” LSI Advanced NRD Seminar, Santa Fe, New Mexico (July, 2010)
- Moderator, “EPA’s Endangerment Finding on Greenhouse Gas Emissions Telebriefing,” Law Seminars International (Dec. 16, 2009)
- “The U.S. Supreme Court’s Environmental Docket – Making Sense of the 2009 Term, a Harbinger of What is to Come?” UW School of Law Conference, Seattle, Washington (October 23, 2009)
- “Federal Climate Change Legislation,” American College of Environmental Lawyers (ACOEL) Annual Meeting, Portland, Maine (October 2, 2009)
- “Implications of the Recent US Supreme Court Rulings,” Environmental Law Education Center, Portland, Oregon (July 10, 2009)
- “Climate Change and Real Estate Development,” Law Seminars International, Seattle, Washington (March 6, 2009)
- “New Developments in Environmental Law / Hazardous Waste and New Climate Change Controls,” Law Seminars International, Seattle, Washington (March 7, 2008)
- “Environmental & Land Use Law: What You Need to Know for 2008,” King County Bar Association, Seattle, Washington (December 12, 2007)
- “Legal and Technical Perspectives on Innovative Settlement Strategies for NRD Claims,” Law Seminars International, Newark, New Jersey (November 29, 2007)
- Roundtable Moderator: “Climate Change Challenges and Responses,” Northwest Environmental Summit (hosted by the Association of Washington Businesses), Tacoma, Washington (October 17, 2007)



Steven G. Jones

Partner · Seattle · (206) 292-2629 · sjones@martenlaw.com

Steve's practice includes representation of both private and public clients in matters arising under both CERCLA and MTCA, the Clean Water Act, NEPA, SEPA, and Washington's Growth Management Act. Steve also has represented clients in matters arising and in insurance coverage litigation. Steve's clients include manufacturers, mining companies, municipalities, and solid waste companies. Steve has extensive trial and appellate experience, before state and federal courts.



Steve has presented papers at American Bar Association's Annual Conference on Environmental Law (Keystone) in 2009, where his paper was named the best of the conference. He has contributed to chapters to both the Association of Washington Businesses' Environmental Compliance Handbook and the Washington State Bar Association's Real Property Deskbook. He is the former editor of the American Bar Association's Superfund and NRD Litigation Committee Newsletter. Steve currently serves on the Executive Board of the Washington State Bar Environmental Land Use Section.

Representative Experience

- Represented the City of Moses Lake in a CERCLA and MTCA cost recovery and contribution action to recover millions of dollars in remediation costs for a drinking water well field that was contaminated by an adjacent former military base, now a federal Superfund site, and prosecuted claims against the military and its defense contractors.
- Represented the City of Ephrata in connection with the remedial investigation and preparation of feasibility study for cleanup of the Grant County Landfill. This project has required negotiation with the Department of Ecology of a scope of work and Agreed Order that included removal of more than 2300 drums from a cache deposited in the 1970's, as well as obtaining both insurance coverage and

grant funds from the State Model Toxics Control Account (now Remedial Action Grants and Loans), which has covered the majority of the City's costs associated with the remedial investigation and feasibility study.

- Currently working on permitting expansion of a the largest composting facility in the Pacific Northwest, including the introduction of anaerobic digestion and an associated co-generation facility using captured methane from the new digesters. This project is being partially funded through federal grants for alternative energy production.
- Lead counsel in the defense of a public utility district's ("P.U.D.") proposed environmental impact statement to develop and solve long-standing transmission and distribution problems in the Methow Valley area in Eastern Washington, one of the most environmentally sensitive areas in the State of Washington. Assisted in the preparation of the environmental impact statement for the project and in mitigating the environmental impacts of seven different installation alternatives for P.U.D. Successfully defended the EIS and the overall project at both the trial court and at the Court of Appeals.
- Successfully pursued insurance coverage for a number of clients who have been involved in environmental remediation or have been sued over hazardous waste sites.

Practices

- Climate Change
- Permitting and Environmental Review
- Waste Management
- Waste Cleanup
- Water Quality
- Energy
- Litigation



MARTEN LAW

Steven G. Jones (Continued)

History

- Marten Law PLLC, Seattle, WA (2002 - Present)
- Foster Pepper & Shefelman PLLC, Seattle, WA and Portland, OR (1990 - 2002)

Education

- J.D., Harvard Law School, Harvard University (1989)
- M.A., University of Wales, University College, Cardiff (1987)
- B.S., summa cum laude, Utah State University (1985)

Admitted to Practice

- State Bars of Washington, Hawaii, and Oregon
- Ninth Circuit Court of Appeals
- U.S. District Courts, Western District of Washington, Eastern District of Washington, and District of Oregon

Professional Activities and Honors

- Member, American Bar Association Sections of Litigation and Real Property, Probate, and Trust Law
- Board Member, Washington State Bar Association Environmental and Land Use Law Section
- Member, Hawaii and Oregon State Bar Associations
- Best Lawyers in America, Environmental Law (2010)
- “Super Lawyer®,” for Environmental Litigation, Washington Law & Politics magazine (2004—2010)

Select Publications and Presentations

- Author, “EPA’s Endangerment Finding Could Spur More NEPA, Nuisance Litigation,” LexisNexis Environmental Law & Climate Change Center (January 11, 2010)
- Author, “Second Circuit Allows Federal Nuisance Claims for Global Warming to Proceed,” LexisNexis Environmental Law & Climate Change Center (October 16, 2009)
- Author, “Applying BNSF, District Court in New York Finds “Best Available Evidence” Is Sufficient to Apportion Liability,” Marten Law Environmental News (July 22, 2009)

- Speaker, “Settlement of Natural Resource Damages Claims – Update on New Defenses,” National Advanced Conference on Natural Resource Damage Litigation, Law Seminars International, Santa Fe, New Mexico (July 9-10, 2009)
- Author, Supreme Court Finds No Permitting Role for EPA When Corps Issues Fill Permits Under Clean Water Act,” Marten Law Environmental News (June 23, 2009)
- Author, Supreme Court Extends Deference to EPA in Deciding Costs and Benefits of Environmental Regulation,” Marten Law Environmental News (April 3, 2009)
- Speaker, “Environmental Impact Assessment under NEPA: Key Challenges for the Next 40 Years,” ABA’s 38th Annual Conference on Environmental Law (Key-stone) (March 14, 2009)
- Co-author, “Are NEPA Waivers Needed to Reach Energy Independence?” LexisNexis Environmental Law & Climate Change Center (February 17, 2009)
- Author, “Supreme Court Set to Decide Major Cases Under Clean Water, Clean Air, CERCLA and Other Environmental Laws,” LexisNexis Environmental Law & Climate Change Center (October 10, 2008)
- Author, “Western Climate Initiative Issues Updated Scoping, Reporting Rules,” LexisNexis Environmental Law & Climate Change Center (October 1, 2008)

Civic Activities

- Civil Rights Civil Liberties Law Review
 - Rotary Foundation Scholar
- Phi Kappa Phi



Jessica K. Ferrell

Associate · Seattle · (206) 292-2636 · jferrell@martenlaw.com

Jessica's practice focuses on environmental and natural resource litigation. She represents public and private clients in cases arising under the Clean Water Act, CERCLA, MTCA, the Endangered Species Act, and other federal, state, and local environmental laws. She has successfully represented clients in litigating cost recovery actions and permit challenges, negotiated settlements in complex hazardous waste cleanup matters, and advised companies and developers regarding regulatory compliance and potential environmental liabilities in property transactions. Jessica also represents clients in fisheries, marine, and endangered species issues.



- Represented a mining company in estimation hearings in the largest environmental bankruptcy case in the United States.
- Advising a Washington recycling and composting company on compliance with federal, state and local environmental laws.
- Successfully appealed the U.S. Army Corps of Engineers' denial of Alaska landowners' permit applications under the Clean Water Act and Rivers and Harbors Act.
- Prosecuted and defended claims in multiple matters to recover environmental cleanup costs under CERCLA and MTCA. Representative cases include airports, maintenance yards, landfills, smelters, refineries, gas stations, dry cleaners, and salvage and recycling facilities.

Representative Experience

- Representing fishing and processing companies in an appellate challenge to National Marine Fisheries Service allocations for Bering Sea and Aleutian Islands Pacific Cod fishery under the Magnuson-Stevens Fishery Conservation and Management Act.
- Representing a New Mexico municipality and county in the remediation of groundwater at Superfund site, including regulatory negotiations, technical and historical investigation of potentially responsible parties ("PRPs"), and negotiation of allocation issues with PRPs.
- Represented a Washington municipality in CERCLA and MTCA cost recovery and contribution action to recover remediation costs at a former military base. Jessica prosecuted claims against the military and its defense contractors, helped obtain insurance coverage to cover cleanup costs, and helped obtain an order requiring federal government to allow local governments to help structure the cleanup. 416 F.Supp.2d 1015 (E.D. Wash. 2005).

Practices

- Climate Change
- Natural Resources
- Fisheries
- Permitting and Environmental Review
- Property Development
- Waste Cleanup
- Water Resources
- Litigation



Jessica K. Ferrell (Continued)

History

- Marten Law PLLC, Seattle, WA (2005 - present)

Education

- J.D., Lewis and Clark Law School (2005)
- B.A., Cornell University, History (1998)

Admitted to Practice

- Ninth Circuit Court of Appeals
- U.S. District Courts, Eastern and Western Districts of Washington
- State Bar of Washington

Professional Activities and Honors

- Editorial Board Member, Washington State Bar Association Environmental & Land Use Law Newsletter
- Member, American Bar Association Section of Environment, Energy and Resources, Washington State Bar Association and King County Bar Association
- "Rising Star®," Washington Law & Politics magazine

Select Publications and Speeches

- Speaker and Author, "When Regulators Don't Enforce: Ethical Challenges Facing Attorneys Representing Competing Regulated Entities," 28th Annual ABA Section of Environment, Energy, and Resources Water Law Conference, San Diego, California (February 2010)
- Co-author, "Despite Apparent Recovery, Climate Change Keeps Grizzly Bears on ESA List," LexisNexis Environmental Law & Climate Change Center (December 15, 2009)
- Author, "Almost Infamous-- Another Circuit Tries to Determine Scope of Clean Water Jurisdiction After Rapanos," The Environmental Counselor, Issue 255 (November 2009)
- Co-author, "Bounty for Land and Sea: Congress Passes Omnibus Public Land Act," The Environmental Counselor, Issue 251 (July 2009)
- Co-author, "Precautionary Resource Management and Climate Change," American Bar Association Natural Resources & Environment Magazine, Vol. 24, No. 1 (Summer 2009)

- Speaker, "Flood Insurance and Endangered Species: A New Era in Floodplain Development," American Planning Association Planning Law Conference, Climate Change/Sustainability Track, Bellevue, Washington (April 2009)
- Speaker and Author, "Project Development in the Shadow of Climate Change," Proceedings of the 54th Annual Rocky Mountain Mineral Law Institute, Snowmass/Aspen, Colorado (July and December 2008)
- Speaker and Author, "Fish, Goods, and International Law," American Association of Law Schools, Section on Admiralty and Maritime Law, New York, New York (January 2008) (presentation of: "Controlling Flags of Convenience: One Measure to Stop Overfishing of Collapsing Fish Stocks," 35 Env'tl. L. 323 (Spring 2005))
- Co-author, "Orcinus and Oncorhynchus: Will Saving Puget Sound Orcas and Salmon Save an Ecosystem?," American Bar Association Natural Resources & Environment Magazine, Vol. 22, No. 2 (Fall 2007)
- Speaker, "Endangered Species and Watershed Planning Issues in Shoreline Development," Law Seminars International, Marine Shoreline Development CLE, Seattle, Washington (February 2007)
- Regular author, Washington State Bar Association Environmental & Land Use Law Newsletter (2005-present) and LexisNexis Expert Forum, Environmental Law & Climate Change Center (2007-present)

Civic Activities

- Northwest Immigrant Rights Project, Pro Bono Attorney (2007-present)





JAMES H. COLOPY

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James H. Colopy chairs the firm's Environmental Law Department and is a member of the Business Litigation Group. He has extensive experience representing private and public entities in all types of environmental and commercial litigation and alternative dispute resolution proceedings. Mr. Colopy also counsels clients on environmental compliance issues and management strategies.

Mr. Colopy's environmental practice includes representation of manufacturers, chemical companies, developers and governmental institutions in environmental enforcement actions, citizen suit litigation, cost recovery actions, toxic tort cases, product liability actions and administrative proceedings involving federal, state and local environmental laws. Mr. Colopy's complex commercial litigation practice similarly encompasses a broad range of subject matters, and he handles all types of contract, securities, business tort, professional negligence and trust and estates litigation in both federal and state court.

Mr. Colopy has extensive experience in high-stakes environmental litigation. In 2009, he was hired shortly before trial to replace prior counsel for the plaintiff in a complicated groundwater cost recovery lawsuit, and represented the client through an intense discovery and trial preparation phase culminating in a very favorable settlement. In another matter, Mr. Colopy was brought into a case to represent defendants on post-trial motions following a \$100 million punitive damages award, and he was able to reduce the award by 93 percent. Mr. Colopy also represented the plaintiff at a five week jury trial and obtained a substantial award of punitive and compensatory damages.

Mr. Colopy is the past chair and current member of the Executive Committee of the Environmental Section for the San Francisco Bar Association. He has served as President of the Board of Advisors of the YMCA of San Francisco (Mission branch), and was the co-chair of the firm's Diversity Committee. Mr. Colopy regularly speaks on the topic of environmental litigation, and has published numerous articles on environmental law.

Mr. Colopy received his J.D. from Stanford Law School in 1994, where he was Senior Article Editor for the *Stanford Environmental Law Journal*, and his B.A. in History from Harvard in 1990. He is a member of the American Bar Association, State Bar of California, Bar Association of San Francisco, Hispanic National Bar Association and La Raza Lawyers Association.



JOHN J. GREGORY

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John J. Gregory is a partner in the firm's Environmental Law Department and specializes in environmental due diligence, remedial and compliance counseling.

Mr. Gregory has significant experience in performing environmental due diligence assessments and related transactional work for complex real property, corporate and lending transactions. He has provided strategic counseling on transactions involving the purchase and sale of real property ranging from individual commercial properties to large, multi-billion dollar commercial/industrial portfolios. He also provides counseling to business and lending clients on the management and disposition of financially-distressed, environmentally-impacted properties. Mr. Gregory is involved extensively in the remediation and redevelopment of contaminated Brownfield properties, including former landfill, military base and manufacturing facilities. He routinely assists clients in the negotiation and procurement of environmental insurance for such properties, including pollution liability and remedial cost cap insurance products.

Mr. Gregory also has substantial experience in conducting compliance audits for major industrial and commercial facilities. His practice covers federal and state programs involving solid and hazardous waste, hazardous materials and wastewater regulatory permitting, compliance and enforcement. Mr. Gregory's experience also includes providing due diligence and regulatory compliance counseling in connection with the acquisition and operation of solar energy and oil refinery facilities, as well as extensive landfill experience, including counseling clients on the acquisition, operation, maintenance, closure and post-closure of solid and hazardous waste landfills and RCRA-permitted TSDFs. He has been involved extensively in federal and state Superfund, RCRA corrective action, and voluntary site cleanups, and has provided strategic counseling with regard to implementation of innovative remedies to address solvent contamination in groundwater, soil, soil gas and indoor air. Mr. Gregory has been instrumental in obtaining remedial liability protections for clients, including federal and state prospective purchaser agreements, covenants not to sue, federal "reasonable steps" letters, and structuring remedial work through the Polanco Redevelopment Act. Mr. Gregory also provides regulatory counseling on natural gas pipeline health and safety matters, and has completed the US DOT Transportation Safety Institute's regulation compliance course for natural gas pipeline operators. He also has worked on matters involving the federal National Historic Preservation Act.

Mr. Gregory is a Registered Professional Engineer in California and Michigan, and worked for six years as an engineering consultant in the field of environmental and civil engineering. Mr. Gregory earned his J.D. in 1988 and his M.S. in Civil Engineering in 1980 from the University of Michigan. He also received his B.S., *magna cum laude*, in Environmental Sciences Engineering from the University of Michigan in 1979. He is admitted to practice in California and Washington.



DEBORAH K. TELLIER

Phone: 415.954.4970
Fax: 415.954.4480
E-mail: dtellier@fbm.com

Deborah K. Tellier is a partner in the Farella Braun + Martel's Environmental Law Department. Ms. Tellier counsels business and industry clients on compliance with federal, state and local environmental laws, with an emphasis on hazardous waste and water quality laws and regulations. She represents companies in administrative proceedings and negotiations with federal, state and local environmental enforcing agencies. She also advises clients on conducting and evaluating environmental due diligence investigations in connection with the acquisition, leasing and financing of real property. She counsels domestic and international clients on establishing and monitoring environmental management systems, audits and sustainability programs.

Ms. Tellier is also a partner in the firm's Exempt Organization Practice Group advising clients on formation, operational, grantmaking and governance issues. As former Associate General Counsel and Chief Compliance Officer for the Gordon and Betty Moore Foundation, she was primarily responsible for the foundation's day-to-day legal matters, compliance programs, organizational and Board governance and regulatory filings. She also provided strategic management and oversight of the Foundation's Grants Administration Department, which was responsible for the due diligence and awarding of \$200-250 million in grants annually.

Ms. Tellier currently serves as Programs Vice Chair for the Waste and Resource Recovery Committee of the American Bar Association's Section of Environment, Energy and Resources. She is a current and former Executive Committee member of the Environmental Law Section of the Bar Association of San Francisco and past co-chair of the Real Property Section, Environmental Subsection, of the State Bar of California. She has taught and lectured on a variety of environmental law and regulation topics at institutions of higher learning and industry conferences in the San Francisco Bay Area.

Ms. Tellier is active in the non-profit sector and serves as a board member and counsel to the Maya Center for Rural Education and Well-Being Association, a US public charity supporting educational programs in rural Guatemala. She is also a board member and Chair of the Governance Committee for the non-profit Community Alliance With Family Farmers. She serves as the partner chair for the firm's Professional Development Committee that focuses on the development, promotion and retention of firm associates.

Ms. Tellier received her J.D. from the University of Oregon, School of Law in 1987, where she was Editor-in-Chief of the *Oregon Law Review* and a founding editor of the *Journal for Environmental Law and Litigation*. She earned her B.S., with Honors, in Environmental Policy Analysis and Planning from the University of California at Davis in 1982.



JOHN D. GREEN

Phone: 415.954.4492

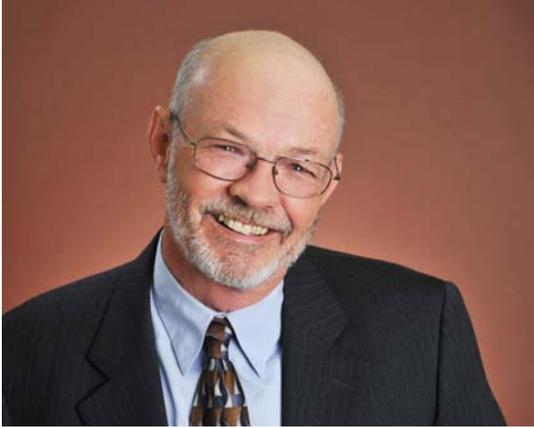
Fax: 415.954.4480

E-mail: jgreen@fbm.com

John Green is a partner at Farella Braun + Martel in San Francisco. He has 22 years of experience representing insureds and claimants in insurance coverage disputes. He represents insureds seeking insurance coverage under general liability and D&O policies for a wide variety of lawsuits, including intellectual property, commercial torts, antitrust, environmental, toxic tort, product liability, construction, and securities litigation. Mr. Green also represents insureds pursuing first-party property coverage, including commercial property, business interruption and builders risk and earthquake claims.

Mr. Green's practice includes both negotiation with carriers to obtain policy benefits and litigation of insurance coverage and bad faith actions. In addition to his litigation practice, Mr. Green has extensive experience with mediation and arbitration of insurance disputes.

Mr. Green graduated first in his class from Boalt Hall School of Law, U.C. Berkeley. He received his B.A. in Economics from the University of California Berkeley (with High Honors), and is a member of Phi Beta Kappa and Order of the Coif.



Dr. Stephen J. Cullen is Principal Hydrogeologist and Senior Vice President at DBS&A. Dr. Cullen received a B.S. in Soil Science and Hydrology from the University of California, Davis, an M.S. in Soil Physics from Montana State University (MSU), and a Ph.D. from the University of California at Santa Barbara (UCSB) where his dissertation, “Field and Laboratory Investigation of Contaminant Natural Attenuation and Intrinsic Remediation in Soils and The Vadose Zone”, was conducted. He specializes

in multiphase contaminant hydrogeology, emphasizing site characterization and remediation. He has more than 33 years of experience providing expert consultation on projects involving evaluation of soil and groundwater impacted by chlorinated solvents, petroleum hydrocarbons, metals, pesticides, perchlorate, PCBs, dioxins and furans and a number of inorganic compounds. Dr. Cullen, formerly a faculty member at UCSB and MSU, has published articles in peer reviewed journals, made presentations at technical conferences, and provided training to the United Nations, the USEPA, the Departments of Defense and Energy, and a number of state and local government agencies.

Dr. Cullen is a registered Professional Geologist (PG) and Registered Environmental Assessor Level II (REA II) in California, a Certified Environmental Manager (CEM) in Nevada, and a Certified Professional Soil Scientist (CPSS). He is familiar with and experienced in a number of California hydrogeologic settings. He has worked on numerous complex soil and groundwater contamination sites in California, including in the Gibson Superfund site, the North Hollywood Operable Unit of the San Fernando Valley Superfund Site, the Antioch Landfill, the Henderson Nevada Perchlorate Site, and the Brown and Bryant Superfund site. To support clients on a variety of issues, he has reported to and participated in negotiations with the U.S. EPA, the California Department of Toxic Substances Control, various Regional Water Quality Control Boards, and testified in front of the State Water Resources Control Board. Dr. Cullen has conducted work to insure compliance with the National Contingency Plan (NCP), CERCLA, RCRA, CEQA, DTSC Preliminary Endangerment Assessment Guidance, and DTSC’s Vapor Intrusion Mitigation Guidance. Dr. Cullen has worked with and represented clients from many economic sectors. He has served on national and state expert panels, and provided expert reports and deposition and courtroom testimony in state and federal legal matters. He recently provided testimony in U.S. District Court regarding the fate and transport of a pesticide in a matter defended by the U.S. Department of Justice.

Stephen J. Cullen, PhD, PG (CA), REA II, CPSS, CEM (NV)

Principal Hydrogeologist / California Operations Manager

EDUCATION

Ph.D., University of California at Santa Barbara, 1996

Dissertation Title: Field and Laboratory Investigations of Contaminant Natural Attenuation and Intrinsic Remediation in Soils and the Vadose Zone

M.Sc., Soil Physics, Montana State University, 1981

B.Sc., Soil Science and Hydrology, University of California at Davis, 1977

REGISTRATIONS

California Professional Geologist, No. 7399

California Registered Environmental Assessor – Level II, REA II- No. 20107

Certified Environmental Manager, Nevada, No. 1839

Certified Professional Soil Scientist, Reg. No. 03169, ARCPACS

SELECTED AFFILIATIONS

Association of Groundwater Scientists and Engineers

Groundwater Resources Association of California

Soil Science Society of America

American Society of Testing and Materials

Southern California Water Utilities Association

American Society of Agronomy

Dr. Cullen is a Principal Hydrogeologist with the firm with more than 33 years of experience. Areas of expertise and experience include environmental contaminant site investigations, intrinsic bioremediation, active approaches to soil and groundwater remediation, vadose zone hydrogeology, vadose zone and groundwater flow and transport modeling, landfill investigations and monitoring systems, land disposal of biosolids and sewage effluent, land treatment facilities, as well as recharge assessments. He has provided expert opinions and testimony supporting resolution of a wide range of groundwater and vadose zone characterization, monitoring, and remediation problems.

Principal Hydrogeologist, CERCLA-Compliant Hydrogeologic Characterization, WWII Magnesium Processing and Chemical Production and Distribution Effluent Disposal Facility, Basic Management, Inc., Henderson, Nevada: Lead hydrogeologist to characterize contaminated soil and groundwater on a 2,332-acre redevelopment site including: Interpretation of geologic, soil, groundwater, hydrologic, chemical, and geotechnical data to support description of the conceptual site model; design and oversight of intrusive field investigation utilizing multiple drilling techniques; characterization of multiple aquifers; development of site-specific soil background concentrations for metals (including arsenic) and radiochemicals; design and oversight of aquifer and soil hydraulic testing; manage development and QA of analytic and numerical groundwater flow and contaminant fate and transport models; participation in public accountability meetings with technical, legal, and public representatives of State, County, and City governments, other potentially responsible parties, and the local citizen Remediation Advisory Board; database and GIS development and support. Site Closure Plan was approved by NDEP.

Principal Hydrogeologist, Remedial Alternatives Evaluation Of VOC-Impacted Soils, Confidential Client, Richmond, California: Evaluation of the technical and financial feasibility of conducting 1) In-Situ Thermal Desorption (ISTD) and 2) Excavation with Off-Site Disposal to remediate chlorinated hydrocarbons at a site adjacent to the San Francisco Bay (“bay muds”) and slated for redevelopment. Tasks included: current and historical geologic/hydrogeologic data evaluation; calculation of seepage velocity; evaluate the presence of DNAPL; evaluate compliance with CERCLA and the National Contingency Plan (NCP); remedial cost estimation and evaluation; estimate remedial volumes and removed groundwater; evaluate remedial performance monitoring alternatives; evaluate compliance with Regional Water Quality Control Board orders. Settlement achieved, and the Site is undergoing redevelopment.

Chlorinated Hydrocarbon Site Characterization, Remediation, and Cost Evaluation, Rockwell-Collins, Santa Ana, California: Evaluated historical environmental sampling data and interpreted fate and transport of site constituents at a former electronics and aerospace manufacturing facility operational since 1959; researched historical regulatory & commercial documents to interpret use of chemicals at site; evaluated site characterization data for adequacy as the basis for remedial cost estimation; prepared remedial action plan that proposed



Daniel B. Stephens & Associates, Inc.

**Stephen J. Cullen,
Ph.D., P.G.**

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REPRESENTATIVE
PUBLICATIONS AND
PRESENTATIONS

Rice, D.W., B.P. Doohar, **S.J. Cullen**, L.G. Everett, W.E. Kastenber, R.D. Grose, and M.A. Marino, 1995. Recommendations To Improve The Cleanup Process for California's Leaking Underground Fuel Tanks (LUFTs). Report submitted to the California State Water Resources Control Board and the Senate Bill 1764 Leaking Underground Fuel Tank Advisory Committee, 20 pp. with references.

Cullen, S.J. 2006. Invited presentation, Investigating Paleochannel Occurrence Near The Las Vegas Wash, California Groundwater Resources Association, "High Resolution Site Characterization and Modeling", November 14, 2006, Long Beach, California.

Cullen, S.J. 2005. Invited speaker, The Driving Force to Perchlorate Leaching: Application of Methods To Date Historic Meteoric Recharge Travel Time to Groundwater, "Environmental Forensics: Focus on Perchlorate", International Society of Environmental Forensics, Santa Fe, New Mexico, September 21- 22, 2005

Cullen, S.J. et al, 1996. Overview of California's Leaking Underground Fuel Tank (LUFT) Cleanup Process. In Proceedings, 1st International Conference on The Impact of Industry on Groundwater, Water Resources & the Environment, Priority of the 3rd Millennium, May 22, 1996, Cernobbio, Italy.

enhanced bioremediation of PCE, TCE, Freon-113 and related breakdown products; provided federal court expert opinion report and deposition testimony; directed groundwater flow (MODFLOW96) and PCE transport (MT3DMS) modeling (GWVISTAS pre/post processor) to quantify PCE travel time to the supply well perforations under various assumed hydraulic conditions; client achieved favorable settlement.

Principal Project Hydrogeologist, chlorinated hydrocarbons, aerospace manufacturing site, Hawker Pacific, Inc., San Fernando Valley Superfund Site, California: RCRA remedial investigation, remedial alternatives study, regional hydrogeologic and contaminant plume investigation, 3-D vadose zone modeling (TRACR3D), litigation support, and presentation to Special Master. Site closure achieved.

Principal Hydrogeologist, Former Aerospace Manufacturing Facility, AlliedSignal, Los Angeles, California: RCRA remedial investigation, feasibility study, fate and transport analysis, conceptual remedial action plan of soils and multiple aquifers impacted by VOCs, petroleum hydrocarbons, and 1,4-dioxane adjacent to LAX. Evaluated: historic aquifer testing data; offsite impacts; potential downgradient liabilities. Pilot and treatability testing: soil vapor extraction; dual phase extraction; groundwater circulation wells; enhanced in-situ bioremediation; monitored natural attenuation. Remedial action objectives successfully negotiated with LA Reg. Water Quality Control Board.

Principal Hydrogeologist, RI/FS Remedial Alternatives, Operable Unit No. 2, Union Pacific and Burlington Northern and Santa Fe Railroads, Brown & Bryant Superfund Site, Arvin, California: Evaluate and comment on technical and financial feasibility of conducting Pump & Treat in a shallow aquifer, Monitored Natural Attenuation (MNA) in a deep aquifer, and removal of a deep municipal supply well as a mean of remediation and prevention of exposure to chloroform, 1,2-DBCP, 1,2-DCP, 1,3-DCP, Dinoseb, EDB, and 1,2,3-TCP. Tasks included: remedial cost evaluation; historic geologic/hydrogeologic data evaluation; municipal well abandonment protocols evaluation and recommendation; surface cap effectiveness evaluation; surface runoff evaluation; fate and transport analysis. Comments submitted to EPA on behalf of client.

Principal Hydrogeologist, Waste Soil Pile Remedial Investigation, Gibson Superfund Site, Bakersfield, California: Directed CERCLA-based remedial investigation at a former waste recycling/treatment facility for soils impacted by metals, VOCs chlorinated hydrocarbons, petroleum hydrocarbons, fuel oxygenates, semivolatile organic compounds (SVOC), polynuclear aromatic hydrocarbons (PAH), PCBs, pesticides, and herbicides. Developed an innovative field-sampling plan using a custom-made hybrid between a direct push rig and an extending fork lift to extract samples. Conducted a statistical analysis of the sampling data used to identify the appropriate method of waste disposition. Remediation by excavation and off-site treatment. Communicated with PRP group and negotiated statistical interpretation methods with DTSC.

Expert Panel Member, Single-Shell Tank Integrity Program (SSTIP), U.S. Dept of Energy, Hanford, Washington: Provided Vadose Zone expertise on Expert panel tasked to provide leak and structural integrity recommendations to guide an enhanced SSTIP. The SSTs are used to store up to 56 million gallons of World War II high-level radioactive waste until future site closure is implemented.





Jenny Sterling is a senior hydrologist with more than eleven years of experience managing and contributing to projects. She holds an M.S. degree in hydrology from the New Mexico Institute of Mining and Technology. Ms. Sterling has served as project manager for a number of high profile projects involving aquifer contamination, including high-profile impacts to municipal well fields, and is able to coordinate large teams of technical experts and staff while exceeding client expectations. Ms. Sterling

has worked on numerous complex projects involving soil, groundwater and surface water contamination by VOCs, metals, petroleum hydrocarbons, PCBs, perchlorate, 1,4-dioxane, MTBE, PAHs, and other contaminants. She has evaluated migration pathways and impacts to regional groundwater aquifers, adequacy and timeliness of remedial activities and potential regional remedy options.

Ms. Sterling has acted as technical assistant to the mediator during settlement negotiations on a number of mediations, including one among over 30 potentially responsible parties (PRPs) in a case involving the Sikes former waste disposal in Texas, a site that had been used to dispose of chemical manufacturing and petroleum facility wastes. Ms. Sterling managed a project for the involving a 6 mile long perchlorate and TCE groundwater plume in the Rialto-Colton basin. This high profile project included providing support in contentious SWRCB hearings and development of proposed region 1 aquifer and vadose zone investigations and monitoring. Ms. Sterling recently managed a project that involved a comprehensive analysis of soil and groundwater impacts by arsenic, hexavalent chromium and other metals in the Central Valley. The work included development of regional and local conceptual models, evaluation of impacts to downgradient domestic and municipal wells and coordination with local agencies. Ms. Sterling also has extensive experience managing the development and use of GIS and environmental databases containing well information, groundwater and soil chemistry data, groundwater elevation data, and other pertinent data. She has managed the implementation of DBS&A Link™, a premier internet accessible environmental information management system that enables remote users to access, manipulate, map and interpret vast amounts of data with a user-friendly interface.

Jenny L. Sterling (nee Cherney)

Senior Hydrologist

EDUCATION

M.S., Hydrology, 2000
New Mexico Institute of Mining
and Technology

B.A., Psychology, 1992
University of California, Irvine

B.A., Sociology, 1992
University of California, Irvine

ADDITIONAL TRAINING

Post Baccalaureate Studies in
Geology, 1994-1997, Georgia
State University

AFFILIATIONS

Groundwater Resources
Association of California

National Ground Water
Association

Ms. Sterling specializes in hydrogeology, alternate dispute resolution (ADR), environmental litigation support, and environmental data management on a wide range of projects.

Project Manager for Evaluation of Perchlorate and TCE Contamination, City of Rialto, California: Assisted in the evaluation of contamination of soil and groundwater in the Rialto-Colton basin by perchlorate and volatile organic compounds. Evaluated and commented on regional hydrogeologic documents and site-specific reports. Coordinated with SWRCB and other agencies. Conducted public meeting on the perchlorate and VOC contamination and existing and proposed investigations. Managed implementation of DBS&A Link® providing client with online access to several tens of thousands documents, extensive environmental database and GIS mapping tools.

Project Manager for Analysis of Regional Groundwater Impacts, Merced, California: As project manager and technical lead, Ms. Sterling assisted in the evaluation of whether former industrial site activities downgradient domestic and municipal water supply wells with arsenic, chromium, chromium VI, copper or PCP. Evaluated impacts to surface soil, surface water, sediment in the site stormwater pond and adjacent irrigation canal, and drinking water and assisted in the development of expert opinions. Coordinated closely with local agencies.

Project Manager for Analysis of Regional Groundwater Impacts, Southern California: Technical lead and project manager in defense of chemical manufacturer in multi-party case involving volatile organic compounds PCE, TCE, 1,1-dichloroethene (1,1-DCE), perchlorate, and 1,4-dioxane contamination of aquifer and impacts to municipal well fields. Evaluated impacts to regional groundwater aquifers, implemented remedy and potential regional remedy options. Assisted in identification of possibly contributing parties. Managed development and use of environmental database and GIS. Managed implementation of DBS&A Link® providing client with online access to documents, data and mapping tools.

Alternate Dispute Resolution for National Priorities List Site, Puente Valley, Southern California: Assisted mediator during settlement negotiations among over 30 PRPs over basin-wide geographic area in case involving volatile organic compounds PCE, TCE, TCA, and their degradation products. Evaluated and critiqued technical positions to construct independent, defensible interpretation of hydrogeologic system and determined each PRP's responsibility. Performed delineation of multi-party plumes, travel time calculations, chemical evolution along flow paths, qualitative ranking based on field chemistry measurements, critique of previous modeling studies, and allocation model development based on mass of chemical release and volume of affected aquifer. Performed quality assurance review of environmental database and integrated party-evaluated



Daniel B. Stephens & Associates, Inc.

Jenny L. Sterling (nee Cherney)

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RECENT PRESENTATIONS

Sterling, J. and J. Kear. 2009. Sustainable water resource exploration and development: a return to local supply. Invited presentation. Pacific Section AAPG - SEPM - SEG 2009 Convention, Pacific Section American Association of Petroleum Geologists, 2009 Ventura, California.

Sterling, J. and S. Moore. 2009. Don't Let Water Quality Issues Spoil Your ASR Plans. 2008 WaterReuse California Annual Conference, WaterReuse, March 23-24, 2009, San Francisco, California.

Sterling, J., P. Brady, J. Kelsey, N. Sweetland, and M. Wing. 2006. Nanotechnology: Implications for the Environment. Presentation at the Emerging Contaminants in Groundwater: A Continually Moving Target Conference, Groundwater Resources Association of California, June 7 and 8, 2006, Concord, California.

Sweetland, N.T., J. Sterling; and J. Bowden. 2005. Innovative Tools for Internet Accessible Environmental Databases. Presentation at the EIMS- Environmental Information Management Systems Conference, Groundwater Resources Association of California, January 26, 2005, San Jose, California

data. As technical lead, presented neutral, scientifically based positions in mediation meetings and negotiations to help PRPs reach a mutually satisfactory allocation agreement.

Litigation Support, Confidential Client, Oregon: Project manager for case involving contamination of municipal airport by volatile organic compounds, jet fuel and 1,4-dioxane. Managed preparation and use of environmental database and geographic information system (GIS) and coordinated development of electronic document library. Assisted in development of expert opinion reports.

Litigation Support, Fulton Homes Corporation and AMEC Infrastructure Inc., Arizona: Technical lead and project manager in defense of developer and builder of residential homes at development showing cracking and movement of homes. Reviewed and analyzed environmental data to evaluate causes of movement and potential impacts of groundwater or irrigation. Assisted in development of expert opinion reports.

Litigation Support, Confidential Client, Santa Rosa, CA: Provided technical assistance in case involving contamination of creek and surrounding soil and groundwater by volatile organic compounds, hydrocarbons, PAHs, and other compounds by multiple potentially responsible parties. The case involved LNAPL and DNAPL contamination. Managed preparation and use of environmental database and coordinated development of electronic document library. Assisted in analysis of facilities.

Litigation Support for National Priorities List Site, Confidential Client, Southern California: Provided assistance in defense of airplane parts manufacturer in case involving PCE, TCE, and NDMA contamination of aquifer and impacts to municipal well fields. Performed review and evaluation of site investigation reports, remedial investigations, feasibility studies, maps, and diagrams. Performed review and evaluation of adequacy of air emissions permits and evaluated impacts to client position if regional remedy systems were to be located on client facility property. Actively participated in client negotiations and case evaluation conferences.

Alternate Dispute Resolution for National Priorities List Site, Sikes Disposal Pits, Texas: Technical assistant to mediator during settlement negotiations among 26 PRPs in case involving variety of chemical compounds disposed at a non-permitted waste disposal site in the late 1950s and 1960s. Evaluated and critiqued technical positions and exhibits, developed technical briefs for mediator evaluating expert reports and positions, developed summaries of party positions, identified issues of consensus and dispute, researched relevant technical and legal topics, and assisted in development of suggested allocation for parties. As technical assistant to mediator, actively participated in mediation sessions and negotiations to help PRPs reach a mutually satisfactory allocation agreement.





Dr. Nicole T. Sweetland is Principal Hydrogeologist and Senior Vice President at DBS&A. Dr. Sweetland received her B.S. in Geology from the University of California, Santa Barbara, and her M.S. and Ph.D. in hydrology from the University of Arizona. She specializes in hydrogeology and contaminant fate and transport. Her Ph.D. research focused on the assessment of contaminated sites, including sites contaminated with chlorinated solvents. She has more than ten years of experience

providing expert consulting support on projects involving evaluation of soil and groundwater impacted by chlorinated solvents, petroleum hydrocarbons and emerging contaminants such as perchlorate and MTBE. Her contributions to and respect by the scientific community are demonstrated through articles published in peer reviewed journals and presentations at technical conferences and through serving on the editorial boards of *Ground Water* (current), *Environmental Forensics* and *Ground Water Monitoring and Remediation*.

Dr. Sweetland is a Professional Geologist in California and is familiar with California geology and hydrogeology. She has worked on several high profile groundwater contamination sites in California, including in Antioch, Rialto, Santa Monica, and San Gabriel Valley. On behalf of her clients, she has interacted with California State agencies (i.e. Department of Toxic Substances Control, Regional Water Quality Control Boards) and U.S. EPA, including participating in meetings and providing written comments on PRP work plans, site assessment reports, and CERCLA documents. She is familiar with Federal and California water quality regulations and guidelines and evaluated NCP compliance issues related to the Moses Lake Superfund Site in Eastern Washington, perchlorate and chlorinated solvent contamination in the Rialto-Colton Basin, and MTBE contamination in Hampton Bays, New York. Dr. Sweetland works closely with her clients to develop effective strategies to resolve environmental concerns related to contaminated soil and groundwater and is able to quickly integrate complex technical and legal issues and lead her team in providing efficient solutions for her clients.

Nicole Sweetland, Ph.D., P.G.

Vice President of Expert Services

EDUCATION

Ph.D., Hydrology, 1999
University of Arizona

M.S., Hydrology, 1996
University of Arizona

B.S., Geology, 1994
University of California, Santa
Barbara

REGISTRATIONS

Professional Geologist No. 7755,
California

Licensed Geologist No., 2547,
Washington

AFFILIATIONS

American Geophysical Union

Geological Society of America

National Ground Water
Association

Groundwater Resources
Association of California

Arizona Hydrological Society

Dr. Sweetland specializes in hydrogeology, environmental forensics, and contaminant fate and transport.

- TCE in Fractured Basalt, City of Moses Lake, Moses Lake, Washington
- Evaluation of Perchlorate and Chlorinated Solvent Contamination, City of Rialto, California
- Chlorinated Solvent Evaluation, Griggs-Walnut Superfund Site, Las Cruces, New Mexico
- Chlorinated Solvent Contamination as Chemical Handling Facility, Industrial Client, Los Angeles County, California
- Chlorinated Solvent Contamination, Industrial Client, Phoenix, Arizona
- Chlorinated Solvent and Perchlorate Contamination at Basin Scale, Confidential Client, San Gabriel Valley, California
- Innovative Site Characterization Investigation of Chlorinated Solvents, Hughes Missile Systems, Inc., Tucson International Airport Area Superfund Site, Arizona
- Chlorinated Solvent Contamination as Chemical Handling Facility, McKesson Corporation, Los Angeles County, California
- PCE Contamination at Dry Cleaner Site, Confidential Client, Flower Mound, Texas
- PCE Contamination at Drycleaner Site, Confidential Client, San Jose, California
- Evaluation of Petroleum Hydrocarbons at Municipal Airport, Continental Airlines, Denver, Colorado
- Evaluation of Petroleum Hydrocarbon Contamination at Municipal Airport, USAIG, Oregon
- Evaluation of Petroleum Hydrocarbon and Solvent Contamination, Confidential Client, Santa Rosa, California
- Basin-Wide Evaluation of MTBE Impacts, Shell Oil Company, Santa Monica, California



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**Nicole Sweetland,
Ph.D., P.G.**

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RECENT PRESENTATIONS

Sweetland, N.T., T.G. Umstot, J. Ayarbe, and D.B. Stephens. 2006. Processes Influencing the Transport of Perchlorate Through the Vadose Zone. Presentation at the Perchlorate 2006: Progress Toward Understanding and Cleanup Symposium, Groundwater Resources Association of California, January 26, 2006.

Sweetland, N.T., J. Sterling; and J. Bowden. 2005. Innovative Tools for Internet Accessible Environmental Databases. Presentation at the EIMS–Environmental Information Management Systems Conference, Groundwater Resources Association of California, January 26, 2005, San Jose, California.

Davis, D.W. and N.T. Sweetland. 2004. Rethinking Traditional Approaches for Groundwater Remedial Actions - Rancho Cordova Case Study. Presentation at the CIO₄ 2004 — Perchlorate in California's Groundwater, Groundwater Resources Association of California., August 4, 2004, Glendale, California.

- Evaluation of MTBE Impacts, Confidential Client, Suffolk County, New York
- Pesticide-formulating Facility, Confidential Client, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Site, California
- Evaluation of MTBE Impacts, Confidential Client, Rockland County, New York
- Evaluation of Ammonium Perfluorooctanoate Contamination, Lubeck Public Service District, West Virginia
- Vadose Zone Tracer Tests, National Institute of Environmental Health Science's Superfund Basic Research Program, Tucson, Arizona
- Vadose Zone Tracer Tests, University of Arizona Research, Maricopa Research Station, Arizona
- Tracer Tests for Locating Petroleum Product, City of Tucson, Tucson, Arizona:
- Tracer Tests and Enhanced Flushing Experiments, U.S. EPA, Hill Air Force Base, Utah
- Tracer Tests for DNAPL Measurement, U.S. Department of Energy (DOE) Environmental Science and Management Program, Pacific Northwest National Laboratory, Richland, Washington
- Investigation of Mining-related Metal Contamination of Surface Water, U.S. Geological Survey, Summitville Mining Site, Colorado





Douglas W. Reaber, P.G. is a Senior Geologist and Technical Specialist DBS&A. Mr. Reaber received his B.A. in Earth Science from the University of California, Berkeley, and his M.S. in Geology from San Diego State University. He has more than 24 years of professional experience in the environmental industry, serving a variety of federal, state, and commercial clients. In addition to being DBS&A's corporate Quality Assurance Manager, Mr. Reaber is DBS&A's Program Manager for all work that

the company performs on its Remedial Action Contract (RAC) with the U.S. EPA in Region 6, and technical lead on State- Lead Superfund contracts in Texas and New Mexico. He has been managing CERCLA sites for more than 15 years, serving private parties and local municipalities in addition to state and federal agencies at more than 25 sites personally. He has been involved in all aspects of the CERCLA process, from negotiating consent decrees and unilateral administrative orders, through the preparation of planning documents and oversight of field work to the authoring of remedial investigation reports and the negotiation of records of decision.

Mr. Reaber has been a licensed Professional Geologist in California for almost 20 years, and is very familiar with California Geology. His work in California has included evaluating the nature and extent of contamination at several chlorinated solvent Superfund Sites in Silicon Valley as well as waterfront revitalization in Richmond, permit negotiations for landfills in Central and Southern California, and site closures on Treasure Island. These projects have included the performance of work under and the negotiation of clean up levels with the Department of Toxic Substances Control (DTSC), several Regional Water Quality Control Boards) and U.S. EPA.

Douglas W. Reaber, P.G.

Senior Geologist

EDUCATION

B.A., Earth Science, 1982,
University of California,
Berkeley

M.S., Geology, 1986, San Diego
State University

REGISTRATIONS

Professional Geologist,
California, No. 5032

Professional Geoscientist,
Texas, No. 2372

REPRESENTATIVE PUBLICATIONS AND PRESENTATIONS

Cullen, S.J., J. Kelsey, N.
Blandford, D. Reaber, 2007.
Principal Workshop Developer
and Instructor, Vadose Zone
Hydrology: Principles and
Practices, two day workshop co-
sponsored by Wyoming
Department of Environmental
Quality, Sheridan, Wyoming,
October 25-26, 2007.

Cullen, S.J., R. Sahu, D. Reaber,
N. Blandford, and M. Jones.
2006. Hydrogeology and
Perchlorate Impacts Near the Las
Vegas Wash, Henderson,
Nevada. Presented at the 2006
East Valley Water District Water
Quality/Regulatory Conference
in Ontario, California. October
11-13.

Mr. Reaber has 25 years of experience in the environmental industry, serving federal, state, and commercial clients. He has served as project manager and technical lead for RCRA landfills, in addition to approximately 20 Superfund sites.. Mr. Reaber has provided managerial and technical support in environmental litigations, including cost allocation, tort litigation and cost recovery matters. He also serves as DBS&A's corporate Quality Assurance Manager, and has extensive training in quality assurance and expedited site characterization (TRIAD) techniques.

Program Manager, EPA Remedial Action Contract (RAC II) for Region 6: Mr. Reaber serves as DBS&A's Program Manager for all DBS&A work being performed for the EPA under the RAC II contract. In this capacity he coordinates with all project managers, as well as teaming members, in preparing and executing scopes of work for remedial investigations (RIs), feasibility studies (FSs), remedial designs (RDs), and remedial actions (RAs) for federally funded Superfund sites. To date, technical scopes of services have been performed at 15 Superfund sites throughout Regions 6 and 9.

Project Manager, Hydrogeological Support Services for the City of Las Cruces, New Mexico: Served as project manager and regulatory specialist for the City of Las Cruces during the performance of the RI/FS at the Griggs-Walnut Street Plume Superfund Site in Las Cruces, New Mexico. Provided regulatory support during the negotiation of the Special Notice Letter and Agreement on Consent with EPA.

Project Manager for 5 Installation Restoration (IR) Sites, Naval Station Treasure Island, San Francisco, California: Responsible for development of closure strategies for 5 sites following Preliminary Assessment/ Site Inspection (PA/SI) guidance and negotiating the scope with the DTSC.

Primary Consultant for Laidlaw Environmental Services, Imperial Valley, California: Responsible for all aspects of groundwater monitoring, including design and installation of saturated and unsaturated zone monitoring networks, preparation of sampling and analysis plans, institution of sampling protocols meeting requirements of the DTSC, RWQCB, and the EPA and preparation of final reports. Negotiated scope of monitoring requirements in revised Part B. Permit Application. Served as certifying Registered Geologist on reports to state of California.

Project Manager, Remedial Design, Remedial Investigation -Remedial Action State Road 114 Groundwater Plume Superfund Site, Levelland, Texas: Served as project manager at a State Lead Superfund Site during the RI. Field services included soil and soil vapor sampling and the installation of 36 wells in three different water bearing units. Work included technical oversight of field staff and negotiation of scope



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**Douglas W. Reaber,
P.G.**

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REPRESENTATIVE
PUBLICATIONS AND
PRESENTATIONS (cont.)

Hsu, K.C., D. Jordan, T.N. Blandford, and D.W. Reaber. 1998. Evaluation of local-scale Contaminant Migration within a Heterogeneous Alluvial Basin. Presented at the National Ground Water Association meeting in Las Vegas, Nevada. December 13-16.

Londergan, J., D.W. Reaber, and C. Crowe. 1995. Environmental Drilling and Groundwater Monitoring: A Field Course. Three day short course presented in Albuquerque, NM.

Londergan, J., D.W. Reaber, D.B. Kaminski, and C. Crowe. 1994. Environmental Drilling and Groundwater Monitoring: A Field Course. Three day short course presented in Austin, Texas.

Duval, T.A., C.P. Ardito, and D.W. Reaber. 1993. Characterizing a DNAPL Source in the Unsaturated Zone via Real-time Analysis of Soil Vapor. Fourth National Technology Information Exchange Workshop, Department of Energy, Knoxville, Tennessee.

Reaber, D.W. and T.L. Stein. 1990. Design and Installation of a Detection Monitoring Network at a Class I Landfill in an Arid Environment. Fourth National Outdoor Action Conference on Aquifer Restoration, Ground Water Monitoring and Geophysical Methods, Las Vegas, Nevada.

with representatives of the EPA and state of Texas. Later served as the DBS&A project manager during the performance of the RD and RA. The project included the installation of 21 groundwater extraction wells and 62 dual-completion soil vapor extraction wells.

Technical Lead, RI/FS, Iron King Mine/ Humboldt Smelter Superfund Site, Humboldt Arizona. Prepared conceptual site model and RI SAP for the characterization of an abandoned mine and smelter. Project included the delineation of groundwater contamination as well as tailing deposits at the mine and slag deposits at the smelter. Currently evaluating remedial alternatives.

Technical Lead, Garland Creosote Company Superfund Site, Longview, Texas: Served as technical lead during preparation of scoping documents including sampling and analysis plan and quality assurance project plan for the investigation of an abandoned wood treating facility. Managed a field staff of 10 performing work under CLP protocols. Served as primary author of the RI report submitted to the EPA. Currently providing hydrogeologic support during as part of RD.

Technical Lead, Many Diversified Interests Superfund Site, Houston, Texas: Acted as field program manager overseeing a staff of 14 employees and various contractors. Field activities included soil, sediment, surface water and groundwater sampling in order to delineate the extent of contamination. Served as primary author for the OU-1 and OU-2 RI and FS reports and the technical memorandum supporting a monitored natural attenuation remedy.

Technical Lead, East 67th Street Superfund Site, Odessa, Texas. Developed TRIAD-based site characterization strategy for the RI that included qualitative tools for source delineation as well as the installation of 25 monitoring wells and 6 vapor profiling wells to delineate the contaminant plumes in both the saturated and unsaturated zone. This work for EPA is follow-on to work performed by DBS&A for the TCEQ under as different contract vehicle.

Project Manager for the Tucson International Airport Superfund Site, Tucson, Arizona: Responsible for negotiating scope of work for the RI and FS with regulatory agencies. RI included evaluation of solvents in dissolved and DNAPL phases, PCBs, and heavy metals in the vadose zone and groundwater. Field investigation performed over the course of three years included the installation of approximately 40 groundwater monitor wells, passive and active soil gas sampling, vadose zone characterization and groundwater modeling. Oversaw sampling associated with PCB removal action and provided comments on final removal action report.

Senior Geologist, Basewide Hydrogeologic Characterization, China Lake Naval Air Weapons Station, Ridgecrest, California: Served as senior geologist on a multi-year project summarizing the hydrogeology of the China Lake Naval Air Weapons Station in Ridgecrest, California. Project included drilling exploratory borings and installing monitor wells in three aquifers to depths as great as 1200 feet, and collecting soil and groundwater samples for chemical and isotopic analysis.





John J. Dodge, P.G. has 21 years of experience in the environmental industry and has completed numerous investigation, remediation and liability management projects as a consultant to Fortune 500 clients, the Department of Energy, the Department of Defense, the Army Corps of Engineers, and national law firms. Mr. Dodge holds a Master of Science degree in geology from The University of Georgia and a Bachelor of Science degree in geology from The University of Delaware. Mr. Dodge is a

Professional Geologist (PG) in the State of California and has been practicing environmental geology since 1989. With a diverse background in the investigation and cleanup of complex impacted properties, his clients include industrial, manufacturing, aerospace, energy, pharmaceutical and chemical companies across the U.S.

Mr. Dodge has completed hundreds of technical documents and hydrogeologic reports related to impacted property assessments, remedial planning, risk evaluation, costing and financial analysis, contaminated soil and groundwater resources, contaminant fate and transport, and related topics. Past accomplishments include successful investigation and remediation projects involving chlorinated solvents, metals, mixed waste, fuels, PCBs, radionuclides, perchlorate, 1,4-dioxane, coal tar, MTBE, dioxins/furans, and other contaminants. His work includes basin-wide hydrogeological characterization and conceptual model development to support water supply investigations, and groundwater flow modeling to evaluate well field performance or to complete capture zone analyses.

John J. Dodge, P.G.

Senior Project Manager

EDUCATION

M.S. Geology, 1991, University of Georgia

B.S. Geology, 1986, University of Delaware

University of California, Irvine, Environmental Studies, 1994 to 1996

University of Waterloo, Robert W. Cleary, NGWA, Courses in Groundwater Pollution, DNAPLs, Hydrology, and Hydrogeologic Modeling (127 Hours) 1994 to 1996

ASTM Risk-Based Corrective Action (RBCA) training course, 1996

Intelligent Decision Technologies, Landfill Groundwater Statistics, 1997

REGISTRATIONS

Professional Geologist, California

Licensed Geologist/
Hydrogeologist, Washington

Mr. Dodge is a Professional Geologist in California currently responsible for technical oversight and project management in the Orange County office. Mr. Dodge has successfully completed numerous soil gas, soil, and groundwater contaminant studies for federal and commercial clients at hazardous, radiological, and solid waste sites in the United States, Central America, and Europe. With 20 years of experience in environmental consulting, Mr. Dodge has diverse technical and management capabilities and a strong background in complex environmental investigation and remediation.

Industrial Properties Investigation, Remediation, and Redevelopment, Basic Remediation Company (BRC), The LandWell Restoration Project, Henderson, Nevada: Currently Senior Project Manager, Senior Hydrogeologist, and Technical Advisor to BRC during assessment, remediation, risk assessment, and redevelopment of complex industrial property (over 2,000 acres) impacted by multiple waste streams from war-time manufacturing plants and related operating facilities in Henderson, Nevada. The Landwell Restoration Project, described in detail at www.LandWellCo.com, is one of the largest and most technically complex multi-party investigation/remediation/redevelopment projects in the U.S.

Alcoa/Alcoa Global Fastening Systems, Inc., Southern California: Provided reserve management, cost allocation/recovery, and overall management and technical consulting services to worldwide aluminum manufacturing company, primarily for their recent acquisition of four former aerospace fastener manufacturing plants in southern California impacted with chlorinated solvents. Completed supplemental site investigation and remedial action planning, and evaluated groundwater containment system capture zone with aquifer testing and numerical groundwater flow modeling. Evaluated applicable innovative groundwater treatment technologies, including oxidation and enhanced reductive dechlorination (bioaugmentation/biostimulation) with recirculation.

Kaiser Ventures Inc., Property Redevelopment, Former Steel Mill Properties, Fontana, California: Mr. Dodge provided strategic consulting services to Kaiser Ventures Inc. in support of their conversion of their former steel mill properties into The California Speedway and other successful businesses. Kaiser Ventures Inc. was awarded the Governor's Environmental and Economic Leadership Award for this project in 1996. Part of this project involved a passive soil gas survey under the former tar disposal ponds at the property to demonstrate that deep groundwater impacts were not occurring due to vapor-phase transport.

Aerospace Component Manufacturing Facility, Los Angeles: Technical advisor for critical review of historical soil gas surveys and iterative confirmatory soil gas surveys at active aerospace component manufacturing plant. Solvents had been released to a common property line by two adjacent aerospace facilities. The



Daniel B. Stephens & Associates, Inc.

AFFILIATIONS

Association of Environmental
and Engineering Geologists

American Association of
Petroleum Geologists

Groundwater Resources
Association of California

Society of American Military
Engineers

discovery of soil gas impacts delayed a planned property redevelopment and expedited the project schedule for an evaluation of the soil gas impacts and remedial strategies.

Supply Well Search and Evaluation for RCRA Program Management, Impacted Recycler Facility, Los Angeles: Project manager and client advisor for RCRA facility investigation (RFI), Corrective Measures Study (CMS), and operation and maintenance (O&M) of interim corrective measures implementation, and related tasks at recycler Site with free-phase LNAPL and dissolved metals and VOC impacts above municipal aquifers in Los Angeles county. Provided critical review of supply well search results completed for impact evaluation.

Former Nike Missile Base, Pennsylvania: Completed sitewide soil gas survey to evaluate the potential for historical release of solvents and other waste materials at a former Nike missile base. The survey grid addressed suspected release areas and the results of the survey guided the subsequent soil and groundwater investigation.

Worldwide Manufacturing Company, Facility Remediation, Southern California: Provided comprehensive and strategic environmental investigation, remediation design, and liability and reserve management services to the Director, Environmental, Health, and Safety, for worldwide electronics manufacturer for their two largest environmental remediation projects (over \$4 million). Managed project team during design, installation, and operation and maintenance of groundwater extraction and hydraulic containment system, and design and implementation of in-situ reactive zone (IRZ) groundwater remediation program using molasses injection, for Santa Ana industrial property impacted with chlorinated solvents.

Supplemental Site Investigation and Remediation, Former Aerospace Facility, southern Beach, California: Consistently under budget for five years (\$800,000 budget) for supplemental site investigation and remediation of residual trichloroethene (TCE) groundwater impacts at former aerospace plant redeveloped into residential community (\$8 million cleanup). Designed and implemented enhanced reductive dechlorination application in low permeability Monterey formation. Evaluated remedial technologies for potential application, including funnel and gate technology and oxidation.

Strategic Planning, Pharmaceutical Manufacturing Facility, Irvine, California: Responsible for technical approach and project management of strategic planning project for manufacturing property impacted by chlorinated solvents from multiple industrial tenants. Summarized critical soil gas, soil and groundwater data and developed matrix of remedial options, costs, and probable regulatory requirements and response for senior officer and attorney review in preparation for tenant/owner litigation.



2010 Discounted Attorney Hourly Rates

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- Bradley Marten \$535
- Steven G. Jones \$465
- Jessica K. Ferrell \$345

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- James H. Colopy \$535
- John J. Gregory \$513
- Deborah K. Tellier \$571
- John Green \$643



City of Benicia Discounted Schedule of Fees

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Confidential

Professional Services

Principal.....	\$265.00/hour
Senior Technical Specialist.....	\$210.00/hour
Technical Specialist.....	\$195.00/hour
Senior Engineer/Scientist II.....	\$170.00/hour
Senior Engineer/Scientist I.....	\$145.00/hour
Project Engineer/Scientist.....	\$130.00/hour
Staff Engineer/Scientist III.....	\$110.00/hour
Staff Engineer/Scientist II.....	\$100.00/hour
Staff Engineer/Scientist I.....	\$90.00/hour
Field/Lab Technician.....	\$80.00/hour
Senior Graphics Designer.....	\$100.00/hour
Senior CAD Technician.....	\$90.00/hour
GIS Analyst/Database Analyst.....	\$100.00/hour
GIS Technician.....	\$90.00/hour
Senior Technical Editor.....	\$95.00/hour
Technical Editor.....	\$80.00/hour
Project Assistant.....	\$80.00/hour
Assistant/Professional.....	\$70.00/hour
Assistant Technician.....	\$60.00/hour

Expenses

Travel	
Airfare, car rental, cab, bus, parking.....	Actual cost
Lodging, meals, phone.....	Actual cost or negotiated per diem rates
Mileage	
Personal vehicle.....	Prevailing IRS rates
Company vehicle	
Daily rate, minimum 1-day.....	\$65/day
Mileage, (partial day).....	Prevailing IRS rates
Subcontractors/temporary service personnel.....	Actual cost plus 10%
Computers and communications.....	Additional charge
Equipment	
Rentals (e.g., environmental monitors).....	Actual cost plus 10%
Fabrication in our shop.....	Labor plus materials
Misc. field equipment and supplies.....	Actual cost plus 10%
Meters, gauges, and monitors.....	Separate schedule available upon request

TERMS

Payment terms for professional services and expenses are net 30 days. Unpaid balance will be assessed a service fee of 1.5% per month.

NOTES

1. All fees are subject to local/state sales or gross receipts tax, as applicable.
2. Delivery of depositions or expert testimony will be billed at 1.5 times Fee Schedule rates.
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Air Force Calls EPA's Bluff on Superfund Cleanup

By Jessica Ferrell
October 8, 2010

Ongoing disagreements between the U.S. Environmental Protection Agency ("EPA") and the U.S. Department of Defense ("DOD") regarding federal facility cleanups, escalated by a recent exchange between the U.S. Air Force and EPA, highlight continuing obstacles to cleaning up DOD sites under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"). While DOD is subject to environmental laws including CERCLA and the Resource Conservation and Recovery Act ("RCRA"), its compliance with those statutes has sometimes lagged. Despite EPA's efforts, non-compliance continues at contaminated military facilities and, in some circumstances, DOD has moved forward with cleanup, albeit on its own terms. At Tyndall Air Force Base ("Tyndall AFB") in Florida, the Air Force recently announced its intent to continue implementing a cleanup plan largely of its choosing, without EPA oversight and, according to EPA, in violation of EPA's RCRA Order governing the site. But due to statutory restrictions, adherence to the unitary executive principle and policy choices by the U.S. Department of Justice ("DOJ"), EPA has not effectively exercised its authority to compel DOD action under CERCLA.

CERCLA Section 120 and the Defense Environmental Restoration Program

In 1986, Congress passed the Defense Environmental Restoration Program statute ("DERP")^[1] as part of the Superfund Amendments and Reauthorization Act ("SARA").^[2] DERP requires that the Secretary of Defense "carry out a program of environmental restoration at facilities under the jurisdiction of the Secretary."^[3] DERP also applies to former Department of Defense facilities, providing that the Secretary of Defense:

shall carry out (in accordance with the provisions of this chapter and CERCLA) all response actions with respect to releases of hazardous substances from ... [e]ach facility or site which was under the jurisdiction of the Secretary and owned by, leased to, or otherwise possessed by the United States at the time of actions leading to contamination by hazardous substances.^[4]

DERP response actions must be carried out "subject to, and in a manner consistent with, section 120 (relating to federal facilities) of [CERCLA]."^[5] Among other provisions, section 120 waives the federal government's sovereign immunity for purposes of CERCLA, and subjects it to CERCLA "in the same manner and to the same extent, both

procedurally and substantively, as any nongovernmental entity, including liability under section 107 of this Act.”[6]

As of October 2009, DOD had established performance measures and identified over 31,600 sites eligible for cleanup under DERP, including about 4,700 formerly used defense sites (“FUDS”), 21,500 sites on active installations, and 5,400 sites on installations that have been closed or are designated to be closed or realigned under the Base Realignment and Closure process.[7] As of July 2010, EPA had listed over 140 DOD installations on the Superfund’s National Priorities List (“NPL”), containing the country’s most contaminated hazardous waste sites.[8] These sites are in addition to hundreds more across the country at which DOD qualifies as a PRP due to historical operations, but which are not designated as FUDS or governed by DERP due to a lack of current or former federal land ownership or control.

EPA Authority at DOD NPL Sites

Section 120 sets up a different path for CERCLA compliance at federal facilities than non-federal sites. That path is still mandatory, however, and enforceable by EPA and through citizens’ suits. For example, required actions by the federal department, agency or instrumentality that owns or operates the federal facility at issue must be performed under statutory deadlines. A remedial investigation and feasibility study (“RI/FS”) must be commenced within six months of a facility’s NPL listing, in consultation with EPA and appropriate State authorities.[9] Within 180 days of EPA’s review of the RI/FS, EPA and the head of the federal agency (i.e., DOD) must enter into an interagency agreement [(“IAG”)] designed to ensure “the expeditious completion by [the responsible federal department] ... of all necessary remedial action at such facility.” The IAG must comply with CERCLA’s public participation requirements, and the responsible department must commence “[s]ubstantial continuous physical onsite remedial action” within 15 months of completing the RI/FS.[10] The IAGs must include, among other things, agreed-upon schedules, arrangements for operation and maintenance of the remedy, and remedial design selection. Should the responsible federal agency and EPA not reach agreement on selection of the remedial action, Section 120 provides that EPA shall select it.[11]

Status of DOD Cleanup Progress

CERCLA Section 120 subjects the United States to CERCLA and former President Ronald Reagan’s Executive Order 12,580 provides EPA with authority to issue administrative orders to federal agencies under CERCLA Section 106, but EPA must obtain DOJ’s concurrence before using that authority.[12] Largely because of DOJ’s adherence to the unitary executive principle – which provides that disputes between parties in the same governmental branch are not justiciable under Article III of the Constitution – EPA enforcement against federal agencies has been significantly more restrained than against private party, state, and local government PRPs.[13] As a result, federal PRPs are often effectively “insulated from direct administrative or judicial

enforcement action by EPA.”[14] This void in enforcement also occurs because DOD has simply failed to enter into IAGs under CERCLA § 120 at several federal sites.[15]

Over the past few years, at the request of members of Congress, the U.S. Government Accountability Office (“GAO”) has scrutinized cleanup progress at DERP, FUDS, and DOD-NPL sites.[16] The GAO identified several tensions and disconnects between EPA and DOD at these sites. For example, EPA and DOD use different terms, metrics, and principles to gauge and report on cleanup progress. As a result, while EPA may report that cleanups at DOD sites are in early investigative stages, DOD might simultaneously announce that the cleanups at the same sites are almost done – resulting in a wide range of inconsistent information being distributed to the public. Further, DOD does not always obtain EPA approval for its cleanup decisions, so EPA does not recognize DOD’s cleanup efforts in those circumstances. In addition to procedural and reporting issues, the GAO noted significant delays in cleanup of serious contamination at federal facilities – including, for example, lead shot found on a school playground on Tyndall AFB in Florida in 2009.[17]

Illustration of Tensions and Stalemates Between EPA and DOD

A recent exchange between the U.S. Air Force and EPA regarding Tyndall AFB brought these issues into sharper public focus. Tyndall AFB has been listed on the NPL since 1997. Located southeast of Panama City, Florida, the 29,000-acre site has been an active Air Force installation since 1947. Contamination includes polychlorinated biphenyls, pesticides such as DDT, heavy metals, volatile and semi-volatile organic compounds, residues from exploded ordnance, and petroleum-based compounds such as jet fuel and oil. Those hazardous substances have been found in soils, sediments, surface waters, and groundwater at the base.[18]

The Air Force has not entered into an IAG with EPA at Tyndall AFB. EPA has objected to this failure, along with the Air Force’s reporting, remedy selection (largely, natural attenuation), and lack of progress at the base for years. These issues led EPA, in November 2007, to issue an Administrative Order under Section 7003 of RCRA to compel the Air Force to clean up the AFB.[19] The order was finalized in May 2008; through it, EPA intended to hold the Air Force to enforceable cleanup milestones. This strategy not been successful. EPA reports that Tyndall AFB is out of compliance with over 24 provisions of the RCRA 7003 Order.[20]

For its part, the Air Force announced plans to continue cleaning up Tyndall AFB largely on its own terms. It also described “a range of community involvement activities to solicit community input” that it has conducted. It reports that it “has and will continue to keep appropriate federal, state and local officials apprised of the work as it progresses. . . . The Air Force is fully committed to the protection of human health and the environment, and to full compliance with applicable laws, at all of its facilities, for all programs, including cleanup.”[21]

On August 19, 2010, Terry Yonkers, Assistant Secretary for Installations Environment and Logistics of the Air Force, formally announced the Air Force's intent to continue its unilateral cleanup of Tyndall AFB. In his memorandum, Assistant Secretary Yonkers asserts the Air Force action's compliance with CERCLA, RCRA, DERP, and the May 2008 RCRA Order.[22] EPA previously announced that, once the Air Force enters into a CERCLA IAG with EPA and the State of Florida, EPA will withdraw the RCRA Order, and cleanup will proceed under CERCLA.[23] Assistant Secretary Yonkers, however, described the position of alleged compliance as "consistent with EPA's recognition that RCRA corrective action and CERCLA response generally yield similar remedies in similar situations and that a cleanup under one program will satisfy the requirements of both."

Last month, Cynthia Giles, EPA Assistant Administrator for Enforcement and Compliance Assurance, responded by letter to Secretary Yonkers' memorandum "to express very serious concern." [24] She alleges that the memorandum is inaccurate regarding cleanup progress and potential risks to human health and the environment, which are "likely to confuse and mislead the public." She therefore "urged" Secretary Yonkers to "immediately issue clarifications that will more accurately portray potential risks to human health and the environment ... and fully disclose the Air Force's noncompliance with federal environmental requirements." She also criticized the Air Force's press release about cleanup progress, which she asserts "gives the incorrect impression that cleanup work at Tyndall is proceeding in an appropriate manner" when it is not. Assistant Administrator Giles described the Air Force's unilateral actions at Tyndall AFB as "unprecedented," and emphasized the significance of the contamination that the Air Force's actions have not addressed – including exceedances of EPA risk-based standards for DDT in sediments by a factor of 200. She explained that Tyndall AFB is "one of only a few of more than 170 federal facility Superfund sites where EPA rates both 'current human exposures' and 'groundwater migration' as 'not under control,'" as groundwater is only 3-4 feet below the surface and serves as a drinking water resource for humans and 40 species listed under the Endangered species Act. She concluded by stating that the Air Force's actions violate EPA's May 2008 RCRA Order and CERCLA: "Such unilateral action is clearly contrary to the intent of Congress and inconsistent with arrangements at other federal facility and private cleanup sites nationwide." [25]

Remaining Questions

Assistant Administrator Giles' letter, though strongly worded, illustrates EPA's apparent inability to effectively address a contaminated site that is allegedly within EPA's jurisdiction, cleanup of which is straying out of EPA's control.

Congressional, presidential, or judicial action may be required in order to enable EPA to hold DOD accountable under CERCLA. In the meantime, the situation at Tyndall AFB and EPA/DOJ stalemates at other federal facilities present several questions relevant to EPA's administration of CERCLA and RCRA and the achievement of those statutes'

objectives. For example, should DOD be allowed to proceed according to its own determinations as to compliance with environmental standards, or must it go through EPA's standard Superfund process? Is DOJ's policy decision not to sue federal agencies justified? Is it constitutional? Does it unfairly shift the burdens of Superfund liability? Should EPA discourage DOD and other federal agencies from taking any action if that action does not comply with the technical requirements of EPA's Superfund process, or is some attempt at environmental restoration better than none? Is enforcement under RCRA alone adequate? If litigation is necessary in order to require DOD compliance with RCRA and CERCLA, would Congressional action have any effect on the stalemate if DOJ continues to refuse to take DOD to court on EPA's behalf?

Unless and until Congress sharpens EPA's enforcement authority against federal agencies under CERCLA, a court holds the unitary executive principle unconstitutional, the President issues an Executive Order addressing the issue, and/or DOJ changes its policy on suits between executive agencies, then attempts to hold the U.S. military liable for its legacy of contamination – according to EPA standards, at least – may be the province of citizen suit plaintiffs. Potential plaintiffs include states, local governments, and private parties – none of which are entitled to the deference afforded to EPA in CERCLA litigation.

For additional information, contact Jessica Ferrell or any other member of Marten Law's Waste Cleanup group.

[1] 10 U.S.C. §§ 2700–10.

[2] Section 211 of SARA contains the DERP statute, which was codified at 10 U.S.C. §§ 2701-2708; Pub. L. No. 99-499 § 211, 100 Stat. 1613, 1719.

[3] 10 U.S.C. § 2701(a)(1).

[4] *Id.* § 2701(c)(1)(B).

[5] *Id.* § 2701(a)(2).

[6] 42 U.S.C. § 9620(a)(1).

[7] GAO Report to Committee on Armed Services, House of Representatives, Formerly Used Defense Sites: The US Army Corps of Engineers Needs to Improve Its Process for Reviewing Completed Cleanup Remedies to Ensure Continued Protection (Oct. 2009).

[8] GAO Report to Congressional Requesters, *Superfund: Interagency Agreements and Improved Project Management Needed to Achieve Cleanup Progress at Key Defense Installations*, GAO-10-348 (July 15, 2010) (“GAO 2010 EPA/DOD Report”).

[9] 42 U.S.C. § 9620(e)(1).

[10] *Id.* § 9620(e)(2).

[11] *Id.* § 9620(e)(4)(A).

[12] Executive Order 12,580 of Jan. 23, 1987, appears at 52 FR 2923, 3 CFR, 1987 Comp., p. 193.

[13] For more information on the Unitary Executive principle, see W.C. Tucker, *The Manacled Octopus: The Unitary Executive and EPA Enforcement Involving Federal Agencies*, 16 Villanova Env't'l L.J. 149 (2005) and authorities cited therein. EPA officials report that they often do not seek DOJ assistance for litigation against DOD at Superfund sites because they are aware of "DOJ's policy that one department of the executive branch will not sue another in court." GAO 2010 EPA/DOD Report at 9 (citing Environmental Compliance by Federal Agencies: Hearing Before the Subcommittee on Oversight and Investigations of the House Committee on Energy and Commerce, 100th Congress 668, 675 (1987) (memorandum from John Harmon, Assistant Attorney General, Office of Legal Counsel, to Michael J. Egan, Associate Attorney General, June 23, 1978) (stating DOJ view that allowing EPA to sue another agency would violate established principle that "no man can create a justiciable controversy against himself"))).

[14] W.C. Tucker, *supra* n.13 at 157.

[15] See GAO 2010 EPA/DOD Report, *passim* (citing examples). Although the relevant statutory language is mandatory, DOJ interprets IAGs as agreements into which DOD must voluntarily enter. According to DOJ, "because an interagency 'agreement' denotes a consensual undertaking," it does "not think that DOD necessarily is required to agree to all extra-statutory terms demanded by EPA." DOJ to DOD, Re: Issuance of Imminent and Substantial Endangerment Orders at DOD Facilities (Dec. 1, 2008).

[16] See, e.g., 42 U.S.C. § 9620(e)(4)(A); GAO, *Superfund: Greater EPA Enforcement and Reporting Are Needed to Enhance Cleanup at DOD Sites*, GAO-09-278 (March 13, 2009).

[17] GAO 2010 EPA/DOD Report at 1 (discussing Tyndall AFB).

[18] EPA, Superfund, Tyndall AFB Profile (last visited Oct. 6, 2010).

[19] In 2007, EPA Region 4 spokeswoman Laura Niles stated that EPA took action under RCRA rather than CERCLA "because the Air Force must accelerate the study and cleanup and because efforts to enter into a federal facility agreement (FFA) over the issue have been unsuccessful." BNA Environment Reporter, *Air Force Ordered to Investigate, Clean Up Contaminated Sites at Tyndall Base in Florida* (Nov. 30, 2007) (subscription required). Niles stated: "EPA attempted to negotiate a comprehensive and enforceable FFA that would govern the selection and implementation of the Air Force response at this site. These agreements have been successfully entered into at approximately 150 out of 172 federal facility NPL sites. Given the Air Force's resistance to sign an acceptable FFA with essential provisions to ensure appropriate

oversight and protectiveness, the imminent endangerment at the site necessitates that EPA move forward with the Order. As Congress specifically provided, nothing in the Superfund law affects the obligation of a federal agency to comply with any requirement under RCRA.” *Id.*

[20] EPA, Superfund, Tyndall AFB Profile. While the Order is enforceable by EPA or by citizens’ suits under RCRA § 7002(a), as of this writing, no enforcement action had occurred.

[21] Tyndall AFB, Air Force moving forward with clean up at Tyndall (Aug. 30, 2010).

[22] Terry Yonkers, Assistant Secretary for Installations Environment and Logistics of the U.S. Air Force, to EPA, Re: Environmental Restoration Program ERP Progress at Tyndall AFB, FL (Aug. 19, 2010).

[23] EPA, Superfund, Tyndall AFB Profile.

[24] Letter from C. Giles (EPA) to T. Yonkers (USAF), Sept. 13, 2010.

[25] *Id.* at 3.

TURNING BROWN INTO GREEN: PRACTICAL CONSIDERATIONS FOR LENDERS AND BUYERS OF CONTAMINATED PROPERTY IN A RED ECONOMY

By Deborah K. Tellier, John J. Gregory, and Mathew J. Swain

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I. INTRODUCTION

Just when it seems like things can't get any worse, the TV monitor in the office elevator reports the stock market has dropped to a new low. Daily, we are bombarded with news of our troubled economy—incipient recession, no new development deals, construction stalled, foreclosures in every commercial district and residential neighborhood, no available credit, layoffs, stalwart businesses closing their doors or filing for bankruptcy, and state workers furloughed. The list goes on and on, and we ponder how long it will take to turn things around.

But such crises also provide for opportunities,¹ and one of the few bright spots may be the acquisition and development of “Brownfields sites”² or environmentally impaired properties. Whether you are an opportunistic developer taking advantage of low market prices, or an unfortunate lender facing foreclosure on an operating hazardous waste recycling facility, the ability to successfully acquire, develop or resell such properties will depend in large part on how well the purchaser or lender has minimized its environmental cleanup liabilities.

This article provides the “glass half-full” perspective on how lenders and buyers can acquire and develop contaminated property during a red economy, while keeping liabilities in check. Section II provides an overview of the key environmental statutes that impose cleanup liabilities. Section III then addresses the legal protections available to lenders, prospective purchasers and landowners that help maximize the acquisition and development of Brownfields sites while minimizing potential cleanup liability. Finally, Sections IV and V provide practical tips to lenders and prospective purchasers who want to turn Brownfields sites into green opportunities.

II. OVERVIEW OF ENVIRONMENTAL LIABILITY SCHEMES

A. The Driving Force Behind Environmental Cleanup Liabilities: “Superfund” Statutes

Adopted in 1980, the federal Comprehensive Environmental Responsibility, Compensation and Liability Act³ (“federal Superfund”) is the primary environmental statute affecting cleanup liabilities in real property transactions. California's counterpart, the Carpenter-Presley-Tanner Hazardous Substances Account Act⁴ (“state Superfund”), has parallel liability provisions and was enacted in 1981 (collectively, the federal and state Superfund are referred to as “Superfund laws”). These Superfund laws are strict liability statutes, imposing retroactive liability on “potentially responsible parties” (“PRPs”) to pay for or carry out the cleanup of contaminated property.⁵

The Superfund laws establish four classes of PRPs⁶ that can be held liable for cleaning up contaminated property: (1) the

current owners and operators of a facility where hazardous substances⁷ were released; (2) the former owners or operators of a facility at the time hazardous substances were released at the facility; (3) generators or persons who arranged for the treatment or disposal of hazardous substances at a facility;⁸ and (4) transporters of hazardous substances to a facility they selected.

PRPs may be ordered to conduct the cleanup of contaminated property,⁹ or the government may carry out the cleanup and recover cleanup costs from the PRPs.¹⁰ Such cleanup costs can include the costs to investigate, remove, manage, and remediate hazardous substances released at a facility, and any other necessary response costs (including those incurred by the government). Thus, Superfund laws can impose cleanup costs on the current owner or operator of contaminated property (and other PRP categories) for releases of hazardous substances that occurred before its ownership or operation of the property, although the owner or operator may be able to recover some of those costs from other PRPs.¹¹

B. Don't Overlook Other Federal and California Statutes that May Impose Environmental Cleanup Liabilities

While Superfund is perhaps the most widely known and feared environmental liability statute, it is but one of many that may impose liability on owners and operators of contaminated property. Several key statutes imposing liability are highlighted below.

1. Federal and California Hazardous Waste Laws Can Trigger Cleanup Liability

The federal Resource Conservation and Recovery Act¹² (“RCRA”) and its California counterpart, the Hazardous Waste Control Law¹³ (“HWCL”), impose requirements on persons that generate or transport hazardous waste, and operate facilities that treat, store, or dispose of hazardous waste (including storage or treatment in underground storage tanks (“USTs”)).¹⁴ Closure of a hazardous waste facility regulated under RCRA or the HWCL will obligate the owner or operator to remove hazardous waste from the facility and take actions required to prevent any hazardous waste remaining onsite from adversely affecting human health or the environment.¹⁵

In addition, an owner or operator may be required under “corrective action” authority to cleanup contaminated property at which hazardous waste management activities occurred, even if the contamination was unrelated to such activities.¹⁶ As part of post-closure care and long-term corrective action obligations, owners and operators may be required to provide financial assurance that cleanup obligations will be met.¹⁷ Moreover, because hazardous waste laws apply to property owners, prospective purchasers, and foreclosing lenders, these entities may find themselves similarly saddled with such cleanup obligations.

2. *Cleanup Liability for Discharges of Waste to Surface and Groundwater*

The California Porter-Cologne Water Quality Control Act¹⁸ regulates discharges of waste¹⁹ to surface water and groundwater within California. Regional Water Quality Control Boards (“RWQCBs”) within the state may issue investigation and cleanup orders to any person (including past and present owners and operators) who has, or is suspected to have, discharged waste that could affect the quality of surface water or groundwater.²⁰ Cleanup orders by the RWQCB frequently target historic discharges such as leaking underground gas tanks, releases of wastes from dry cleaning facilities and semi-conductor operations. Since it is not uncommon for releases of these wastes to contaminate groundwater, groundwater remediation often comprises a significant amount of cleanup costs associated with remediation of contaminated property in California.

III. LEGAL PROTECTIONS FROM POTENTIAL FEDERAL AND STATE SUPERFUND LIABILITY

As onerous as these environmental statutes can be, affirmative defenses do exist and can provide protection to parties that acquire contaminated property either voluntarily or involuntarily. Superfund laws provide three statutory defenses—an act of God, an act of war, and the most popular, an act or omission of a third party. The most useful application of this third party defense arises in the context of secured creditors (primarily lenders), prospective purchasers and innocent landowners. These protections are highlighted below.

A. **Liability Protection for Lenders—Superfund’s Secured Creditor Exemption**

Superfund laws have evolved over the years to provide secured creditors with protection from liability for cleanup of contaminated property both before and after a lender forecloses on the property.²¹ The federal Superfund “Secured Creditor Exemption” excludes from the definition of owner/operator “a lender that, *without participating in the management* of a vessel or facility, holds indicia of ownership primarily to protect the security interest of the person in the vessel or facility.”²² The parallel security interest exemption in the state Superfund law is structured differently, comprised of an entire chapter within the Health and Safety Code. Though the scope of protection is substantially the same between the federal Superfund and state laws, several important distinctions exist.²³

While the Secured Creditor Exemption was included in the original federal Superfund law, prior to federal amendments in 1996 there was confusion in the courts over whether the Secured Creditor Exemption applied to post-foreclosure activities by the lender.²⁴ Confusion also existed as to whether the mere capacity to control the actions of the borrower prior to foreclosure, without actually exercising such control, constituted “participation in management” that resulted in the lender becoming an “owner or operator,” and thus losing the exemption.²⁵ In 1992, the United States Environmental Protection Agency (“EPA”) promulgated its “Lender Liability Rule” to clarify the actions that lenders could and could not take to avoid Superfund liability.²⁶ EPA’s Lender Liability Rule was subsequently vacated by a federal court in 1994 on the grounds that EPA lacked

authority to issue the rule as a binding regulation.²⁷ Although EPA stated thereafter that it would rely on the vacated rule as an enforcement policy,²⁸ confusion remained as to the scope of the Secured Creditor Exemption.

The 1996 amendments to federal Superfund (“1996 Amendments”), in effect, codified the vacated rule.²⁹ These amendments broadened the definition of lender and specifically stated that the Secured Creditor Exemption applies to any lender that did not participate in the management of a borrower’s facility.³⁰ The 1996 Amendments also clarified what constitutes “participation in management” and whether a lender becomes liable as an owner after foreclosing on contaminated property.

Fundamentally, the 1996 Amendments clarified that the lender must demonstrate that it did not actually participate in the management of the property pre-foreclosure.³¹ Pursuant to the 1996 Amendments, participation in management would occur if the lender exercised either decision-making control over environmental compliance, or control comparable to that of a manager who has responsibility for the overall management of or substantially all the operational functions of a facility or vessel.³² The 1996 Amendments also provided examples of certain activities excluded from the definition of “participation in management.”³³ Despite the additional clarity provided by these amendments, the inquiry into the applicability of the pre-foreclosure portion of the Secured Creditor Exemption is certain to be fact-specific and thus, may depend on the time and pervasiveness of the lender’s involvement with the environmental conditions at a particular site.

Foreclosure is a necessary part of protecting a lender’s security interest in the property, and as such, is permitted under the Secured Creditor Exemption. A lender may remain exempt from liability after foreclosing on contaminated property so long as the lender did not participate in management of the facility prior to foreclosure.³⁴ Under Superfund laws, a lender must divest itself of a foreclosed property in a *reasonably expeditious manner* using whatever *commercially reasonable means* are available or appropriate. Section IV provides practical considerations for lenders leading up to, during and following foreclosure.

B. **Liability Protection for Prospective Purchasers**

1. *Federal Laws Providing Liability Protections to Prospective Purchasers*

In the early years of Superfund, prospective purchasers often found themselves between a rock and a hard place if they wanted to purchase environmentally impaired property. Such a purchase would immediately transform the purchaser into a “current owner” under the Superfund laws. The “innocent landowner” defense protected such a purchaser from owner liability provided the purchaser had *no knowledge* of any environmental contamination on the property based on inquiries made prior to the purchase.³⁵ But in many cases, environmental problems were frequently identified—or could not be ruled out—in Phase I or Phase II environmental site assessments (“ESAs”). Consequently, prospective purchasers were left with lingering doubts about whether they had an adequate shield of protection from Superfund liability should they become owners of such contaminated properties.

EPA attempted to quell such doubts and encourage cleanup and development of contaminated properties in the early 1990s. Over the next decade, EPA developed a number of tools within the Superfund program and enforcement offices to encourage redevelopment of Brownfields sites, including Prospective Purchaser Agreements (“PPAs”) aimed at providing liability relief in exchange for payment and/or cleanup work by the purchaser (even where the prospective purchaser had not caused the contamination).³⁶ This and other efforts by EPA were steps in the right direction but they did not go far enough to drive the expeditious and cost-effective remediation of Brownfields sites.

In response, Congress enacted the Small Business Liability Relief and Brownfields Revitalization Act of 2002 (“Brownfields Amendments”), which provided a powerful and positive shift in landowner liability protections and help for prospective purchasers of Brownfields sites. The Brownfields Amendments provided liability relief to three classes of landowners: (1) bona fide prospective purchasers (“BFPPs”); (2) contiguous property owners (“CPOs”); and (3) innocent landowners (“ILOs”). In order to qualify for the conditional Superfund immunity, each class of landowners must meet certain threshold conditions prior to the acquisition of contaminated property and each must satisfy certain continuing obligations during its ownership.³⁷ The attributes of each class are briefly summarized below.

Bona Fide Prospective Purchasers: Congress’ establishment of the BFPPs class of landowners significantly changed Superfund’s liability landscape. Prior to the Brownfields Amendments, this class of purchasers who acquired property with knowledge of the contamination became de facto “owners” under the Superfund law. Now, these prospective purchasers *can acquire property with knowledge of the contamination and obtain liability protection* from the broad reach of Superfund laws.³⁸

Contiguous Property Owners: Since the early days of Superfund, prospective and current landowners have worried about being tagged with liability for contamination migrating onto their property from off-site sources.³⁹ CPOs can now take advantage of the conditional Superfund immunity. This immunity is limited, however, to situations in which a CPO did not know or have reason to know that its property was or could have been contaminated by the off-site sources.⁴⁰

Innocent Landowners: This class of landowners are those who, at the time of purchase, acquired the property without knowledge or reason to know of any contamination on the site. Such entities have been historically protected by Superfund’s innocent landowner defense. The Brownfields Amendments however clarified what an innocent landowner must do to qualify for the statutory protection.⁴¹

In addition to the three landowner classes created by the Brownfields Amendments, EPA recently identified a fourth landowner-type class that may be eligible for Superfund liability protection.

“Derivative” BFPP Status for Tenants: The latest word from EPA on the Brownfields Amendment is EPA’s January 2009 guidance addressing liability protection for tenants.⁴² In this memorandum, EPA acknowledges the importance that leasehold interests play in the cleanup and reuse of Brownfields sites. Accordingly, EPA extends some measure of the BFPP protections to qualifying tenants. While EPA has confirmed that the mere execution of a lease does not trigger owner/operator

liability for the tenant, it has also acknowledged the uncertainty that a tenant may experience in executing a long-term lease on contaminated property.

EPA has identified two situations involving tenants where EPA would use its discretion *not* to enforce Superfund liability against the tenant. The first situation is where the lease “gives [the tenant] sufficient indicia of ownership to be considered an ‘owner’ and who meets the statutory elements of a BFPP.”⁴³ The second gives tenants “derivative” BFPP status from the property owner who has complied with and continues to comply with all BFPP requirements.⁴⁴

2. California Laws Providing Liability Protections to Prospective Purchasers

A tenet of the Brownfields Amendments is that states, not the federal government, should serve as the lead in Brownfields cleanups (except for cleanups on federal Superfund sites). California has developed a host of statutory and regulatory programs to protect prospective purchasers from environmental cleanup liabilities or to reduce such liabilities while encouraging and facilitating cleanup of contaminated property. Key statutes are highlighted below.

California Land Use and Redevelopment Act of 2004 (“CLRRA”): The most significant effort by California to provide landowner liability protection was the enactment of CLRRA.⁴⁵ Essentially, CLRRA establishes a process in which qualified BFPPs, CLOs, and ILOs may enter into agreements with the California Department of Toxic Substances Control (“DTSC”) or RWQCB to clean up contaminated property and receive immunity for certain hazardous materials response costs and other damages.⁴⁶ To be eligible, the property must be a vacant or underutilized property in a populated area, must not be a state or federal Superfund site, and must not be solely impacted by petroleum releases from an underground storage tank.⁴⁷ Once a CLRRA agreement has been established with respect to a given property, subsequent purchasers may also qualify for immunity if they meet qualifying conditions and continue to carry out the terms of the agreement.⁴⁸

California’s Polanco Redevelopment Act (“Polanco Act”): California’s Polanco Act has emerged as one of the more effective and efficient tools for Brownfields redevelopment for sites located within the jurisdiction of a redevelopment agency.⁴⁹ Key features of the Polanco Act include the ability of redevelopment agencies to obtain information about the environmental conditions at a site from potentially responsible parties, expedite investigation and cleanup, and impose deadlines for regulatory action.⁵⁰ It also provides liability protection incentives to developers and lenders that clean up and redevelop such properties pursuant to a plan approved by the DTSC or RWQCB.⁵¹

California’s Unified Agency Review Program (“AB 2061”): Purchasers of contaminated property should also be aware of AB 2061, which was developed to eliminate or minimize the duplication of efforts by various state and local agencies to clean up hazardous materials release sites.⁵² Under this program, a current owner may request that a single regulatory agency be designated to oversee the investigation and remediation of the property (the administering agency).⁵³ After the owner completes the agreed-upon investigation and remediation, the administering agency will issue a certificate of completion, which will prohibit

all state agencies from taking any action against the owner for hazardous materials released at the property, except under limited conditions.⁵⁴

IV. PRACTICAL CONSIDERATIONS FOR LENDERS

Although the Secured Creditor Exemption available under the Superfund laws seemingly provides lenders with a safe harbor from potential environmental liability, lenders nonetheless can quickly find themselves in choppy seas when dealing with financially-distressed borrowers and contaminated properties. Below are some practical considerations to help navigate through these troubled waters.

A. Loan Policing and Work Out Activities

So long as a lender does not *participate in management*, the lender may take appropriate steps without jeopardizing the Secured Creditor Exemption to monitor and enforce the terms and conditions of its loan, including when necessary and appropriate, engaging in loan work out activities. Permissible activities include periodic monitoring or inspecting (*e.g.*, through environmental auditing) of the borrower's facility to assess the borrower's environmental compliance and whether there are any threatened or actual environmental releases.⁵⁵ Moreover, the lender may provide financial and other advice and counseling to the borrower, including advice on environmental matters if such advice is given in an effort to mitigate, prevent, or cure a loan default or diminution in value of the property.⁵⁶

Loan agreements typically allow a lender to require the borrower to take appropriate actions to comply with any observed environmental non-compliance, including requiring the borrower to conduct response actions (using contractors approved by the lender) to address actual or threatened hazardous substance releases. If the borrower is unable or unwilling to perform such work, the lender may, in certain circumstances, undertake cleanup work at the borrower's cost without assuming any cleanup liability. In such cases, the lender must be careful to avoid taking actions or failing to take actions that could be construed as causing or contributing to the release of hazardous substances. For example, the lender's hiring of a shoddy contractor that exacerbates existing contamination at the borrower's property may expose the lender to liability for cleanup of such exacerbated conditions.

So what should a lender do to keep itself from *participating in management*? Although there is no definitive guidance from EPA, the law identifies actions the lender should avoid while the borrower is in possession of the property. The lender should avoid exercising decision-making control on matters involving environmental compliance, particularly as it relates to hazardous substance handling and disposal practices.⁵⁷ Even if the lender is not involved with environmental compliance matters, the lender should also avoid managing all or substantially all of the operational functions of the borrower's business. Operational functions are akin to those of a facility or plant manager, operations manager, chief operating officer, or chief executive officer.⁵⁸ So long as the lender's actions involve financial or administrative functions such as the functions of a credit manager, accounts payable/receivable manager, personnel manager, controller, or chief financial officer, the lender will not be considered to be participating in management.⁵⁹

Although lenders may provide guidance to the borrower, ultimately, the borrower must make the call when it comes to managing environmental compliance and conducting business operations at its facility. To that end, lenders should be careful in sharing with the borrower environmental audit reports prepared for the lender by the lender's consultant which go beyond merely identifying areas of environmental non-compliance (*i.e.*, the lender's consultant is providing specific recommendations on how to manage such non-compliance which could be construed as participation in management by the lender).

B. Pre-Foreclosure Considerations

Lenders faced with the prospect of foreclosing on and taking title to property that is or may be suspected of being contaminated should make a thorough assessment of environmental conditions and potential liabilities associated with the property. If the property turns out to be contaminated, its value will nose-dive, placing the lender at financial risk not only for cleanup costs, but for potential third party liability claims from property occupants and neighbors. Even cleaned up property may retain a stigma that could adversely affect the property's market value making the property difficult to resell or re-lease. Depending on the nature of the borrower's operations and property conditions, a thorough assessment may include conducting an environmental due diligence assessment of the property and compliance audit of the borrower's operations.

1. Environmental Due Diligence Assessment

Traditionally, an environmental assessment⁶⁰ is part of the lender's due diligence performed during the loan origination process. Because such due diligence predates the borrower's occupancy, reliance on such assessment would critically miss environmental releases that may have occurred during the borrower's operations, not to mention releases from concurrent operations of third parties on adjoining properties that may impact the borrower's property. Therefore, prudent lenders should either update previously performed assessments or conduct entirely new assessments *before* foreclosing.

EPA's All Appropriate Inquiries or "AAI Rule" (discussed in more detail in Section V.A. below) permits a prospective property owner to use a previously conducted Phase I ESA report if the information was collected and updated within one year prior to the date of acquisition of the subject property (*i.e.*, the date the landowner obtains title to the property).⁶¹ Certain aspects of the previously conducted assessment must be conducted or updated within 180 days prior to the date of acquisition of the property, including the conducting of interviews, visual inspections, historical records review, and the search for environmental liens.⁶² In addition to giving the lender an ability to potentially qualify itself as a BFPP, conducting a new or updated environmental assessment using the AAI Rule also permits any subsequent purchaser from the lender to qualify as a BFPP, CPO, or ILO for purposes of asserting a defense under the Superfund laws.

2. Environmental Facility Audit

A financially distressed borrower with hazardous materials operations presents additional financial risks to the lender.

Significant equipment and inventory containing hazardous materials may be present as a result of the borrower's operations on the property. In addition, the borrower's operations may be subject to federal, state, and local environmental permits which may contain rigorous closure and decontamination requirements. Because the lender could be left holding the bag with regard to removing hazardous materials and obtaining regulatory closure for the property, the lender should conduct (using an appropriately-qualified environmental consultant) an environmental audit of the borrower's facility *prior to foreclosing* to assess the potential environmental liabilities that may be associated with the borrower's hazardous materials operations.

3. Other Considerations

In addition to assessing its potential environmental liabilities, the lender should also assess if there are any measures that may help to reduce or mitigate its environmental liability exposure. Such assessment often requires the help of an experienced environmental attorney, and may involve consideration of, among other things:

- The nature and extent of the borrower's environmental indemnity, keeping in mind that an indemnity from a financially-distressed borrower may provide little, if any, comfort to the lender;
- The availability of a third party guaranty, financial assurance, or performance bond that would back-stop the borrower's indemnity;
- The availability of environmental insurance, either issued to the borrower or lender, that may cover environmental cleanup costs and third party bodily injury and property damage claims;
- The availability of state cleanup funds (*i.e.*, UST funds) that may help to pay for cleanup costs;
- For properties with tenants conducting hazardous material operations, the availability of indemnity and cleanup or closure commitments from such tenants; and
- Use of a court-appointed receiver or bankruptcy trustee to manage the property.

C. Post-Foreclosure Considerations

As previously noted in Section III.A. above, foreclosure is a necessary part of protecting a lender's security interest in the property, and as such, is permitted under the Secured Creditor Exemption. It is important to remember that the exemption is temporary in nature and is limited to the time in which the lender is seeking to sell or otherwise divest itself of the foreclosed property. Under federal and state laws, lenders should divest themselves of a foreclosed property in a *reasonably expeditious manner* using whatever *commercially reasonable means* are available or appropriate. Under California law, the property must at least be listed for sale, re-lease or other disposition with a broker, dealer or agent within twelve months of foreclosure, or alternatively, be advertised for sale, re-lease or other disposition on at least a monthly basis.⁶³

There is no time requirement for the ultimate disposition of foreclosed property. Provided the property is being actively offered for sale or re-lease and no offers of fair consideration are ignored or rejected by the lender, foreclosed property may continue to be held by the lender without the lender being considered an owner or operator of the property. The current global economic crisis has and will continue to have a significant adverse impact on the commercial real estate market for the foreseeable future. Such adverse market conditions will no doubt play a role in defining what a *reasonably expeditious manner* means in the industry.

Once a lender forecloses and takes possession of the property, the lender should exercise care with regard to environmental conditions on the property, otherwise, the lender risks losing the Secured Creditor Exemption. For example, under California law, after taking possession of the property, lenders should take steps to address hazardous materials that have been left on the property.⁶⁴

Lenders should also remember to comply with all applicable statutes, regulations, or ordinances that require disclosure of environmental information or conditions regarding the property to any person.⁶⁵ One such provision under California law requires persons selling or leasing nonresidential property who know or have reasonable cause to believe that any release of hazardous substances has come to be located on or beneath the property to provide written notice of such condition to prospective buyers and lessees.⁶⁶

Lenders may undertake actions to protect or preserve the value of its secured asset following foreclosure, including taking steps such as removing hazardous materials and wastes to prepare the property for safe public access incident to the sale or liquidation of assets. Note, however, that in those instances where lenders arrange for or sign manifests sending hazardous wastes or materials to off-site treatment, disposal, or recycling facilities, such lenders may still be independently liable under the Superfund laws as generators for having arranged for transportation and/or disposal of such wastes or materials.⁶⁷

Finally, lenders should also remember that they are not exempt from complying with long-term operation and maintenance requirements that may be imposed on the property by means of an environmental deed restriction, land use covenant, permit, or other regulatory directive. For example, a property may contain a passive vapor mitigation system installed in conjunction with previously-performed remedial activities that may need to be periodically inspected, maintained, and monitored to ensure its continued, satisfactory performance.

V. PRACTICAL CONSIDERATIONS FOR PROSPECTIVE PURCHASERS

The liability protections in the Brownfields Amendments and the recent regulatory developments discussed in Section III above have created perhaps the best climate yet to foster and support redevelopment activities. However, the impact of the recession and credit crisis has already stalled and will likely further stall or delay planned development. Nevertheless, there will be opportunities during this time for prospective purchasers to acquire environmentally impaired properties at fire sale prices and conduct transactional planning so that the "shovels are ready" when the money begins to flow for purchase and

construction. The practical considerations described below may help a prospective purchaser steer steadily through the red economy and hopefully avoid the environmental liability trappings that may come with properties that are “too good to pass up.”

A. Assessing Environmental Conditions of the Brownfields Site

Prospective purchasers of contaminated property—whether BFPPs, CPOs, or ILOs—will want to learn as much as they can about the environmental condition of the property and adjacent properties prior to acquisition. Such an undertaking will qualify prospective purchasers for the conditional Superfund liability relief, as well as establish an appropriate purchase price, confirm suitability for the intended land use, avoid potential tort liabilities, avoid (or plan for) increased construction costs and delays, and comply with the due diligence requirements imposed by lenders and investors.

Fortunately for Brownfields developers, the recent development of regulatory and technical standards makes the task of conducting an environmental assessment more straightforward than ever before. In order to qualify for liability relief, the Brownfields Amendments require a prospective purchaser to undertake all appropriate inquiries (“AAI”) to evaluate a property’s environmental conditions and assess potential liability for any contamination.⁶⁸ Congress directed EPA to develop standards and practices for conducting these inquiries, and in November 2005, EPA issued its AAI Rule, which took effect in November 2006.⁶⁹ The primary objective of the AAI process is to “identify conditions indicative of releases and threatened releases of hazardous substances on, at, in, or to the subject property.”⁷⁰ One of California’s landowner liability relief statutes discussed in Section III.B. above—CLRRRA—also imposes the requirement to conduct AAI in a manner compliant with EPA standards as one of its threshold requirements.

Virtually concurrent with EPA’s publication of the AAI Rule, ASTM International (originally known as the American Society for Testing and Materials or “ASTM”) issued a technical standard entitled, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, Designation: E 1527-05 (“ASTM E 1527-05”), to conform to the AAI Rule requirements. EPA has determined that the ASTM standard is consistent and compliant with the provisions of its AAI Rule.⁷¹ Accordingly, prospective purchasers can now use *either* the revised ASTM E 1527-05 standard *or* the specific AAI Rule requirements to satisfy compliance with the AAI requirement of the Brownfields Amendment, without the need to consult with and receive approval from EPA.

ASTM more recently issued guidelines for assessing potential vapor intrusion impacts to properties, an environmental condition that has taken front and center stage at sites with volatile organic contamination problems.⁷² Note that, presently, the AAI Rule and the ASTM E 1527-05 do not mandate compliance with these vapor intrusion guidelines. However, a prudent prospective purchaser should seriously consider conducting such an analysis (depending on the type and concentration of chemicals in the soil and groundwater beneath the site) to determine if vapor intrusion may be a significant problem as there may be long-term maintenance requirements imposed on the property to keep potential vapor problems under control.

B. Statutory and Regulatory Mechanisms for Cleanup Liability Protections for Prospective Purchasers

If a proposed Brownfields acquisition appears promising after completing the AAI process, next steps should include analyzing which statutory and/or regulatory approaches provide the greatest liability protection post-acquisition, while still promoting an expeditious, protective and cost-effective cleanup. A number of factors will shape this decision, including how contaminated the property is, whether cleanup work is already underway, who is conducting the work, which agency (or agencies) if any will oversee the cleanup, the timing of the cleanup and proposed schedule for redevelopment, and what level of investment in cleanup the prospective purchaser is willing to take on.

The statutory and regulatory approaches described below provide varying degrees of liability protection for a prospective purchaser and varying degrees of flexibility in executing the cleanup and redevelopment of contaminated property. Decisions about which path to take are best made with input from a multi-disciplinary team including environmental consultants, environmental counsel, financial advisors, and the like. In addition to liability protection provided by statutory or other regulatory mechanisms, a prospective purchaser should also consider other commercially available tools such as insurance and contractual agreements as liability-limiting measures.

1. Federal Statutory and Regulatory Liability-Limiting Options

In order to gain liability protection, a prospective purchaser may want to supplement making and documenting AAI under the Brownfields Amendments with other statutory and regulatory options, including obtaining a “reasonable steps” letter or a prospective purchaser agreement from EPA.

“Reasonable Steps” Letters: The Brownfields Amendments include a condition that purchasers who want to take advantage of the liability protection undertake “reasonable steps” with respect to hazardous substance releases at the site. On its face, the “reasonable steps” requirement suggests the purchaser has an independent obligation to address releases of hazardous substances; but this is not the case. EPA has clarified that the Brownfields Amendments do not create the same type of response and remedial obligations for the three classes of landowners that exist for other PRPs.⁷³ These classes of landowners must exercise “due care” in responding to the contamination and they must not ignore the potential dangers associated with the pre-existing contamination on the property. In a number of cases, EPA has been willing to provide “reasonable steps” letters to these classes of property owners defining what specific actions, if any, must be taken by the purchasers to maintain the statute’s liability protection.⁷⁴

Prospective Purchaser Agreements: Despite the liability relief under the Brownfields Amendments, some developers of contaminated properties may want further assurances regarding liability protection from EPA even where the developers have conducted AAI. Prior to the Brownfields Amendments, the standard tool was the PPA where EPA provides an otherwise responsible party (including subsequent owners who did not

cause the contamination) with liability relief in exchange for payment and/or cleanup work. While EPA now views PPAs as unnecessary in the post-Brownfields Amendment world (as landowners can now “self-certify” compliance with the AAI requirements without agency involvement), EPA has recognized limited circumstances where PPAs are appropriate to motivate redevelopment of contaminated property.⁷⁵

2. *California’s Statutory and Regulatory Liability-Limiting Options*

California EPA has been an active leader in promoting Brownfields redevelopment activities, and as a result, has developed a number of programs to encourage the cleanup and redevelopment of Brownfields sites derived in large part from the state statutes discussed in Section III.B above. Prospective purchasers should carefully examine the pros and cons of utilizing various state programs,⁷⁶ several of which are briefly described below.

California Land Reuse and Revitalization Act of 2004 (CLRRA): Cleanups under CLRRA provide a developer of urban infill sites with a significant liability shield as long as statutory conditions are met, including an AAI assessment. Prospective purchasers must enter into an agreement with either the DTSC or RWQCB in order to take advantage of the CLRRA broad liability protections.⁷⁷

Prospective Purchaser Agreements: California also has developed a program similar to EPA’s PPA program to remove or lessen the liability associated with purchasing contaminated property. Under this program, the DTSC or RWQCB would covenant not to sue the prospective purchaser for pre-existing contamination as long as certain remedial actions and other conditions are met. No admission of liability by the prospective purchaser would be required.⁷⁸

Unified Agency Review of Hazardous Materials Release Sites (AB 2061): This program designates a single administering agency to oversee site cleanup.⁷⁹ Certificates of completion issued under this program provide broad liability protection against cleanup demands from all state regulatory agencies with regard to the covered cleanup matters.

Voluntary Cleanup Program (“VCP”): One of California’s oldest Brownfields programs, the VCP was established in 1993 and allows motivated parties who are willing to pay for site investigation and cleanup to move forward with the work at their own pace. Modest liability protection is provided under this program—project proponents do not have to “admit to legal liability for remediation of a site” by entering into a VCP agreement with the DTSC.⁸⁰ Moreover, parties that clean up contaminated sites under this program may have greater control over the timing of the remedial work.

3. *Use of Insurance Products to Reduce Risk*

The role of insurance in Brownfields development has increased significantly in recent years, as insurance can reduce the risk for the key players in a Brownfields transaction. However enticing insurance products may appear, the utility of such mechanisms to manage liability risks is highly dependent on the type of coverage available, the dollar cap on claims, term limits of the policy, the cost of securing the insurance, and other factors.⁸¹ Accordingly, a prospective

purchaser should carefully evaluate available insurance products such as:

- **Cleanup Cost Cap**—places a limit or “cap” on cleanup costs that exceed the estimated costs of remediation;
- **Pollution Legal Liability** (aka Environmental Impairment Liability)—transfers risks for third party liabilities (personal injury, property damage, diminution in value), cleanup of unknown environmental conditions, regulatory “reopeners,” and changes in environmental regulations; and
- **Other Insurance Products** — Contractors pollution liability coverage is available for consultants and contractors who may be performing remedial work on the property. Secured creditor’s insurance may also be available to protect lenders against liabilities for environmental conditions on properties foreclosed by the lenders.

4. *Private Tools for Managing Liability*

Various private mechanisms are frequently used to manage environmental cleanup risks between parties involved with a Brownfields development. Contractual tools such as indemnities, guarantees, release and hold harmless agreements, as well as cost sharing and funding agreements for remedial actions, are commonly used to allocate liability. Note that it is not uncommon for the parties to get bogged down in negotiating such agreements.

Additionally, environmental consulting firms are frequently offering property owners guaranteed fixed-price remediation (“GFPR”) arrangements that provide the developer with certainty about cost and time for cleanup. While GFPR agreements can be extremely advantageous by providing greater certainty about costs to remediate a site, they can be fraught with pitfalls due to incomplete information about the site or the use of overly ambitious remedial technologies that fail to perform as promised. If a GFPR agreement makes sense for the cleanup, the property owner is well advised to select an appropriately qualified and well-capitalized and insured environmental firm, and to carefully monitor the activities and proposed remedial strategies during the execution of the GFPR arrangement. In addition, the owner should consider the benefits of engaging an independent remedial expert to oversee the recommendations and work of the fixed-price consultant.

5. *Living with “Long-Term Environmental Obligations”*

The revitalization of Brownfields sites typically involves cleanups that do not achieve complete removal or treatment of contamination, but instead include measures to safely manage, on a long-term basis, residual contamination that remains on or beneath the site. Regulatory agencies consider such measures to be appropriate remedial approaches to controlling residual contamination, while making the property safe for new and more productive uses.⁸²

Such long-term remedial approaches typically utilize engineering controls and/or institutional controls. Engineering controls typically involve the installation of engineered remedial

systems, such as protective soil caps, vapor extraction systems, and groundwater pump-and-treat systems. Often, such systems will require long-term operation and maintenance, the details of which may be set forth in a site or risk management plan. Institutional controls typically involve legal mechanisms, such as land use covenants or deed restrictions, which may restrict certain types of land uses or require the property owner to comply with agency-imposed requirements to prevent exposure to residual contamination on the property. As such, prospective purchasers will want to evaluate any requirements that may impose restrictions on the future use of the property or impair the future marketability of the development of such property.

C. Explore Various Funding Arrangements

In this red economy, traditional opportunities for funding redevelopment seem to have all but dried up. Creative Brownfields developers will want to seek out lesser known, but potentially lucrative, funding arrangements, including the following:

The American Recovery and Reinvestment Act of 2009 ("2009 Act"): First and foremost for potential funding opportunities is H.R. 1 signed by President Obama on February 17, 2009. The 2009 Act is chock-full of incentives and funding for Brownfields. First in line is EPA, which received \$100 million for the clean up, revitalization, and sustainable reuse of Brownfields sites. Funding under the new stimulus package is available for eligible entities through job training, assessment, revolving loan fund, and cleanup grants.

Clean, renewable and alternative energy development and projects were top winners in the economic stimulus package. The 2009 Act created a Clean Energy Finance Authority and Renewable Tax Credits that together will leverage an additional \$100 billion in private investment in the renewable energy sector. While this funding is not specific to projects located on contaminated property, EPA and other commentators are encouraging the use of currently and formerly contaminated lands for renewable energy development.⁸³

The 2009 Act also provides funding for existing environmental programs where funds can be directed toward the redevelopment of Brownfields sites, including \$600 million for Superfund cleanups and \$200 million for enforcement and cleanup of leaking underground storage tanks.⁸⁴

Brownfields Program Grants: EPA's Brownfields Program provides grants that may be used to address sites contaminated by petroleum and hazardous substances, pollutants, or contaminants (including hazardous substances commingled with petroleum). Grant funding is available for environmental assessments (each funded up to \$200,000 over three years), revolving loan funds (each funded up to \$1,000,000 over five years), and cleanup grants (each funded up to \$200,000 over three years). Eligible recipients vary by grant program though they typically include governmental agencies, quasi-governmental agencies, nonprofit organizations, and educational institutions.⁸⁵

Funding for Cleanup of Petroleum Releases: The Brownfields Amendments provide a provision that allocates 25 percent of its funding each year to assess, clean up, and ready for reuse petroleum Brownfields sites. This law expanded the original EPA Brownfields Program by including relatively low-risk petroleum sites as eligible sites for Brownfields assessment and cleanup grant funding.⁸⁶

While California's Underground Storage Tank (UST) Cleanup Program Fund is falling on hard economic times as well,⁸⁷ the State Water Resources Control Board has recently established the Contamination Orphan Site Cleanup Fund Program to provide financial assistance to eligible applicants for the cleanup of Brownfields sites contaminated by leaking petroleum USTs where there is no financially responsible party.⁸⁸ Regulations to implement this program are currently under development.

VI. CONCLUSION

As Barack Obama said in his first major address to Congress as President, the current economic environment is a chance to "discover great opportunity in the midst of great crisis." While fortune may favor the bold, developers and lenders with an interest in Brownfields sites should take heed of the significant environmental liabilities that can accompany these properties. Fortunately, there are significant safe harbors provided in federal and state laws that developers and lenders can utilize to substantially immunize themselves from these concerns. Taking the time to understand and apply these safe harbor provisions may be the key to turning brown into green in this red economy.

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ENDNOTES

- 1 “The Chinese use two brush strokes to write the word ‘crisis.’ One brush stroke stands for danger; the other for opportunity. In a crisis, be aware of the danger - but recognize the opportunity.” John F. Kennedy, Speech in Indianapolis, April 12, 1959, *available at* <http://www.quotationspage.com/quote/2750.html>.
- 2 The federal Superfund law defines a “brownfields site” as “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.” 42 U.S.C. § 9601(39).
- 3 42 U.S.C. §§ 9601 *et seq.*
- 4 CAL. HEALTH & SAFETY CODE §§ 25300 *et seq.*
- 5 As noted most recently by the U.S. Supreme Court in *Burlington Northern & Santa Fe Railway Co. v. United States*, Nos. 07-1601 & 1607 (U.S. May 4, 2009), although the federal Superfund imposes a strict liability standard, it does not mandate joint and several liability and instead permits courts to apportion Superfund liability among the responsible parties in those cases where the harm created by the contamination is theoretically capable of being apportioned.
- 6 42 U.S.C. § 9607(a); CAL. HEALTH & SAFETY CODE § 25323.5(a)(1).
- 7 “Hazardous substances” as defined under the federal Superfund is an exhaustive group of substances, and includes toxic pollutants regulated under the federal Clean Water Act, hazardous air pollutants regulated under the federal Clean Air Act, hazardous wastes, and certain chemicals regulated under the federal Toxic Substances Control Act. 42 U.S.C. § 9601(14). California has a similar definition. CAL. HEALTH & SAFETY CODE § 25316. The Superfund laws expressly exclude petroleum and natural gas (the so-called “petroleum exclusion”). *Id.*; CAL. HEALTH & SAFETY CODE § 25317(a).
- 8 The U.S. Supreme Court recently provided clarification on what it means to “arrange for” disposal of hazardous substances in *Burlington Northern & Santa Fe Railway Co. v. United States*, Nos. 07-1601 & 1607 (U.S. May 4, 2009). In that case, the Court noted that there is a wide continuum of circumstances under which a party can be deemed to be an arranger under CERCLA and that determining when “arranger” liability attaches involves a fact intensive and case-specific inquiry. In the instant case, the Court held that a seller of pesticide products subsequently released by the buyer was not liable as an arranger, notwithstanding that the seller knew that minor leaks and spills occurred during the transfer of the product from the seller to the buyer.
- 9 42 U.S.C. § 9606; CAL. HEALTH & SAFETY CODE § 25358.3(a)(1), (e).
- 10 42 U.S.C. § 9604(a); CAL. HEALTH & SAFETY CODE § 25358.3(a)(2), (b), (c).
- 11 42 U.S.C. § 9613(f)(a); CAL. HEALTH & SAFETY CODE § 25363(e).
- 12 42 U.S.C. §§ 6901 *et seq.*
- 13 CAL. HEALTH & SAFETY CODE §§ 25100 *et seq.*
- 14 USTs that contain hazardous substances which are not part of a facility that treats, stores or disposes of hazardous waste are regulated in California under a separate statutory program. *See* CAL. HEALTH & SAFETY CODE §§ 25280 *et seq.*; CAL. CODE REGS. tit. 23, §§ 2610 *et seq.*
- 15 EPA Closure Performance Standard, 40 C.F.R. § 264.111; CAL. CODE REGS. tit. 22, § 66264.111.
- 16 42 U.S.C. §§ 6924(u) & 6928(h); EPA Corrective Action Program, 40 C.F.R. §§ 264.100, 264.101; CAL. HEALTH & SAFETY CODE § 25187; CAL. CODE REGS. tit. 22, §§ 66264.100, 66264.101.
- 17 40 C.F.R. Part 264, Subpart H (Financial Requirements); CAL. CODE REGS. tit. 22, ch. 14, Art. 8.
- 18 CAL. WATER CODE §§ 13000 *et seq.*
- 19 “Waste” is defined as any and all sewage and waste substances, whether liquid, solid, gaseous, or radioactive, that is of human or animal origin, including manufacturing and processing operations. CAL. WATER CODE § 13050(d).
- 20 CAL. WATER CODE §§ 13267 & 13304.
- 21 42 U.S.C. § 9601(20)(A); CAL. HEALTH & SAFETY CODE § 25548.2.
- 22 42 U.S.C. § 9601(20)(A).
- 23 The California security interest exemption is provided in Chapter 6.96 of the California Health and Safety Code, §§ 25548 *et seq.* In contrast to the federal exemption which applies solely to federal Superfund law, the state exemption applies to any state or local statute, regulation or ordinance that requires a cleanup action and authorizes the imposition of penalties or fines, or the recovery of damages, in connection with an actual release of hazardous substances. *See* CAL. HEALTH & SAFETY CODE § 25548.2(a)(1). Note that the state exemption does not exempt the lender from claims brought under common law theories, such as nuisance, trespass, strict liability or negligence. In addition, the statute includes an extensive list of activities which are ineligible for the Secured Creditor Exemption, including holding a security interest for investment purposes, and causing or contributing to the release of hazardous materials as a result of the lender’s actions or failure to act. *See* CAL. HEALTH & SAFETY CODE § 25548.4. Finally, a lender may be liable for damages resulting from its gross negligence or willful misconduct. *See* CAL. HEALTH & SAFETY CODE § 25548.2(b).
- 24 *See e.g., Guidice v. BFG Electroplating & Manufacturing Co.*, 732 F.Supp. 556 (W.D. Pa. 1989) (holding that bank became “owner” under federal Superfund after foreclosure).
- 25 Perhaps the most famous, or infamous, case was *United States v. Fleet Factors Corp.*, 901 F.2d 1550 (11th Cir. 1990), which held that that ability to exercise control over environmental matters constituted participation in management, whether or not such control was actually exercised.
- 26 National Oil and Hazardous Substances Pollution Contingency Plan, Lender Liability Under CERCLA, 57 Fed. Reg. 18344 (Apr. 29, 1992) (Final Rule).
- 27 *Kelly v. EPA*, 15 F.3d 1100 (D.C. Cir. 1994).
- 28 After the court decision, EPA and the U.S. Department of Justice (DOJ) issued the “Policy on CERCLA Enforcement Against Lenders and Government Entities that Acquire Property Involuntarily” (September 22, 1995), which stated that the EPA and DOJ were not precluded from following the provisions of the rule as enforcement policy. *See also* “Revitalizing Contaminated Site: Addressing Liability

- Concerns – The Revitalization Handbook” (May 2008), hereinafter referred to as “EPA Revitalization Handbook.”
- 29 Asset Conservation, Lender Liability, and Deposit Insurance Protection Act, Pub. L. No. 104-208, 110 Stat. 3009-462.
- 30 42 U.S.C. §§ 9601(20)(E)(i), 9601(20)(G)(iv).
- 31 42 U.S.C. § 9601(20)(F)(i).
- 32 42 U.S.C. § 9601(20)(F)(ii).
- 33 42 U.S.C. § 9601(20)(F)(iv); *see also* “CERCLA Lender Liability Exemption: Updated Questions and Answers” (July 2007). Further discussion of such excluded activities is provided in Section III *Practical Considerations for Lenders* below.
- 34 42 U.S.C. § 9601(20)(E)(ii).
- 35 42 U.S.C. §§ 9607(b)(3), 9601(35)(A)(i).
- 36 <http://www.epa.gov/swerosps/rcrabf/pdf/memoppa.pdf>
- 37 US EPA Memorandum, “Interim Guidance Regarding Criteria Landowners Must Meet in Order to Qualify for Bona Fide Prospective Purchaser, Contiguous Property Owner, or Innocent Landowner Limitations on CERCLA Liability” (March 6, 2003) (hereafter referred to as “EPA Common Elements Guidance”), *available at* <http://www.epa.gov/compliance/resources/policies/cleanup/superfund/common-elem-guide.pdf>.
- 38 42 U.S.C. §§ 9607(r) & 9601(40). BFPPs should be aware of the “windfall lien” provision in the Brownfields Amendments which permits EPA to recover from the BFPP the increase in the property’s value attributable to the government’s cleanup actions. 42 U.S.C. § 9607(r); *See* U.S. EPA, “Windfall Lien Administrative Procedures” and “Model Notice of Intent to File a Windfall Lien Letter,” (January 8, 2008), *available at* <http://www.epa.gov/compliance/resources/policies/cleanup/superfund/wf-admin-mem.pdf>.
- 39 EPA provided such landowners some measure of protection in its 1996 “Final Policy Toward Owners of Property Containing Contaminated Aquifers.” Not only did EPA state that it would not require cleanup or the payment of cleanup costs if the landowner did not cause or contribute to the contamination, it also stated that if a third party sued or threatened to sue, EPA would consider entering into a settlement with the landowner covered under the policy to prevent third-party damages being awarded. <http://www.epa.gov/swerosps/bf/pdf/aquifer.pdf>. *See also* US EPA “Interim Enforcement Discretion Guidance Regarding Contiguous Property Owners” (January 13, 2004), *available at* <http://www.epa.gov/compliance/resources/policies/cleanup/superfund/contig-prop.pdf>.
- 40 Section 107(q)(1)(C) of the Brownfields Amendments provide that a person who cannot qualify as a CPO because contamination is known or discovered during the AAI phase may still qualify for landowner liability protection as a BFPP, as long as the BFPP criteria in 42 U.S.C. § 101(4) are met.
- 41 If contamination is discovered and exists on the ILOs property, then this liability protection is not available. However, this category may help owners of contaminated property who purchased property prior to 2002 and had no knowledge of contamination who cannot not otherwise take advantage of the BFPP protection (which only covers post-2002 acquisitions).
- 42 US EPA Memorandum, “Enforcement Discretion Guidance Regarding the Applicability of the [BFPP] Definition in CERCLA § 101(40) to Tenants” (January 14, 2009).
- 43 *Id.* at 2.
- 44 *Id.* at 4. The implications of the second situation are significant – the tenant has no independent duty to carry out the BFPP requirements as long as the owner is doing so. Even if the owner loses BFPP status (through no fault of the tenant), EPA may still exercise its enforcement discretion not to pursue a tenant as a responsible party under the Superfund laws.
- 45 CAL. HEALTH & SAFETY CODE §§ 25395.60 *et seq.* Although CLRRRA is scheduled for repeal on January 1, 2010, a bill has been introduced to make these liability protections permanent. *See* SB 143 (Cedillo).
- 46 CAL. HEALTH & SAFETY CODE § 25395.81.
- 47 *Id.* § 25395.79.2.
- 48 *Id.* § 25395.98.
- 49 *Id.* §§ 33459 *et seq.*
- 50 *Id.* § 33459.1.
- 51 *Id.* § 33459.3(e)(2)-(4).
- 52 *Id.* §§ 25260 *et seq.*
- 53 *Id.* § 25262.
- 54 *Id.* § 25264(c).
- 55 42 U.S.C. § 9601(20)(F); CAL. HEALTH & SAFETY CODE § 25548.1(k).
- 56 *Id.*
- 57 *Id.*
- 58 42 U.S.C. § 9601(20)(G)(v); CAL. HEALTH & SAFETY CODE § 25548.1(k)(2)(A).
- 59 42 U.S.C. § 9601(20)(G)(ii); CAL. HEALTH & SAFETY CODE § 25548.1(k)(2)(B).
- 60 Environmental assessments are normally performed in phases. A Phase I assessment is noninvasive (*i.e.*, no drilling and sampling) and generally relies on a visual inspection of the property and research (through interviews and records reviews) of the environmental history of the subject and surrounding properties. As noted below in Section IV.A, ASTM International developed ASTM E 1527-05 as a standard for performing Phase I ESAs. Depending on the results of the Phase I assessment, a more detailed and involved Phase II assessment may need to be performed to investigate the nature and extent of environmental contamination on the property. Such assessment may include drilling, sampling and testing of soil, installation and sampling of groundwater monitoring wells, and sampling and testing of vapor, indoor air and building materials.
- 61 EPA Standards & Practices, 40 C.F.R. § 312.20(a).
- 62 EPA Standards & Practices, 40 C.F.R. § 312.20(b).
- 63 CAL. HEALTH & SAFETY CODE § 25548.5(a)(1). Federal lender liability law does not define *commercially reasonable means*. A similar twelve-month period was cited by EPA in its former “Lender Liability Rule,” which was promulgated in 1992 but vacated by a federal court in 1994. *See supra* notes 25 and 26.
- 64 CAL. HEALTH & SAFETY CODE § 25548.4(i).
- 65 CAL. HEALTH & SAFETY CODE § 25548.5(b).
- 66 CAL. HEALTH & SAFETY CODE § 25359.7(a).
- 67 *See* EPA’s Lender Liability Rule, 57 Fed.Reg. 18379.
- 68 42 U.S.C. § 9601(35)(B).
- 69 “Standards and Practices for All Appropriate Inquiries,” 70 Fed. Reg. 66070, 66086 (Nov. 1, 2005) (Final Rule). The

- rule is lengthy and articulates a number of specific activities required to meet the AAI standard. EPA has a number of memoranda and guidance documents to help navigate through the AAI Rule. See, e.g., http://www.epa.gov/brownfields/aa/aa_final_factsheet.pdf; <http://www.epa.gov/fedrgstr/EPA-WASTE/2005/November/Day-01/f21455.htm>.
- 70 *Id.*
- 71 *Id.* at 66081.
- 72 Standard Practice for Assessment of Vapor Intrusion into Structures on Property Involved in Real Estate Transactions, ASTM Designation: ASTM Designation E2600-08.
- 73 EPA Common Elements Guidance, see *supra* note 35.
- 74 EPA Common Elements Guidance, see *supra* note 35, Attachment C, for a sample Federal Superfund Reasonable Steps Letter.
- 75 EPA has expressed willingness to execute PPAs where project completion is jeopardized, substantial public benefits exists, jobs are created, long blighted, under-utilized property is revitalized, or environmental justice is served. EPA's Revitalization Handbook, see *supra* note 35 at 23-25.
- 76 DTSC Fact Sheet, "Brownfields Initiatives" (Jan. 2007), *available at* http://www.dtsc.ca.gov/SiteCleanup/Brownfields/upload/BF_Initiative.pdf.
- 77 DTSC Fact Sheet, "California Land Reuse and Revitalization Act of 2004" (May 2006), *available at* http://www.dtsc.ca.gov/SiteCleanup/Brownfields/upload/Brownfields-CLRRRA_FS.pdf. As previously noted in footnote 43, CLRRRA will be repealed on January 1, 2010, although a bill has been introduced to make these liability protections permanent. See SB 143 (Cedillo).
- 78 DTSC Fact Sheet, "Prospective Purchaser Program" (Dec. 2004), *available at* http://www.dtsc.ca.gov/SiteCleanup/Brownfields/upload/BF_FS_ProspectivePurchaser_11-04.pdf.
- 79 DTSC Guidance, "Questions and Answers for AB2061" (last updated Nov. 14, 2003), *available at* <http://www.calepa.ca.gov/legislation/1996/ab2061.htm>.
- 80 DTSC Guidance, "Voluntary Cleanup Program" (May 2006), *available at* http://www.dtsc.ca.gov/SiteCleanup/Brownfields/upload/Brownfields-VCP_FS.pdf.
- 81 Additionally, the availability of such insurance products are highly dependent on site-specific conditions, including the nature and extent of contamination conditions, remedial work being performed (if any), the contractor performing such work, to name a few.
- 82 EPA Revitalization Handbook, see *supra* note 26 at 37-40.
- 83 <http://www.epa.gov/renewableenergyland/>; <http://subscript.bna.com/pic2/eddg.nsf/id/BNAP-7PFMR7?OpenDocument>; <http://www.nemw.org/bfnews0902.pdf> (see item 2); http://www.landpolicy.msu.edu/modules.php?name=News&op=viewlive&sp_id=77.
- 84 <http://epa.gov/brownfields/eparecovery/index.htm>
- 85 <http://epa.gov/brownfields/pilot.htm>; http://epa.gov/brownfields/assessment_grants.htm.
- 86 <http://www.epa.gov/oust/rags/pbgrants.htm>.
- 87 http://www.waterboards.ca.gov/water_issues/programs/ustcf/docs/claim_application_forms/ustcf_claimantnotice012809.pdf.
- 88 http://www.waterboards.ca.gov/water_issues/programs/ustcf/oscf.shtml.

Moses Lake Contaminated Wellfield Superfund Site

Moses Lake, Washington
City of Moses Lake

Project Issues

The City of Moses Lake water supply was contaminated by trichloroethene (TCE) related to the operation of the former Larson Air Force Base, now the Moses Lake International Airport.

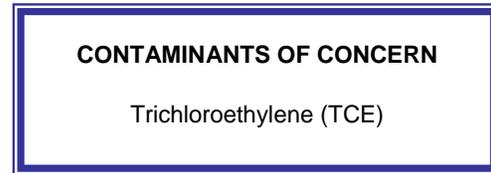
Responsibilities

DBS&A provided expert services to the City of Moses Lake related to TCE contamination of the City's water supply and the City's efforts to ensure the characterization and remediation of contamination in soil and groundwater, to identify potentially responsible parties (PRPs), and to recover the City's response costs.

DBS&A reviewed and evaluated historical documents related to the development and operations of the former Larson Air Force Base to identify and prioritize potential source areas and PRPs. DBS&A reviewed technical reports to evaluate hydrogeologic conditions, and the effectiveness of characterization efforts and proposed remedies.

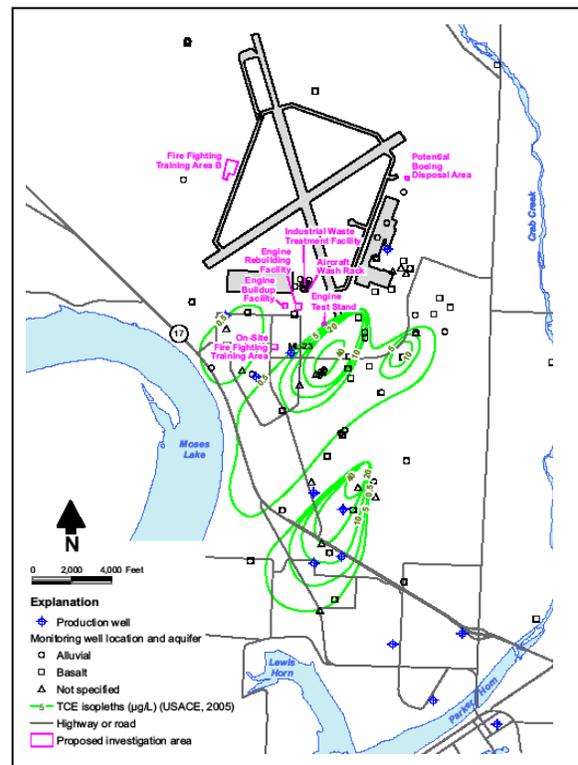
DBS&A reviewed the United States Environmental Protection Agency's (EPA) draft Proposed Plan and provided detailed comments on the plan in accordance with criteria in the National Contingency Plan.

DBS&A represented the City in several meetings with EPA and the Washington Department of Ecology to discuss those comments and provided detailed



recommendations for additional characterization.

The technical comments and recommendations provided to EPA were instrumental in EPA's redevelopment of the Proposed Plan and the adoption of an interim remedy pending additional characterization of hydrogeologic conditions and contamination in the fractured basalt aquifers and the potential source areas.



Daniel B. Stephens & Associates, Inc.

Evaluation of Perchlorate and Trichloroethylene Contamination

City of Rialto, California

Project Issues

The City of Rialto is home to the former Rialto Ammunition Storage Point (RASAP) which was developed during World War II. After the war, the facilities were used for a variety of industrial purposes, including the development of the Minute Man Missile and fireworks manufacturing and storage. These operations resulted in perchlorate and VOC contamination of soil and groundwater. The groundwater plume is more than six miles long and has led to the removal from service of five of City of Rialto's 13 wells.

The City of Rialto has been working closely with the U.S. Environmental Protection Agency (EPA), the Santa Ana Regional Water Quality Control Board (RWQCB), and the State Department of Toxic Substances Control (DTSC) to assemble the responsible parties to restore local groundwater basins. The City filed a lawsuit against more than 40 potentially responsible parties (PRP) to help assure the swiftest clean up of the perchlorate contamination. A portion of the Rialto-Colton basin has since been designated as the B.F. Goodrich Superfund site.

Responsibilities

The City of Rialto retained DBS&A to provide hydrogeologic services and expert assistance related to the perchlorate and VOC contamination. DBS&A project tasks included evaluation of local and regional hydrogeology and historic operations to develop a solid conceptual model of contaminant migration. DBS&A evaluated potential contaminant sources, and made detailed recommendations

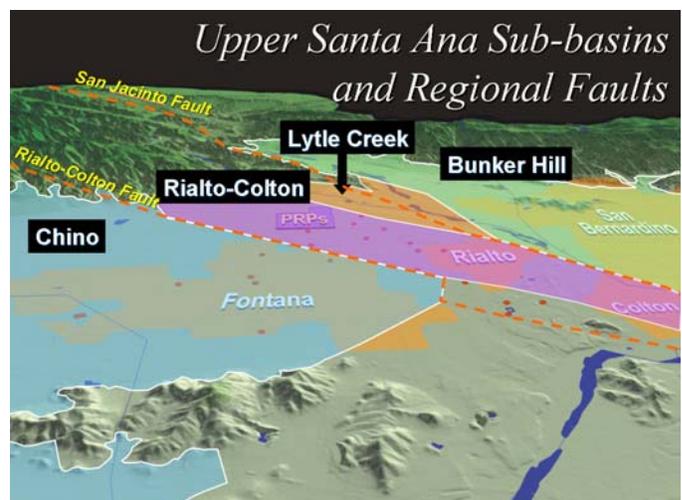
CONTAMINANTS OF CONCERN

Perchlorate
Trichloroethylene (TCE)
Perchloroethylene (PCE)

regarding source investigations and basin-wide characterization and remedial actions. DBS&A created an extensive environmental database and geographic information system (GIS) containing groundwater and soil chemistry data, groundwater elevation data, and other pertinent data.

DBS&A represented the City at meetings with government agencies and in providing written comments to Santa Ana RWQCB, EPA and DTSC on PRP work plans, site assessment reports, remedial action plans, and other relevant documents.

Dr. Stephens and the project team prepared a number of expert opinion reports and provided expert testimony in support of Rialto for a Clean-Up and Abatement Order Hearing by the SWRCB.



Daniel B. Stephens & Associates, Inc.

Griggs and Walnut Groundwater Plume

Las Cruces, New Mexico

City of Las Cruces, Dona Ana County

Under contract with the City of Las Cruces, DBS&A is providing technical support on the Griggs-Walnut Street Plume Superfund Site. Work has included preparing a Good Faith offer letter and commenting on the Special Notice Letter and Attached Scope of the Agreement to Fund. The project included meeting with the City, Doña Ana County, the U.S. Environmental Protection Agency (EPA) and its consultants, as well as the New Mexico Environment Department to develop a focused scope of work to complete the Remedial Investigation (RI). To prepare for these meetings, DBS&A reviewed existing reports on the project and evaluated the existing conceptual site model (CSM) for contaminant transport and exposure.

Throughout the RI/FS (Remedial Investigation/Feasibility Study), DBS&A supported the City in its review and refinement of data quality objectives (DQOs) and associated sampling strategy, and performed technical review of the final RI and FS that had been prepared by the EPA's consultant for the site. This included support in the development of the groundwater fate and transport modeling, as well

as a detailed analysis of the proposed remedy and associated costs. As part of this analysis, DBS&A presented a revised CSM for the site that had the effect of focusing the remedial action objectives (RAOs) on a smaller portion of the aquifer, resulting in lower remediation costs.

Based in part on recommendations proposed by DBS&A, the City of Las Cruces was able to work cooperatively with the EPA in proposing a site remedy that meets EPA's RAOs while relying heavily on existing infrastructure, thus resulting in significant cost savings for the City.

DBS&A was selected in a competitive bid process to be the engineering contractor for the Remedial Design of the selected remedial alternative. Currently, DBS&A is working on the preliminary design for the treatment system, including extraction well rehabilitation, treatment compound and building, raw water piping, air stripping equipment and evaluation of potential metals treatment and finished water pipelines. The treated water will be pumped to an existing City storage tank and used as potable water by the residents of the City of Las Cruces.



Daniel B. Stephens & Associates, Inc.

CERCLA Investigation and Closure Plan

Historic Magnesium Processing Plant
Henderson, Nevada

DBS&A provided comprehensive hydrogeologic site characterization and oversight required to support the closure of a series of effluent disposal ponds associated with a historic World War II era magnesium ore refining facility in accordance with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, "Superfund") Guidance. The 2,332-acre site is located in a rapidly growing portion of Henderson Nevada, where the Site is slated for residential redevelopment.

The site consists primarily of former industrial wastewater effluent ponds and conveyance ditches into which various industrial process wastewaters from the site vicinity were discharged from the early 1940s through the mid 1970s.

DBS&A manages, directs, and oversees the hydrogeologic characterization for site. Over a period of six years, DBS&A has:

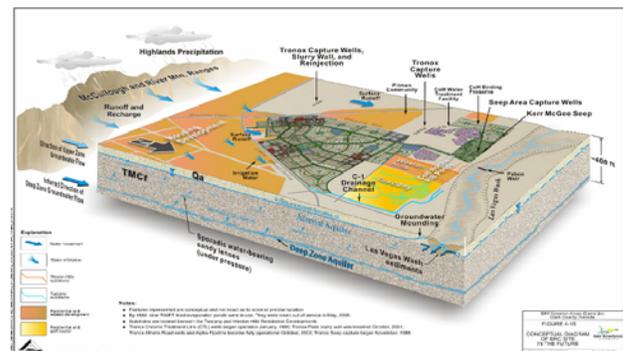
- Interpreted Site geologic, soil, groundwater, hydrologic, chemical, and geotechnical data to support the description of the conceptual site model
- Designed and oversaw extensive field investigations, utilizing multiple drilling techniques to collect chemical and physical data for laboratory analysis of the chemical and physical samples. The investigations included hydrologic characterization of multiple aquifers and the development of site-specific background for metals in soils.
- Designed and oversaw aquifer and soil hydraulic testing program.
- Conducted Site analytic and numerical groundwater flow and chemical transport modeling to determine onsite chemical

CONTAMINANTS OF CONCERN

VOCs, SVOCs, TDS, Perchlorate,
Metals, PCBs, Dioxins and Furans,
Pesticides and Radiochemicals

migration, the potential for historic migration between site water-bearing zones, and the potential for impact by off-site chemical impacts. Particle Track modeling was used to evaluate monitoring networks and points of evaluation for remedial decision making.

- Used environmental tracers and stable isotopes to evaluate the connectivity of Site water-bearing zones and to assess the origin of high TDS water of suspected paleo-evaporite origin.
- Participated in public accountability meetings with technical, legal, and public representatives of State, County, and City governments, other potentially responsible parties, and the local citizens' Remediation Advisory Board.
- Designed groundwater monitoring program; conducted interpretation and reporting of periodic monitoring data from over 170 site monitoring wells.



Daniel B. Stephens & Associates, Inc.

Evaluation of Chlorinated Solvents Emanating from GBF/Pittsburg Landfill

Contra Costa County, California

Project Issues

This project involved a multi-party CERCLA contribution action involving the GBF/Pittsburg Landfill site (Landfill), a closed landfill located in eastern Contra Costa County between the Cities of Antioch and Pittsburg, California. A large plume of chlorinated solvents emanated from the Landfill.

Downgradient landowners bordering the GBF/Pittsburg Landfill planned to develop the property and were concerned about the on-going and proposed remedies to address contamination associated with releases from the GBF/Pittsburg Landfill; as well as the potential human health risk from vapor intrusion to indoor air of contaminants in groundwater and soil gas at their property resulting from release of contaminants from the GBF/Pittsburg Landfill. Of particular concern was the planned reliance on natural attenuation, rather than active remediation, to clean up the groundwater plume.

Responsibilities

Farella Braun + Martel LLP, on behalf of Albert D. Seeno Construction Company and West Coast Home Builders, Inc., retained DBS&A to conduct a comprehensive review and evaluation of recent and historic consultant reports and data.

DBS&A determined the presence of CERCLA or RCRA hazardous waste in the landfill and the identified entities responsible for its disposal using historical documents, testimony, and waste manifests.

DBS&A conducted an examination and evaluation of the factors affecting soil gas migration and the adequacy of the soil vapor characterization that had been conducted at the site (taking into account anticipated applicable regulatory requirements of

CONTAMINANTS OF CONCERN

Trichloroethylene (TCE)

Perchloroethylene (PCE)

Carbon tetrachloride

Metals

the California Environmental Protection Agency [Cal/EPA]).

The technical feasibility and cost of remedies that would be required to mitigate (1) the chemical impacts to groundwater and (2) the current and potential future chemical vapor intrusion impacts to and below the proposed development property were evaluated. Our evaluation of the groundwater capture system indicated that the current extraction system was not capturing the chemicals migrating from the landfill. It was also determined that natural attenuation was not occurring at a rate sufficient to stop downgradient migration of the plume using EPA-recommended approaches.

DBS&A determined that migration of chemical vapors in the vadose zone, combined with migration of volatile organic compounds (VOCs) in the groundwater and subsequent vaporization into the overlying soils, were resulting in VOC concentrations that presented a significant threat to future residents of the proposed development.

Dr. Stephen J. Cullen and Dr. Nicole T. Sweetland prepared expert opinion reports and declarations in support of Seeno.

Results

Client reached a favorable settlement following completion of expert reports and depositions.



Daniel B. Stephens & Associates, Inc.