

Philip S. Childers, CEM, CAC

Senior Environmental Manager

Mr. Childers has been working in environmental consulting since 2003, with 6 years of prior experience working at Converse Consultants. He is a graduate of the Nevada higher education system and holds a degree in Environmental Science. He is a Certified Environmental Manager (CEM), California Asbestos Consultant (CAC), Nevada licensed asbestos consultant and California Certified Lead Based Paint Inspector/Risk Assessor.

His experience includes Phase I Environmental Site Assessments (ESA), Phase II ESAs, and management of remediation projects on commercial and industrial properties. He has completed Lead-Based Paint Surveys, Turn-key Asbestos Abatement projects, and Indoor Air Quality (IAQ) investigations. He has completed Hazardous Building Materials Surveys (HBMS) for municipal clients and conducted the asbestos survey at the NV Energy Ried Gardner Power Generating plant to facilitate goals of strategic demolition at the plant. Most recently he managed a large turn-key asbestos abatement project located at JFK International Airport in New York City and completed a turn-key LBP removal of a generator building at a US government military base. Mr. Childers has completed Indoor Air Quality (IAQ) projects for residential, commercial, and industrial sector clients including moisture intrusion assessments (with fungal evaluation) for clients with occupied commercial hotel buildings.

Hazardous Building Materials Survey (HBMS)

Mr. Childers has completed HBMS assessments for municipal clients in California, Nevada, New York, and Oklahoma. The HBMSs have included both destructive and non-destructive sampling methods for asbestos, lead based paint (LBP), lead in building materials, mercury, low level radioactive materials, and other hazardous materials. Mr. Childers is an EPA Lead Inspector and Risk Assessor, Asbestos Inspector, Management Planner, Project Designer and Project Monitor.

Asbestos

Mr. Childers has completed asbestos surveys for law firms, architectural firms, construction companies, real estate companies, and smaller clients such as residential home owners. He also has completed NESHAP surveys for NDOT and Caltrans construction projects. He has completed asbestos abatement projects of high rise office buildings, commercial buildings, and residential apartment complexes.

Lead

Mr. Childers has completed numerous EPA compliant lead risk assessments and LBP inspections in target housing and child occupied facilities. LBP in commercial buildings is not regulated by the EPA; however, clients often request LBP inspections to ensure

EDUCATION

- B.S., Environmental Studies, University of Nevada Las Vegas (UNLV), 2004

REGISTRATIONS/CERTIFICATIONS

- Nevada Certified Environmental Manager
- Nevada Licensed Asbestos Consultant
- Nevada Certified Lead Based Paint Risk Assessor
- California Asbestos Consultant (CAC)
- Oklahoma Asbestos Inspector, Management Planner, Project Designer, Project Monitor
- Oklahoma Lead Based Paint Risk Assessor
- New York Asbestos Inspector, Project Designer and Project Monitor

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compliance with OSHA regulations during construction activities. Mr. Childers has completed numerous LBP inspections and assessments for clients with strategic renovation or demolition projects. He also has completed lead in soil characterization and remediation.

Indoor Air Quality

Mr. Childers has conducted many IAQ assessments throughout the course of his environmental consulting career. He has conducted fungal assessments for municipal, commercial, and residential clients. He specializes in thermal imaging along with traditional methods such as moisture measurements and airborne fungal sampling to determine the extent of hidden fungal contamination. He recently completed a moisture intrusion investigation and fungal assessment on an occupied hotel building. The project involved isolated exterior moisture penetration testing to determine the source of the moisture infiltration, core sampling of the building exterior to determine the extent of the exterior wall system failure and fungal/moisture assessment of interior rooms to determine the extent of fungal contamination hidden inside wall cavities. Most recently he has completed indoor fungal assessments for the City of Sacramento and clients in the insurance industry (California), providing independent third party IAQ report reviews when requested.

Phase I Environmental Site Assessments

Mr. Childers has conducted Phase I ESAs mostly on commercial, industrial, and multifamily residential and retirement-assisted living properties with sensitive populations. His clients included residential and commercial developers, property management companies, environmental consulting companies, and private parties. His work has included field reconnaissance for the identification of potential environmental hazards in connection with the subject and adjacent properties, conducting interviews with relevant parties, review and interpretation of aerial photographs, topographic maps, and Sanborn maps. Mr. Childers performed regulatory agency records and compliance review, building permit records review, interpretation of environmental database reports, and report writing. Mr. Childers also has experience with EDR's Phase I Parcel Platform software.

Phase II Environmental Site Assessments

Mr. Childers has been involved in the completion of Phase II ESAs in both Nevada and California. His most recent project included a site associated with historic mining activities in Nevada County, California. He has also completed Phase II ESA subsurface investigations at commercial and residential properties in Washoe and Clark County, Nevada. His work has included Brownfield sites, dry cleaning facility investigations, underground storage tank investigations, historic and operational automotive filling stations, and various auto related facilities. His Phase II ESA experience has included soil, soil gas and groundwater sampling for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), various heavy metals, petroleum hydrocarbons, and polychlorinated biphenyls (PCBs).

Environmental Remediation

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Mr. Childers has been involved environmental remediation projects in both Nevada and Illinois. His remediation experience has included field screening for heavy metals using X-ray Fluorescence technology, soil sampling for leachable contaminants, and treatment of hazardous metals in soil with both in situ and ex situ treatment methods.

Relevant Experience

Turn-Key Lead Based Paint Removal of a Generator Building at a US Government Military Base: Mr. Childers has completed a turn-key abatement project of a large generator building located on a US Government military base. The project included completing bid specifications, contractor scope of work, project oversight and final clearance. The generator building is critical to base operations could not be de-energized during the abatement process and alternative dry remediation methods were implemented including sand blasting. This caused the need for additional compliance measures with OSHA safety regulations that were successfully implemented during the project.

Turn-Key Asbestos Abatement Project for Industrial Flight Kitchen, JFK International Airport: Mr. Childers has completed a turn-key abatement project of a commercial flight kitchen for a multinational client in the airline industry. The project included conducting the initial asbestos survey, completing the project design, bid specifications, contracting, project oversight and final clearance. The flight kitchen is a 24-hour, round the clock operation creating a high level of complexity both with the project design, abatement design and client coordination. The abatement involved constructing multiple zero emission containments with clearance followed by immediate tear down and set up to minimize disruption to the clients' food production process.

Former Wonder Bread Factory, Pre-Renovation HBMS: Mr. Childers has completed a Hazardous Building Materials Survey (HBMS) of the former Wonder Bread Factory Complex located in Sacramento, CA. The survey included sampling for asbestos, lead based paint or lead containing materials, and other hazardous materials including polychlorinated biphenyls (PCBs) and Mercury. Hidden asbestos subflooring materials were identified during the survey and the client was provided with a cost estimate for the needed abatement.

Branch Center Building, IAQ: Mr. Childers has completed an Indoor Air Quality (IAQ) and Moisture Intrusion Assessment at the Branch Center Building located in Sacramento, California. The IAQ included conducting a rigorous visual inspection for suspect visible mold growth and moisture intrusion. The reason for the assessment was to investigate employee complaints of mildew and mold-like odors and determine if the cause of hay fever symptoms and upper respiratory discomfort being reported was caused by airborne fungal contamination. After an extensive investigation, areas of concern in the building were identified due to roof leaks and a previous flood that had occurred due to burst chiller lines. Recommendations included improving the building's filtration system and a limited

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moisture intrusion study to assess the condition of the roof and to isolate areas where the roof membrane was potentially failing.

Four Points Hotel, Moisture Penetration Study and Fungal Evaluation: Mr. Childers has completed a complex moisture penetration study and fungal evaluation of an occupied hotel located in Oklahoma City, Oklahoma. The building had previously been evaluated due to noticeable moisture intrusion and fungal growth on interior perimeter walls after rainfall events; however, the cause of the moisture intrusion and extent of the fungal contamination was not adequately defined. Mr. Childers recommended a comprehensive moisture penetration study utilizing Spray Rack Testing to determine the location of moisture penetration points through the exterior walls of the building. In addition, core samples were taken to observe the actual condition of the EIFS wall system. After the testing was completed, the probable cause of the moisture intrusion was determined to be delamination of the exterior EIFS wall cladding due to improper installation during construction. Fungal contamination was found to be approximately 20,000 SF with remediation and repair costs estimated at approximately \$2.5 million.

City Place High Rise Building, Asbestos, Lead and IAQ Services: Mr. Childers has completed asbestos, lead based paint, and indoor air quality consulting services in support of renovation projects at the City Place High Rise Building located at 501 Robinson Ave, Oklahoma City, Oklahoma. City Place is one of Oklahoma City's preeminent landmarks and, when completed in 1931, was the city's first skyscraper. City Place Management often have abatement projects that need to be completed before tenant spaces can be renovated to facilitate a new lease. Time is of the essence as these projects are often predicated on a move-in date by new tenants. Recently Mr. Childers managed four multi-story abatement projects for City Place Management, removing a total of 6,000 LF of asbestos piping insulation and 24,000 SF of asbestos floor tile products.

Page Woodson Historic School, Asbestos Abatement: Mr. Childers has completed asbestos abatement services for Lingo Construction Services at the Page Woodson School in Oklahoma City, Oklahoma. The project involved coordinating with community stakeholders and the National Park Service due to the properties listing on the National Register of Historic Places. The vision for the building was to convert the building into a modern apartment building while preserving the historic nature of the property. Mr. Childers was involved with all phases of the asbestos abatement work providing conceptual pre-planning, a complex multi-phase/multi-task Project Design, bid documents and turn-key asbestos abatement services. The asbestos abatement included the removal of 5,700 LF of asbestos piping insulation, 1,600 SF of asbestos boiler insulation, and 17,000 SF of asbestos floor tile.

Buena Vista Springs I & II, Pre-Demolition Hazardous Building Material Survey: Mr. Childers has completed a comprehensive asbestos, lead, and other hazardous materials survey of the Buena Vista Springs Apartment Complex in North Las Vegas, Nevada. Mr. Childers collected over 1,000 bulk asbestos samples and 50 paint chip samples from 72

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buildings at the property in preparation for scheduled demolition activities. His consulting services included providing:

- Review and interpretation of the analytical data and reporting providing conclusions and recommendations
- Preparation of abatement specifications for asbestos, lead, PCBs, mercury, radioactive materials and other hazardous materials
- Assist the City of North Las Vegas with utility coordination, bid phase support, and construction management support services

168 South Aurburn St, Hazardous Materials Phase II: Mr. Childers completed a comprehensive Phase II subsurface investigation for contamination in soil, soil gas, and groundwater due to the presence of multiple leaking underground storage tanks and a historic filling station. Contaminates of concern included VOCs and metals in soil and groundwater. Conducted under an EPA Brownfield Grant and administered by the City of Grass Valley, Mr. Childers conducted field sampling for VOCs in soil gas, soil and groundwater, and Lead and Arsenic in the soil and groundwater. His work also included review and interpretation of analytical data and reporting providing conclusions and recommendations.

Pullman Business Park, Soil Remediation: Mr. Childers completed comprehensive soil remediation at the historic Pullman Park Industrial Complex located in Chicago, IL. Conducted under an EPA Brownfield Grant and administered by the Chicago Brownfields Initiative, Mr. Childers conducted soil remediation for heavy industrial contamination due to historic industrial use dating back to 1850. His work included supervising daily operations of demolition and remediation contractors; field screening using X-Ray Fluorescence (XRF) screening for Lead, Chromium, and Arsenic; conducting soil sampling for regulated metals; delineating and treating contaminated soils (both in-situ and ex-situ methods); and characterizing, delineating, and excavating large areas of hydrocarbon contamination.