Camarie Skarovsky Perry, M.S.

SENIOR SCIENTIST II

CONTACT INFORMATION

ToxStrategies, A BlueRidge Life Sciences Company
190 T C Jester Blvd., Suite 420
Houston, TX 77007
(Home office in Austin, TX)
Phone (512) 366-3209
cperry@toxstrategies.com

PROFESSIONAL PROFILE

Camarie Perry is trained in toxicology and human health risk assessment and has more than 25 years of experience. Her specific areas of expertise include human health toxicology; complex human health risk assessment; assembly, analysis, and summary of toxicological information; development of toxicity factors; remediation, including cleanup-level calculation and development; risk/hazard calculations, and homeland security issues related to toxicology and health effects. She has extensive experience with state and federal remediation sites and analysis of sampling data. Ms. Perry has summarized complex human and animal toxicity information, written scientific papers, and contributed to the development of rapid risk assessment tools for various chemical and biological agents.

Ms. Perry has experience in site evaluation and cleanup under EPA and various state criteria. Her expertise also extends to occupational safety evaluations, as well as food, consumer product, and cosmetic safety assessments. Specifically, she has conducted cosmetic ingredient safety assessments and evaluations, GRAS determinations of food ingredients for human food and animal feed, and evaluations of various chemicals in products. She has completed toxicological and exposure evaluations of various chemicals, including benzene, TCE, hexavalent chromium, manganese, lead, mercury, PCBs, and PFAS. In addition to her technical expertise, Ms. Perry also has served as a project manager.

EDUCATION AND DEGREES EARNED

1995 M.S., Toxicology and Pharmacology
College of Pharmacy, University of Texas at Austin

1992 B.S., Genetics (*cum laude*)
Texas A&M University, College Station, TX

PROFESSIONAL ASSOCIATIONS

Society of Toxicology (SOT)

- Specialty Sections:
  - Risk Assessment
  - Exposure
  - Regulatory and Safety Evaluation

Society for Risk Analysis (SRA)

- Specialty Sections:
  - Decision Analysis and Risk
  - Exposure Assessment
  - Foundational Issues in Risk Analysis
  - Occupational Health & Safety

SCIENTIFIC ADVISORY PANELS, COMMITTEES, & WORKGROUPS

Served on SOT placement committee

Served as chair for Regulatory Policy and Decision-Making session at December 2004 SRA meeting

PROJECT EXPERIENCE

Toxicology

Critically evaluated and summarized data from multiple toxicity studies involving 1,4-dioxane, boron, copper, hexavalent chromium, nickel subsulfide, nickel sulfide, nickel acetate, and nickel carbonate. Researched toxicological information for polychlorinated biphenyls (PCBs), dioxins/furans, manganese, selected volatile organic compounds (VOCs), and sulfolane, to write and contribute to several white papers and risk evaluations. Evaluated acute and chronic inhalation toxicity information and occupational standards for air toxics measured in a large urban/industrial area.

Provided extensive toxicological support to U.S. Department of Energy (DOE) and U.S. Environmental Protection Agency (EPA) National Homeland Security Research Center (NHSRC) for various projects and tasks, including documents addressing health-protective chemical levels for building re-entry following a chemical disaster (provisional advisory levels [PALs]) and assessment of cumulative risk, as well as development of acceptable acute/short-term and chronic/subchronic chemical levels in water following a hypothetical attack on public water supplies. Examples of specific work include research and analysis of primary and secondary toxic effects data, health standards, and acute exposure guideline levels (AEGLs) for chemicals; methods development; derivation and justification of health-protective values; extensive document writing, review, and incorporation of comments from EPA; research of effect-specific toxicity factors and relative severity of effect; discussion of degradation products and half-lives of various organic compounds; and preparation of health-effects graphics for presentation. Critically reviewed several documents produced by other entities, including an inhalation testing protocol and draft standard operating procedures for PAL development, and prepared technical information for peer review.

For several related litigation cases, researched medical records, disease rates, causes of certain conditions, toxicological interactions of various chemicals and pharmaceuticals, and disease etiology and links, as well as biomarker information for litigation cases. Assembled detailed slides and figures, including those describing medical histories and proposed disease etiologies, for presentations in support of these cases. Extensively

researched available approaches for determining arsenic cleanup levels on indoor surfaces and performed multiple calculations reflecting the various approaches. Researched potential bovine toxicity related to chemicals present in livestock drinking water.

Assembled relevant animal and human toxicological data into toxicity profile summaries of various chemicals for Health Canada. Critically evaluated and developed detailed summaries of acute, subchronic, and chronic cancer and noncancer toxicity data from various human health exposure routes, considering toxicokinetics, mode-of-action data, and relevance of particular animal data to humans.

Developed an 24-hour inhalation toxicity factor for manganese. Project involved an extensive literature search and PBPK modeling to ensure the guideline is also protective of neurological effects.

Cosmetics, Consumer Products, and Food Safety Evaluations

Critically evaluated benzene in consumer products, including its toxicity and background concentrations, as well as regulatory guidance levels and their basis.

Performed safety assessments for multiple cosmetic ingredients. Wrote reports discussing current uses and typical concentrations, and potential concerns such as sensitization, absorption, and toxicity. Assessed safety using the proposed concentration and a margin-of-safety approach.

For multiple ingredients in human and pet food, researched safety and toxicity information for Generally Recognized as Safe (GRAS) assessments, evaluated current use levels, and distilled available toxicity data for various forms of the ingredients.

Evaluated cumulative effects resulting from co-consumption of multiple artificial sweeteners, considering intake rates and common modes of action.

Risk and Exposure Assessment

Coordinated human health risk assessment for multi-year Superfund project. Performed complex risk/hazard calculations and prepared EPA Risk Assessment Guidance for Superfund (RAGS) Part D tables to evaluate exposures from multiple contaminants in fish, crab, sediment, and surface water. Primary chemicals of concern included dioxins, furans, PCBs, PAHs, and methyl mercury. Project involved a deterministic risk assessment and a probabilistic risk assessment.

Developed complex risk assessment calculations and approaches for residential, parkland and school areas near a large Superfund site. The primary chemicals of concern included dioxins, furans and PAHs. The approach included evaluations of individual properties as well as area-wide assessments.

Performed calculations, developed Excel models and researched human health toxicity values for a large project researching and developing proposed health-based thresholds in support of water quality standards protective of human health and aquatic life for a state regulatory agency. This project involved researching health-based literature for over 250 contaminants of emerging concern and was conducted to support the agency's exploration into expanding state water resources.

Conducted a risk assessment for multiple compounds present in various types of steel slag. Project involved probabilistic risk assessment, site-specific bioaccessibility information, a Bayesian model of relative bioavailability and PBPK modeling.

Evaluated potential human health hazard associated with trace levels of PFAS in fluorinated containers for downstream users' conditions of use. Performed exposure-based modeling to evaluate fate and transport and estimated hazard for various human exposure scenarios.

Human health lead for third-party review of human health and ecological risk assessments and related documents for a regulatory agency. Coordinated and reviewed documents for six related sites containing coal combustion

residuals; subject matter included toxicity information, absorption, screening levels, conceptual site models, lines of evidence, and risk assessments.

Conducted a complex risk assessment for dioxins and furans at a site in Canada; the project involved both deterministic and probabilistic risk assessments. Along with the team, researched toxicity information, exposure factor options and distributions, background concentrations, and congener-specific considerations.

Participated in assessment of workers' exposure to lead in a semi-conductor fabrication facility. Focused on dermal exposure and incidental ingestion. The project included collection of nearly 300 surface wipe samples, calculation of daily lead intake via skin contact and ingestion, evaluation of 14 different worker groups, and blood lead modeling using EPA's adult lead model.

Evaluated measured air concentrations in the Barnett Shale, an area of intensive natural gas exploration; aided in developing appropriate hierarchy of regulatory sources for multiple time frames of exposure.

Performed extensive calculations of concentrations of multiple air toxics monitored over several years in a large urban/industrial area. Compared concentrations to applicable toxicity factors, and critically evaluated the results, considering predominant wind directions, bases for toxicity and occupational values, and margin of exposure. Researched available tap water and groundwater levels for sulfolane. Assembled white paper discussing novel sulfolane toxicity factors derived by ToxStrategies and determined screening levels in tap water for sulfolane. Summarized toxicological and exposure information for several VOCs in groundwater, and derived screening levels protective of various uses, including vegetable garden irrigation.

Calculated screening levels in steel slag for various metals, considering multiple exposure pathways and human receptors. Coordinated and wrote portions of an extensive risk assessment report documenting findings, including a refined probabilistic risk assessment. Developed protective concentration levels (PCLs) based on the Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) rule for comparison with measured concentrations of chemicals in compost derived from sewage sludge. Reviewed TCEQ's compost and sludge rules for applicability.

Developed a complex, integrated Excel model that calculates remediation goals (RGs) for almost 600 chemicals of concern (COCs) for the State of Nebraska Voluntary Cleanup Program (VCP). The model calculates RGs for contaminants in soil and groundwater, considering multiple exposure pathways and both residential and industrial land use. Based on discussions with and comments from the State of Nebraska, patterned the calculations and output after the EPA Region 9 Preliminary Remediation Goals, and added several state-specific approaches and inputs. Wrote text describing the approaches taken for the VCP RGs, assembled a list of contaminants affecting various target organs, applied EPA's toxicity factor hierarchy, wrote a detailed glossary and acronym list, and developed a modified approach for adding the groundwater dermal exposure pathway to the model. Later updated the RG approaches to include current toxicological approaches consistent with EPA's Regional Screening Levels and calculated RGs for the vapor intrusion pathway.

For the State of Kansas Department of Health and Environment, Bureau of Environmental Remediation, developed a detailed, linked Excel model that calculates risk-based concentrations of VOCs in indoor air. Model is accompanied by explanatory text, input parameters, and equations for carcinogens and noncarcinogens. The values and the accompanying text were designed for incorporation into a new section of the Risk-Based Standards for Kansas (RSK) Manual.

Highly involved in the development and implementation of the TCEQ TRRP rule for remediation sites. Wrote rule language, responded to comments, edited portions of the rule, and created and maintained a highly complex, multipathway remediation model. The model calculated Risk-Based Exposure Limits (RBELs) and PCLs for more than 600 COCs in soil, groundwater, and sediment for both residential and commercial/industrial land use. Developed a similar model to calculate Medium-Specific Concentrations (MSCs) for more than 600 COCs under the 1993 Risk Reduction Rule (RRR). Involved in writing and editing the accompanying guidance known as the Consistency Document, and presented TCEQ staff training on this document. Updated PCL/MSC tables with new toxicity data, chemical/physical data, and COCs at least annually for availability on TCEQ's website. Served as the

Toxicology & Risk Assessment Section (TARA) contact for answering human health questions from within and outside agency regarding TRRP, RRR, and Consistency Document. Attended meetings with internal and external parties to discuss comments on remediation documents and provided guidance for those developing workplans for submittal to the agency.

Reviewed and approved all comments on risk assessments and TRRP documents from TARA staff prior to internal and external distribution, to ensure accuracy and consistency. Reviewed and distributed comments on risk assessments and TRRP documents for remediation sites and on portions of documents where her expertise could be applied. Trained new toxicologists in remediation reviews and co-reviewed initial documents with them. Wrote and edited TRRP guidance documents and participated in guidance workgroups; wrote TRRP-18 guidance document addressing risk and hazard levels and cumulative adjustment. Presented instruction on use of TRRP-18 to internal and external audience at TCEQ's Environmental Trade Fair. Served as the TARA contact for receiving requests and calculating human health PCLs/MSCs for additional exposure pathways, as well as COCs not on the TRRP/RRR tables; added 89 COCs in one year. Served as the contact for referrals of risk assessments and TRRP documents to TARA, which involved assigning and tracking the reviews.

Reviewed and analyzed toxicity data, including extensive review for the TCEQ's effect screening levels (ESLs) project. Provided critical review of the Acute Exposure Guideline Levels Technical Support Documents to assess acute health effects of various compounds. Reviewed monitoring data and air permit applications. Reviewed trial/risk burn plans for hazardous waste combustion facilities and overhauled TARA's multipathway combustion risk assessment model.

Calculated complex cleanup levels for a site in Missouri, considering several human health exposure pathways, including dermal contact with groundwater, groundwater volatilization to ambient air, a construction trench, and indoor air, as well as standard soil pathways. Generated EPA RAGS D tables, as well as associated, integrated Excel files to perform the various pathway analyses. Compared the risk-based approaches and exposure factors used in the Risk-Based Corrective Action (RBCA) report to those indicated in various federal and state guidance documents and recommended appropriate parameters for use at the site. Wrote portions of the human health risk assessment (HHRA) text and tables, and responded to comments from EPA, the city, and other interested parties.

Calculated complex risks and hazards for a wide variety of on- and off-site receptors, for both reasonable maximum and central tendency exposure scenarios and a number of human health exposure pathways, for a former metals site in Illinois. Pathways included dermal contact with groundwater, groundwater volatilization to ambient air, a construction trench, indoor air, surface water and sediment, and standard soil pathways. Incorporated current risk assessment approaches, including unique considerations for certain chemicals, including mutagens.

Developed a complex, integrated Excel model for calculating health-protective, site-specific remediation objectives for park properties in Illinois where biosolids may be applied. Developed equations evaluating eight different receptors for seven types of land uses and eight chemicals; considering both carcinogenic and noncarcinogenic effects.

Determined current toxicity factors for chemicals listed in EPA's combustion guidance, consistent with the December 2003 toxicity hierarchy for an Oregon incinerator site. With a colleague, selected and technically reviewed appropriate reference doses (RfDs), oral cancer slope factors (CSFs), inhalation reference concentrations (RfCs), inhalation unit risk factors (URFs), and inhalation CSFs for almost 200 chemicals. Determined acute inhalation exposure criteria (AIEC) in air for the same list of chemicals, consistent with the hierarchy outlined in the site risk assessment work plan. Performed similar toxicity factor selection tasks and wrote descriptive text for a power plant site in Nevada, an explosives site in Missouri, and an incinerator site in Israel.

Critically reviewed the Multipathway Risk Assessment Protocol generated for a federal site in Iowa, according to EPA's 2005 hazardous waste combustion guidance. Provided detailed comments on various issues, including COPC and toxicity factor selection, fate and transport modeling, exposure fact or selection, and evaluation of acute hazards.

Automated, revised, and updated existing human health calculations and output tables to include current COPC concentrations and various exposure pathways for multiple areas of a site in Ohio for soil and groundwater.

Critically reviewed the draft HHRA and risk/hazard calculations for an incinerator site in California, which is proposed to be a future wetland. Primary site COPCs were metals, dioxins, and polycyclic aromatic hydrocarbons (PAHs).

Developed RAGS D tables for various site-specific pathways, including evaluation of indoor air exposures and a construction-worker trench scenario, for a Nebraska site. In addition to toxicity factor selection, risk calculations, and associated analyses, aided in developing the HHRA document and responding to comments from EPA.

Created RAGS D tables and performed risk/hazard and intermediate calculations for contaminants at a site in Nebraska. The site consisted of two exposure units, which were evaluated separately. Receptors evaluated include adult and child residents, commercial/industrial workers, and utility workers. Groundwater exposure pathways relevant to the site included ingestion, inhalation (outdoor and indoor), and a kiddie pool and trench scenario. Wrote portions of the HHRA and remedial investigation (RI) text and summary and revised the RAGS D tables per comments received.

For a site with hexavalent chromium and nickel contamination of soil and groundwater, performed various cleanup-level calculations for several human receptors. Ultimately used a novel toxicity factor for hexavalent chromium, which assumed a non-linear mode of action.

For several Navy sites in California, developed and technically reviewed extensive RAGS D tables for both incremental and total risk at various soil depths for several media and compiled toxicity factors according to EPA's 2003 toxicity factor hierarchy. Recommended and produced documentation for surrogate toxicity factors, analyzed site data, and prepared additional tables and documents related to the site.

Wrote various portions of text, assembled multiple RAGS D tables, and determined risks/hazards for chemicals for various on-site areas, as well as off-site residential areas, for surface and subsurface soil at a Navy site in California. Created complex, interlinked Excel spreadsheets for two residential and two industrial soil depths for each of four different sites within the site. The tables depict soil data statistics, exposure-point concentrations, screening levels, and hazard quotients, as well as carcinogenic risk levels for each of the land uses, soil depths, and individual sites. Performed extensive technical reviews of various data filtering and analyses, RAGS D tables, and performed site-specific analyses of vapor intrusion of COPCs from soil. Reviewed site-specific analyses of vapor intrusion of COPCs from groundwater and used site-specific information to divide a large area of the site into logical exposure units for the vapor intrusion evaluations.

Critically reviewed multiple RAGS D tables for several areas within a Navy site in California for surface and subsurface soil and groundwater impacted by a large suite of chemicals. Reviews entailed complex data set comparisons, verifying selection of chemicals of concern, exposure-point calculations, toxicity value selection (using EPA's 2003 toxicity value hierarchy), toxicity surrogate and target organ selection, detection limit comparisons, statistical calculations, and confirming additional approaches and values within the tables.

For a Navy site in California, derived toxicity factors/cleanup goals where data were lacking, performed temporal data analysis for RAGS D Tables, conducted extensive research for and assembly of toxicity factors considering EPA's December 2003 revised toxicity factor hierarchy for RAGS D tables, and performed streamlined analysis for construction-worker groundwater inhalation risk. Helped develop a method for active soil gas sampling at specific areas and evaluated risks and hazards for indoor air across these locations.

Performed technical reviews for the data analysis and statistics and researched available cleanup goals for explosives detected at a Navy site in California. Performed COPC screening and revised various tables for the HHRA.

For a Navy site in Nevada, reviewed cleanup goals and supporting calculations for a construction worker, data analyses, and risk tables. Provided technical comments on the various approaches and proposed values.

Closely coordinated with a project team in devising sampling plans and an HHRA workplan for a historical mining site in California, evaluating risks/hazards and calculating potential cleanup levels for metals present in soils at the site. Researched and applied various chemical-specific approaches for arsenic, including considerations for relative bioavailability and potential modifications to the cancer slope factor.

For several former manufactured gas plant facilities in Kansas, critically reviewed and provided comments to the Kansas Department of Health and Environment (KDHE) for risk evaluation and feasibility studies for four sites, consisting of on-site and off-site exposures through multiple exposure pathways. Provided toxicity factors/surrogate information for chemicals present at a fifth site. Developed a complex set of Excel calculations to develop Tier 2 risk-based values, using the approach developed by KDHE. Critically evaluated prepared reports for consistency with both state and federal guidance documents and responded to comments from interested parties.

Critically reviewed toxicity profiles discussing toxicity factors, health effects, and absorption information for chemicals of concern at a site in Delaware, including arsenic, methyl tert-butyl ether, chlordane, and various PAHs.

For a former refinery in Illinois, critically reviewed several documents associated with an HHRA and evaluation of the site, including exposure assessment, lead modeling, and calculation of background concentrations.

Developed toxicity profiles for several compounds and various RAGS D tables, which involved selection of toxicity factors according to EPA's 2003 hierarchy for a site in the Texas panhandle. Wrote several portions of the HHRA text and reviewed others.

Developed toxicity profiles for manganese and iron for a site in New Mexico. Researched and discussed the bases for various toxicity factors and cleanup levels for both chemicals.

For a Superfund site in Indiana, technically reviewed the risk assessment, which addressed PCBs in surface water, sediment, and fish tissue.

Wrote portions of the HHRA for a site in Maryland; analyzed soil, groundwater, surface water and sediment data; extensively researched exposure factors; and produced several RAGS D tables.

For a site in Delaware, created various site-specific RAGS D tables for multiple soil and groundwater exposure pathways, for four future site receptors. Also reviewed the toxicity factors selected for the HHRA.

For a contaminated area along a river in New York, developed calculations to determine current and future hazards to three types of receptors for central tendency and reasonable maximum exposure approaches for various exposure pathways, including fish ingestion, surface water, and sediment ingestion and dermal contact. COPCs included PCBs, PAHs, and metals. Developed toxicity factors and wrote much of the HHRA text and tables.

For a combustion site in Washington State, developed calculations to determine risks and hazards from groundwater exposures in a Native American sweat lodge, assuming indoor inhalation and dermal exposures. COPCs included dioxins, uranium, benzo(a)pyrene, Aroclor 1254, and nickel. Technically reviewed responses to comments and calculated media concentrations for various COPCs and complex exposure pathways.

Performed a critical technical review of inputs and calculations for the contaminant volatilization to indoor air exposure pathway, using the Johnson & Ettinger model, for a Navy site in California.

With discovery of a new area of concern at a Superfund site in Texas, wrote risk assessment language to address risks and hazards, derived human toxicity factors based on recent toxicological literature, compiled RAGS D tables, and performed data and site-specific exposure pathway analyses.

For a Superfund site in Texas, wrote the HHRA for off-site areas, where lead was the main chemical of concern. Performed extensive data analysis and presentation, assembly of RAGS D tables, consideration of receptors and exposure pathways; and coordination and integration of figures and subanalyses needed for the risk assessment report.

Reviewed and provided comments relevant to technical comments on a spill investigation report for a refinery in Montana. The evaluation centered on total petroleum hydrocarbon (TPH) chemical analyses and subsequent cleanup goal comparisons.

For a metals facility in Nevada, researched and wrote a brief document describing correlations between radon-222 and radium-226/-228 in groundwater. Studied the relative concentrations of each radionuclide in groundwater at the site and presented observations gleaned from peer-reviewed literature on groundwater studies of the three contaminants, including hydrogeological and geological data, relative toxicity, fate and transport issues, and natural background concentrations.

Environmental Justice

On behalf of the American Petroleum Institute (API), evaluated methods for cumulative impact assessment (CIA). The project objective was to provide an understanding of existing cumulative impact methods and identify strengths, limitations, commonalities, and differences. With the team, produced a detailed review of research publications and publicly available regulatory information, creating a repository of documentation for these information sources, with a summary of the information provided. The final report also discussed case studies in which CIA methods were used to support policies and decisions regarding environmental justice, which provided understanding of fit-for-purpose methods for CIA.

Environmental Assessments/Investigations

Participated in evaluations and coordinated comprehensive reports for two large-scale environmental audits for companies involved in widespread cleanup activities. Wrote report sections and coordinated documentation of findings from team members.

Conducted Phase I Environmental Site Assessments (ESAs) for several clients and projects. Performed initial Phase I ESAs, updated Phase I ESAs with new information, wrote reports, performed and documented site visits, and researched various environmental issues applicable to Phase I ESAs.

For an environmental insurance company, researched multiple properties and reviewed applicable environmental/site history records to identify and document any past or current environmental issues. Summarized relevant documents, identified data gaps, and presented findings based on these documents.

Critically reviewed the Engineering Evaluation/Cost Analysis (EE/CA) document for a former chemical company site in Virginia, in accordance with EPA guidance, and provided comments on this document. Ensured that the conclusions for the site, as well as the bases for them, were defensible and health protective. Responded to comments generated by the client and reviewed a revised EE/CA document, modified according to previous comments.

Site Remediation

For a dry cleaner site in Irving, Texas, prepared a Drinking Water Survey Report as part of an Affected Property Assessment Report (APAR) for the TCEQ in accordance with agency guidance. Wrote the document, contacted local water authorities, and researched potential private well locations. Summarized detailed groundwater contamination data and hydrogeological information (e.g., groundwater flow and other site-specific characteristics), and researched local water supplies.

Extensively reviewed existing sampling data regarding investigations of five solid waste management units (SWMUs) at a chemical company in the Texas panhandle. Determined the extent of sampling and investigations that have been conducted at each SWMU and recommended approaches for completing TCEQ APARs for the five SWMUs. Developed detailed APARs for two of the five SWMUs; coordinated with other staff performing APARs for remaining SWMUs.

For a contaminated site in Dallas, reviewed and assembled site-specific information, including former agency reports, data, geological and hydrogeological data, and soil and groundwater contamination data, to write a

Response Action Plan (RAP) for the TCEQ. RAP was written according to TCEQ guidance and contained detailed information relevant to the cleanup plan for the site.

Coordinated with the TCEQ in obtaining ESLs for various chemicals as part of an air permit amendment and renewal for a Texas facility. These chemicals did not have ESLs available on the TCEQ's standard ESL list.

Conducted multiple evaluations and produced documents for several sites for Louisiana Department of Environmental Quality's (LDEQ) Risk Evaluation/Corrective Action Program (RECAP) program. Projects specifically involved environmental investigation of facilities with underground storage tanks that were impacted by Hurricane Katrina in 2005. Reviewed and summarized available soil and groundwater data, carried identified chemicals through the tiered RECAP process, and wrote documents and developed forms according to the RECAP process. Made recommendations on the status of these facilities regarding the extent of environmental contamination at each site.

Toxicology Laboratory Research

Studied the metabolism and acrolein toxicities of the anti-cancer agent, cyclophosphamide (CP), and conducted cell culture experiments with CP and its glutathione metabolites. Assessed relative toxicities of metabolites using the alamarBlue® assay and investigated further metabolism of CP-generated species using high-performance liquid chromatography (HPLC). Presented various seminars and posters at Society of Toxicology (SOT) meetings.

PUBLICATIONS

Perry CS, Verwiel AH, Covington TR, Proctor DM. 2024. PBPK modeling demonstrates that exposure time adjustment is unnecessary for setting an acute manganese inhalation exposure guideline. Regul Toxicol Pharmacol 153:105698; doi: 10.1016/j.yrtph.2024.105698.

Mittal L, **Perry C**, Blanchette AD, Proctor DM. 2024. Probabilistic risk assessment of residential exposure to electric arc furnace steel slag using Bayesian model of relative bioavailability and PBPK modeling of manganese. Risk Anal 44(9):2169–2186 [open access].

Perry CS, Blanchette AD, Vivanco SN, Verwiel AH, Proctor DM. 2023. Use of physiologically based pharmacokinetic modeling to support development of an acute (24-hour) health-based inhalation guideline for manganese. Regul Toxicol Pharmacol 145:105518 [open access].

Wikoff D, Thompson C, **Perry C**, White M, Borghoff S, Fitzgerald L, Haws LC. 2015. Development of toxicity values and exposure estimates for tetrabromobisphenol A (TBBPA): Application in a margin of exposure assessment. J Appl Toxicol 36(11):1292–1308.

Bunch AG, **Perry CS**, Abraham L, Wikoff DS, Tachovsky JA, Hixon JG, Urban JD, Harris MA, Haws LC. 2014. Evaluation of impact of shale gas operations in the Barnett Shale region on volatile organic compounds in air and potential human health risks. Sci Tot Environ 468–469(2014):832–842.

Thompson CM, Gaylor DW, Tachovsky JA, **Perry C**, Carakostas MC, Haws LC. 2013. Development of a chronic noncancer oral reference dose and drinking water screening level for sulfolane using benchmark dose modeling. J Appl Toxicol 33(12):1395–1406.

MacDonell M, Haroun L, Teuschler L, Rice G, Hertzberg R, Butler J, Chang Y, Clark S, Johns A, **Perry C**, et al. 2013. Cumulative risk assessment toolbox: Methods and approaches for the practitioner. J Toxicol, Article ID 310904.

Ramu K, **Perry CS**, Ahmed T, Pakenham G, Kehrer JP. 1996. Studies on the basis for the toxicity of acrolein mercapturates. Toxicol Appl Pharmacol 140:487–498.

Perry CS, Liu,XL, Lund LG, Kehrer JP. 1995. Differential toxicities of cyclophosphamide and its glutathione metabolites to A549 cells. Toxicol in Vitro 9:21–26.

ABSTRACTS AND PRESENTATIONS

Reátegui-Zirena EG, Lange SS, Jenkins A, Heintz MM, Franke K, **Perry CS**, Thompson C, et al. Acute health-based screening level derivation for cyanotoxins (microcystin, cylindrospermopsin and anatoxins). Abstract 7.05P-Th-197, Society of Environmental Toxicology and Chemistry, 45th Annual Meeting, Fort Worth, TX, October 2024.

Lynn SG, Lea IA, Urban J, Borghoff SJ, Wikoff D, Fitch S, **Perry C**, Choksi N, et al. Development and application of systematic approach to inventory and interrogate thyroid hormone network information. Abstract 4357, Society of Toxicology 63rd Annual Meeting, Salt Lake City, UT, March 2024.

Perry CS, Vivanco SN, Verwiel AH, Proctor DM. Derivation of manganese 24-hour acute inhalation guideline protective of respiratory and neurological effects. Abstract 4751, Society of Toxicology 63rd Annual Meeting, Salt Lake City, UT, March 2024.

Racz L, Mittal L, **Perry CS**, Blanchette A, Proctor D. Assessing sustainable applications of electric arc furnace steel slag as construction aggregate: Applications of probabilistic risk assessment and physiologically-based pharmacokinetic modeling. Poster presentation at Society of Environmental Toxicology and Chemistry North America 44th Annual Meeting, Louisville, KY, November 2023.

Perry C, Proctor D. Short-term environmental inhalation toxicity criteria for airborne manganese protective of neurological and respiratory effects for use in air toxics risk assessment. Presentation 5-15.t-04 to Society of Environmental Toxicology and Chemistry, Pittsburgh PA, November 2022.

Proctor D, Mittal L, Vivanco S, **Perry C**, Blanchette A. Probabilistic health risk assessment for residential exposures to metals in electric arc furnace (EAF) steel slag. Presentation 5.15.P-Th123 to Society of Environmental Toxicology and Chemistry, Pittsburgh PA, November 2022.

Perry C, Verwiel A, Antonijevic T, Vivanco S, Proctor D. Short-term environmental inhalation toxicity criteria for airborne manganese protective of neurological and respiratory effects for use in air toxics risk assessment. Presented at the Society of Environmental Toxicology and Chemistry North America's 43rd Annual Meeting, Pittsburgh, PA, November 13–17, 2022.

Perry C, Rish W, Ring C, Mittal L, Harris M. Use of probabilistic risk assessment and physiologically based pharmacokinetic modeling in supporting soil remedial objectives for dioxins and furans at a Canadian site. Poster for Society for Risk Analysis, Virtual Annual Meeting, 2020.

Urban JD, Thompson CM, Plunkett LM, **Perry CS**, Haws LC. A state of the science copper reference dose for soil remediation. Presented at Society of Toxicology 54th Annual Meeting, San Diego, CA, March 22-26, 2015.

Haws LC, Thompson C, **Perry C**, White M, Fitzgerald L, Borghoff S, Wikoff D. Development of non-cancer based toxicity factors and daily dose estimates for TBBPA. Presented at Society of Toxicology 53rd Annual Meeting, Phoenix, AZ, March 23–27, 2014.

Wikoff D, Thompson C, **Perry C**, White M, Fitzgerald L, Borghoff S, Haws LC. Development of an oral cancer slope factor and lifetime average daily dose estimates for TBBPA. Presented at Society of Toxicology 53rd Annual Meeting, Phoenix, AZ, March 23–27, 2014.

Perry C, Tachovsky JA, Ke M, Urban J, Haws L. Natural gas exploration and production in the Barnett Shale: Assessment of exposures to volatile organic compounds (VOCs). Presented at Society of Toxicology 51st Annual Meeting, San Francisco, CA, March 11–15, 2012.

Thompson C, **Perry C**, Gaylor D, Tachovsky A, Burkhalter B, Haws L. Derivation of an oral reference dose and drinking water screening level for sulfolane using benchmark dose modeling. Presented at Society of Toxicology 50th Annual Meeting, Washington, D.C., March 6-10, 2011.

Williams CW, **Perry CS**. Risk assessment for arsenic on indoor surfaces. Presented at the Society for Risk Analysis Annual Meeting, Boston, MA, December 7-10, 2008.

Perry CS. Vibrios in surface waters and a hypothetical scenario using EPA's Environmental Consequence Assessment Tool (ECAT). Presented at the Society for Risk Analysis Annual Meeting, San Antonio, TX, December 9-12, 2007.

Smith JD, **Perry C**, Garcia S, Jenkins A, Dwyer M, Garrahan K. Emergency Consequence Assessment Tool (ECAT) for USEPA NHSRC. Presented at the Society for Risk Analysis Annual Meeting, San Antonio, TX, December 9-12, 2007.

Dwyer M, **Perry C.** Jenkins A. Trichloroethylene toxicity and risks: Recent developments and potential implications. Presented at Texas Association of Environmental Professionals -- Environmental Challenges and Innovations Conference, February 2007.

Finster M, MacDonell M, Bhattacharyya M, Haroun L, Peterson J, **Perry C**. Environmental fate and cumulative risk context for cleanup programs. Presented at the Society for Risk Analysis Annual Meeting, Baltimore, MD, December 3-6, 2006.

Perry CS, Garcia S, Collie S, MacDonell M, Adeshina F, Sonich-Mullin C. Application of provisional advisory levels for EPA National Homeland Security Research Center's secure, internet-based rapid risk tool. Presented at the Society for Risk Analysis Annual Meeting, Orlando, FL, December 4-7, 2005.

Perry CS, Morton E. Lessons learned from creating integrated Excel models to calculate human health screening values. Presented at the Society for Risk Analysis Annual Meeting. Palm Springs, CA, December 5-8, 2004.

Perry CS. Process for development of protective concentration levels for remediation sites in Texas. Presented at Society for Environmental Toxicology and Chemistry (SETAC) Meeting, Austin, TX, November 9-13, 2003.

Perry CS. TRRP Rule - The basics part 2: Human health PCLs and look-up tables. TNRCC Environmental Trade Fair, 2002.

Perry CS, Post ZL, Rembish SJ. Methods used and general findings of the human health workgroup of the State of Texas Environmental Priorities Project (STEPP). Presented at the Society for Risk Analysis Annual Meeting,1996.

Perry CS, Post ZL, Rembish SJ. Methods used and general findings of the human health workgroup of the State of Texas Environmental Priorities Project (STEPP). Gulf Coast SOT Meeting, 1995.

Ramu K, **Perry CS**, Ahmed T, Pakenham G, Kehrer JP. Mechanisms of acrolein mercapturate toxicity. Presented at Society of Toxicology 35th Annual Meeting, Anaheim, CA, March 1996.

Sauers L, **Perry C**. Regulatory affairs—A growing opportunity for toxicologists. SOT Communiqué, May/ June 1996.

Perry CS, Kehrer JP. Relationship between toxicity of glutathione-acrolein conjugates and thiol status of A549 cells. Society of Toxicology 34th Annual Meeting, Baltimore, MD, March 1995.

Perry CS, Liu XL, Lund LG, Kehrer JP. The effect of cyclophosphamide and its metabolites on the growth of cultured A549 cells. Presented at the Gulf Coast SOT Meeting, 1993.

Perry CS, Liu XL, Lund LG, Kehrer JP. The effect of cyclophosphamide and its metabolites on the growth of cultured A549 cells. Presented at Society of Toxicology 33rd Annual Meeting, Dallas, TX, March 1994.

Fraiser L, **Skarovsky C**, Kehrer JP. Bioactivation of a glutathione-acrolein conjugate to bladder-toxic species. Presented at Society of Toxicology 32nd Annual Meeting, New Orleans, March 1993.