Subject: Online Form Submittal: Advisory Group Application
Date: Sunday, December 28, 2025 3:08:21 PM

Advisory Group Application

Step 1

Application for Appointment to Whatcom County Advisory Groups

Public Statement
THIS IS A PUBLIC DOCUMENT: As a candidate for a public advisory group, the information provided will be available to the County Council, County Executive, and the public. All advisory group members are expected to be fair, impartial, and respectful of the public, County staff, and each other. Failure to abide by these expectations may result in revocation of appointment and removal from the appointive position.

Title	*Field not completed.*
First Name	Charles
Last Name	Brown
Today's Date	12/28/2025
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
Do you live in Whatcom County?	Yes
Do you have a different mailing address?	*Field not completed.*
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Step 2

1. Name of Advisory	Climate Impact Advisory Committee

Group	
Climate Impact Advisory Committee Position:	Yes
2. Do you meet the residency, employment, and/or affiliation requirements of the position for which you're applying?	Yes
3. Which Council district do you live in?	District 3
4. Have you ever been a member of this Advisory Group	No
5. Do you or your spouse have a financial interest in or are you an employee or officer of any business or agency that does business with Whatcom County?	No
6. Have you declared candidacy (as defined by RCW 42.17A.055) for a paid elected office in any jurisdiction within the county?	No
You may attach a resume or detailed summary of experience, qualifications, & interest in response to the following questions	Attached
7. Please describe your occupation (or former occupation if retired), qualifications, professional and/or	Retired chemical engineer. Resume attached. Short summary: Air pollution control and regulations (Radian, VECO), petroleum refining (BP, VECO), aluminum production (Kaiser), and nuclear power support systems (General Atomic). BS, chemical engineering, Washington State University, 1973; MS,

community activities, and education	Environmental Engineering, University of Washington, 1982). Teaching experience includes seminars and short courses for the science of global warming and effects of climate change at WWU's Academy for Lifelong Learning, Edmonds College Creative Retirement Institute, and WWU's Institute for Energy Studies. Also served as Adjunct Professor for air pollution control systems at Gonzaga University and WWU's College for the Environment and short course for the American Institute of Chemical Engineers Education Services.
8. Please describe why you're interested in serving on this Advisory Group.	As a retirement activity, I have developed a passion for understanding and sharing knowledge about global warming and climate science. There is a huge amount of good information as well as disinformation that must be sorted and understood to form good policy.
References (please include daytime telephone number):	Whatcom County Councilmember Kaylee Galloway, [redacted] Dr. Darrin Magee, WWU Institute for Energy Studies, [redacted]
Appointment Requirements	I understand and agree
Signature of applicant:	Charles A Brown
Place Signed / Submitted	[redacted]
	(Section Break)

CHARLES A. BROWN

[redacted]

SUMMARY: 40 years experience as a process design and development engineer in several industries including petroleum refining, petroleum coke calcining, primary aluminum production, air pollution control, and nuclear power. Teaching experience includes courses and seminars in global warming and air pollution control.

ENGINEERING EXPERIENCE:

2016-Present Retired, Bellingham, WA

- Part-time instructor for seminars and short courses on the science of global warming for Western Washington University's Institute for Energy Studies and Academy for Lifelong Learning. Also for Edmonds College Creative Retirement Institute.

2002-2016 Process Engineer – BP Cherry Point Refinery, Blaine, WA.

- Process Optimization Engineer for the Crude, Coker, and Calciner Units to improve commercial performance based on key parameters including product yield and product quality.
- Team Lead for Coker, Sulfur Plant, and Calciner Unit Process Engineers.
- Unit Process Engineer for the Crude, Vacuum, Diesel, and Coke Calciner Units. Responsible for performance monitoring, troubleshooting, and initiating projects to improve the process.
- Used AspenTech HYSYS® for modeling Crude and Coker process units. Used Coker model to support development of Operator Training Simulator.

1994-2002 Principal Staff Process Engineer – VECO Pacific, Inc., Bellingham, WA. Responsible for providing conceptual and detailed process design engineering for petroleum refineries and other chemical process industries.

- Process Engineer for caustic wet scrubber modifications for SO_2 control and new wet electrostatic precipitator for particulate and sulfuric acid mist control at Cherry Point Refinery's petroleum coke calciner.
- Process Engineer for process selection and design of a dry, sodium bicarbonate-based acid gas scrubber system in the aluminum industry.

1990-94 Senior Staff Engineer -- Radian Corporation, Seattle, WA.
Office Manager for new branch office technical staff. Directed and participated in a variety of environmental consulting projects, with special emphasis in air pollution control systems, flue gas desulfurization (FGD) systems, and air quality services.

- Prepared and managed office overhead and project budgets. Responsible for recruiting engineers and scientists and for project staffing.

- Prepared process description, emission estimates, and BACT analysis for the PSD permit application for sulfuric acid mist emissions from the coke calciner at the Cherry Point Refinery.
- Project Director for 10-MW Clean Coal Technology demonstration of the gas suspension absorber (GSA) and the ADVAnced siliCATE (ADVACATE) hydrated lime FGD processes.

1986-90 Senior Engineer -- Radian Corporation, Austin, TX.
Process design, research, and development for a variety of air pollution control projects, including:

- Project Director for design, construction, operation, and performance evaluation of a 1.7-MW pilot demonstration at a coal-fired utility to develop the hydrated lime duct injection/electrostatic precipitator FGD process for the U.S. Dept. of Energy. Supervised literature survey, pilot plant staff, and subcontractors for facility design, construction, and support studies. Evaluated, published, and presented results.
- On-site engineer representing the Electric Power Research Institute (EPRI) for 10-MW pilot demonstration of the lime spray dryer/electrostatic precipitator FGD system in a high-sulfur coal application.

1984-86 Senior Engineer -- Kaiser Aluminum & Chemical Corp., Spokane, WA.

- Assisted operator training and restart of rotary kiln petroleum coke calciner.
- Programmed on-line process control computers for prebake aluminum reduction plant. Investigated alumina feed strategy as function of cell resistance.

1982-84 Principal. Brown Fluid Systems, Spokane, WA.
Marketed services as an independent environmental consultant.

1981-82 Research Assistant -- University of Washington, Seattle, WA. Basic research for effects of high strength recreational vehicle wastewater on sewage treatment systems.

1976-80 Engineer -- Kaiser Aluminum & Chemical Corp., Spokane, WA.

- Process Engineer for design and startup of lime spray dryer SO_2 control system for petroleum coke calciner.
- Performed and evaluated experimental projects in potroom and potlining areas, including effect of bath ratio on current efficiency and effects of pot design on cell life.

1973-76 Engineer in Systems Engineering and Fuel Recycle Development Departments -- General Atomic Company, San Diego, CA.

- Performed pilot plant experiments to investigate solubility of thorium in nitric/hydrofluoric acid from silicon carbide reactor fuel pellets.
- Process design for radioactive gas collection and recovery systems using chromatographic adsorption to separate helium from air, xenon, and krypton gases.

TEACHING EXPERIENCE:

2002-2016 BP Cherry Point Refinery. Present internal training sessions for Intro to HYSYS®, Distillation, Intro to Refining, Basics of Volume Planning, Intro to PI Processbook, Statistical Data Evaluation, and Air Pollution Regulations for Process Engineers.

1999-2001 Western Washington University, Huxley College of Environmental Studies. Bellingham, WA. Adjunct Professor. Instruct senior technical elective course in air quality, covering air pollution effects, regulations, and control technology.

1995-2001 American Institute of Chemical Engineers: Instructor for continuing education courses in air pollution control technology and regulations.

1996-1997 University of California at Berkeley, University of California at Davis: Guest Lecturer for particulate and SO_2 control segments of extension course in air pollution control technology.

1982-1985 Gonzaga University, *Spokane, WA*. Adjunct Assistant Professor, School of Engineering. Instruct courses in air pollution engineering, thermodynamics and heat transfer, and fluid mechanics.

PROFESSIONAL DATA

Education: Master of Science in Engineering with emphasis in Environmental Engineering, August 1982, University of Washington

Bachelor of Science in Chemical Engineering, with Distinction, June, 1973
Washington State University

Registrations: Professional Engineer - Chemical
Washington

Memberships: American Institute of Chemical Engineers
Past Chair for the Virtual Local Section
Former Director for the Environmental Division
Former Officer for Puget Sound Section

SELECTED PUBLICATIONS:

Brown, C. A., D. E. Archer, and V. L. Young. “Introduction to an Atmospheric Radiation Model.” Chemical Engineering Progress. Vol. 118, No. 5. May 2022, pp. 35-43.

Schnelle, K. B., and C. A. Brown. *Air Pollution Control Technology Handbook*. CRC Press, Boca Raton, FL, 2002.

Brown, C. A., and P. A. Hohne. “Eliminating a Sulfuric Acid Mist Plume from a Wet Caustic Scrubber on a Petroleum Coke Calciner.” Environmental Progress. Vol 20, No. 3. October 2001, pp. 133-195.

Brown, C. A. “Pick the Best Acid-Gas Emission Controls for Your Plant.” Chemical Engineering Progress. Vol 94, No. 10. October 1998, pp. 63-70.

Brown, C. A., and P. H. O. Dixon. “Control Emissions from Aboveground Storage Tanks.” Chemical Engineering Progress. Vol. 92, No. 5. May 1996, pp. 42-47.

Brown, C. A. "Estimating Air Toxic Emissions from Petroleum and Petroleum Storage Tanks Using EPA's TANKS Program." 1993 Pacific Northwest-International Section/AWMA Annual Conference, Victoria, B.C. 1993.

Lepovitz, L. R., C. A. Brown, T. E. Pearson, J. F. Boyer, T. A. Burnett, V. M. Norwood, E. J. Puschaver, C. B. Sedman, and B. Toole-O'Neil. "10-MW Demonstration of the ADVACATE Flue Gas Desulfurization Process." EPRI/EPA/DOE 1993 SO_2 Control Symposium, Boston, MA. 1993.

McGuire, L. M. and C. A. Brown. "Vapor Control Options for the Petroleum Industry." AIChE 1993 Summer National Meeting, Seattle, WA. 1993.

Brown, C. A., M. Maibodi, and L. M. McGuire. "1.7 MW Pilot Results for the Duct Injection FGD Process Using Hydrated Lime Upstream of an ESP." EPRI/EPA/DOE 1991 SO_2 Control Symposium, Washington, D.C. 1991.

McGuire, L. M. and C. A. Brown. Fundamental Investigation of Duct/ESP Phenomena. DOE Contract No. DE-AC22-88PC88850. Final Report. 1991.

Durham, M. D., T. G. Ebner, D. B. Holstein, C. A. Brown, and L. M. McGuire. "Pilot Plant Investigation of ESP Performance and Upgrade Strategies for In-Duct Sorbent Injection." EPRI Ninth Particulate Control Symposium, Williamsburg, VA. 1991.

Brown, C. A., G. M. Blythe, L. R. Humphries, R. F. Robards, R. A. Runyan, and R. G. Rhudy. "Results from the TVA 10-MW Spray Dryer/ESP Evaluation." EPA/EPRI First Combined FGD and Dry SO_2 Control Symposium, St. Louis, MO. 1988.

Brown, C. A., G. M. Blythe, L. R. Humphries, R. F. Robards, R. A. Runyan, and R. G. Rhudy. “Spray Drying/Electrostatic Precipitator Retrofit on High Sulfur Coal: Results of 10-MW Pilot Tests.” 50th Annual American Power Conference, Chicago, IL. 1988.

Brown, C. A. “Using the Three Parameter Weibull Distribution for Aluminum Reduction Cell Life Prediction.” Light Metals 1986. The Metallurgical Society 115th Annual Meeting, New Orleans, LA. 1986.