



BRIDGING THE GAP BETWEEN
NUCLEAR DANGERS & A SAFE,
SUSTAINABLE FUTURE

50 YEARS OF FIGHTING THE GOOD FIGHT

THE COMMITTEE TO BRIDGE THE GAP CAME INTO BEING IN A COUNTRY TORN APART BY THE VIETNAM WAR. Responding to the moral imperative to work to end the horrors of the war, and catalyzed by the killings at Kent and Jackson State at home, a “Committee to Bridge the Gap” was formed, aimed at bridging the generation gap and attempting to change community views of the war and other issues that divided the country. We worked night and day for the following five years to help end the war. After the bombs and napalm finally stopped, Bridge the Gap shifted focus to work for environmental and social justice and fighting nuclear dangers of all kinds.

Fifty years after CBG’s founding, the country is once again torn apart by divisions that threaten to destroy the very foundations of democracy. Our planet is threatened by the existential threats of nuclear war and climate change.

At this crucial moment, we look back to honor the work that has been done over the past 50 years and those who did it, and to recommit to the struggles ahead.

In the pages that follow, you will read of our work that contributed to:

- The shutdown of the UCLA reactor, which insecurely stored weapons-grade uranium, and the subsequent banning of such uranium in scores of reactors here and abroad, enough for hundreds of atomic bombs.
- The closure of the Department of Energy’s Hanford N reactor and the ending of U.S. and Russian production of plutonium for nuclear weapons.
- The shutdown of the Santa Susana Field Lab nuclear facility, believed to be the first time a community succeeded in shutting down an unsafe Dept. of Energy nuclear site.
- The banning internationally of dumping radioactive wastes in the ocean.
- The ending of U.S. plans to place in orbit nuclear reactors and bombs to power “Star Wars” battle stations.
- The adoption of regulations requiring nuclear plants to be protected against truck bombs.
- The defeat of the proposal to dump nuclear waste at Ward Valley, which could have contaminated the Colorado River for thousands of generations.
- The closure of the San Onofre Nuclear Power Plant, which could have devastated much of Southern California from radioactive fallout were there an accident or terrorist attack.
- The shutdown of the Diablo Canyon Nuclear Plant by 2025, which will make California nuclear-free.
- And much, much more...

This work was not done alone; CBG worked closely with other organizations. But Bridge the Gap played a key role in these hard-won victories. Many individuals worked hard with us in these fights, not of all of whom have we been able to acknowledge here.

Struggles for justice are always unequal. Powerful forces have been our adversaries in these battles, and yet we have prevailed. We prevailed because commitment is itself a kind of countervailing power.

This beautiful world and the people who live upon it are hurting. With your help, we will continue, in these challenging times, the hard work of bridging the gaps that threaten the planet, to be “repairers of the breach, restorers of paths to dwell in.”

Bridge the Gap's Origin

Trying to Help End a War

FIFTY YEARS AGO, THE war was raging in Vietnam and tearing our own country apart. American planes were “carpet bombing” the Vietnamese countryside, napalm burned the flesh of children, and Agent Orange was defoliating the land and adding a toxic burden that has caused lasting health effects to this day. The U.S. dropped on Vietnam more than three times the tonnage of all bombs dropped in World War II. Hundreds of thousands of Vietnamese civilians died and tens of thousands of American soldiers. The heart of every feeling person was being burst by every bomb dropped and burned by every use of napalm occurring half a world away.

In late April, President Nixon invaded Cambodia, further expanding the war. Students demonstrated across the nation. On May 4, at Kent State in Ohio, National Guard soldiers fired on unarmed student demonstrators, killing four and wounding nine others. Eleven days later, police killed two students and injured twelve at Jackson State, a historically black college in Mississippi. Campuses around the country shut down in protest. Students were to go back to their home communities and work to end the war.

At UCLA, a “Committee to Bridge the Gap” was quickly formed, with chapters forming on dozens of other campuses. It was designed to “bridge the gap”

between the generations and between the campus and community on the war and the related problems of race, inequality, and the environment. Unlike many groups, then and now, which spend their time “preaching to the choir,” Bridge the Gap was designed to promote genuine dialogue among people who strenuously disagreed and to try to change minds with facts.

We trained students—several thousand went through the training eventually—in non-antagonistic communication techniques, armed them with information on the origins of the war and the magnitude of the racial and inequality problems. Then we sent them into sessions in homes in the community to talk with older people who supported the war, opposed the youth movement, and often had given little thought to the racial and economic divides in the country. We tried to educate people about the nature of the war so that they would join in opposing it, and by opposing, end it.

We would divide the gatherings into small groups, with two students in each group. The older folks would begin to get some of their anger out—often they were very hurt and confused about the values of their own children, couldn't talk to them about any of these issues, and found it remarkably therapeutic to be able to talk with students their own kids' age about the issues they were not

speaking terms with their own kids about. Sometimes the atmosphere in the room would get very tense. “Love it or leave it,” we were told over and over. “If you think what we're doing in Vietnam is so bad, why don't you move to Cuba or Russia?” The knee-jerk phrases of people whose worldview seemed under attack as the Vietnam consensus collapsed would be tossed around with zealotry and loud emotion.

The student would then respond, quietly, thoughtfully. “I hear you. I understand how strongly you feel. But you need to hear me, too. I am opposing the war in Indochina out of love of this country. I accept that some can fight in Vietnam out of love of country. But you should accept that many who fight so hard against this war do so likewise out of love for this country. Love of country does not mean ‘my country right or wrong.’ As Camus said, ‘I wish I could love my country and still love justice.’ I believe that the war in Indochina is against all the things that this country should stand for.”

The sessions were difficult and transformative. Older supporters of the war would be surprised by facts they hadn't known (e.g., the 1954 Geneva Accords ending the French colonial war in Vietnam temporarily divided the country into two regions until an election could be held two years later, but the U.S. subsequently blocked the election because Eisenhower concluded that Ho Chi Minh would win with 80% of the vote). And their preconceptions were further altered by the thoughtfulness and decency of the students they were dialoging with, so



Drawing by Dr. Richard Saxon

different than the stereotypes spread by the media. Real change occurred.

Among those key to the founding of CBG were Paul Kaplow, Michael Gallant, Joan Bauer, Fran Berman, Robert Kaufman, Dan and Joel Hirsch, Dell and Ruth Scott, and Stan and Wilma Keller, among many others. Attorney Marshall Glick incorporated us (his first nonprofit incorporation, his website boasts), and still provides kind advice half a century later.

We kept working for an end to the war, day after day. We did human billboard-ing at freeway entrances; we leafleted at shopping markets; we went to nearly every religious institution in West LA asking them to allow us to put on educational programs about the war for their congregants. We provided support for the defense team during the Pentagon Papers trial of Dan Ellsberg and Tony Russo. The Indochina Peace Campaign, when founded by Tom Hayden and Jane Fonda, moved into the CBG office for a time. We worked hard with them, while criticizing their romanticization of North

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ORIGINS - CONTINUED

Vietnam and blindness to its own human rights problems (had they only listened to us!). Our office was bugged and the phones tapped, presumably by Nixon's "Plumbers."

We stood outside concerts handing out hundreds of requests that the attendees call Western Union and send telegrams (yes, telegrams in those days) to their Congressperson to vote against continued funding of the war. We arranged delegations of clergy to meet with their Congressional representatives, who had long supported the war, and helped move them to oppose. Milli Martinez helped organize town hall meetings to exert citizen pressure on wavering Congressmembers. Pauline Saxon, Dan Hirsch and others went to hundreds of meetings, organized scores of vigils, teach-ins and other events, and pressed religious and other leaders to speak out.

We pushed Congresspeople to sign public pledges to oppose funding that supported the torture and political imprisonment in South Vietnamese prisons. We wrote and helped enact legislation cutting off funding to the police and prison system there because of the torture of political prisoners held in "tiger cages," legislation that became the model for human rights legislation applying to numerous other countries worldwide.

All we knew was that some terrible crime was being committed in our name in Indochina—countless innocent lives were being lost, and the blood of those children was on our hands. It is hard to recall today the daily horror we all felt as we watched the nightly news and saw the bombers flying off to drop death and destruction in our name. We knew this was going on around the clock. As we slept, as we ate our meals or did any of our normal activities of living, others were doing the dying in a war that made no sense, a war that was wrong, a war that must be ended.

So, for nearly five years, six and a half days a week, we worked to help end the war. So did many, many others. And finally, in 1975, the guns fell silent.



BRIDGING INEQUALITY, RACIAL AND GENDER GAPS

"The World Has Enough for Each Person's Needs, but Not Enough for Each Person's Greed"

- Mahatma Gandhi

AFTER THE INDOCHINA War ended, we turned to bridging other gaps, all interconnected. Joe Maizlish—who has worked with CBG for decades ever since being released from federal prison for refusing to participate in the Vietnam War—often reminded us that the links between war and inequality were perhaps best (although unintentionally) described by Lyndon Johnson himself. Johnson said people ask why we are in Vietnam? We are in Vietnam, he said, because there are two hundred million of us and three billion of them and they want what we have and we're not going to let them have it.

Now, of course, the situa-

tion was really the reverse: we wanted what they had—their natural resources and cheap labor. Much of our wealth—and that of other colonial powers—was built by its forcible transfer. Global inequality and war were inextricably linked. And inequality at home was tied to our long racial sins. "It's all related," we would say. So we dug in deep in our own communities to bridge these gaps.

We tried to raise consciousness about inequality and our own ties to it. We promoted the Shakertown Pledge, which called for a "Just World Standard of Income," at which level no one would be rich and no one would be poor. We tried to melt the

hearts of those with more than they needed to transfer their excess to those who had less than they needed. We tried to educate and activate religious congregations and clergy to practice what they preached, to take effective action on behalf of peace and reducing poverty. We worked on human rights campaigns to help free political prisoners who were being tortured. We helped campaigns such as the international boycott of Nestlé because of its aggressive promotion of infant formula in poor countries, where mothers' milk was free and paying for infant formula took money that could go to other critical needs.

Led by Peter Weber and Christie Menadier, we organized in support of the United Farm Workers boycotts. We ran consciousness-raising



Tyrone Taborn

groups for medical professionals to get them to use their essential skills on behalf of those most needy. We set up the West Coast Health Lobby and helped write one of the first bills for national health

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INEQUALITY - CONTINUED

insurance. Alan Sadowsky led organizing efforts among low-income tenants and successfully used religious “courts” rather than civil courts to roll back rent increases for tenants of limited means. We also worked to bridge the gender gap, addressing the damage that sexism does to both women and men and the responsibilities of all to work to remedy these problems, in society at large and in ourselves. Ruth Christie helped run groups on “non-sexist love and friendship relationships” and Alan and Shel Plotkin one of the first men’s consciousness groups.

When desegregation of the Los Angeles School District was ordered, white adult demagogues tried to inflame fears of what would happen if students of different racial and economic backgrounds sat in the same classroom. Tyrone Taborn, a young teenager from the inner city who basically

grew up at Bridge the Gap, organized students from across the city, from all ethnic and class backgrounds. With help from Sister Jeanette van Vleck, the students, under Tyrone’s remarkable leadership even at that age, worked together in a multi-cultural campaign to fight the fear-mongering of the “adults” and show the value of exposure to diversity and the moral necessity of ending the stain of inequality and racial prejudice. Tyrone has gone on to become an extraordinary national leader in efforts to open doors to the professions for people of color, daily “bridging gaps” throughout the country, and remains a key part of and support for the Bridge the Gap family.

“If you want peace, work for justice.” We wanted both, and worked hard for both.

WORK FOR PEACE AND FOR AN END TO THE ARMS RACE

WAR KILLS AND MAIMS, and preparation for war starves and impoverishes. Nuclear war is the final extinction.

We fought against efforts to expand the arms race. We organized against proposals for new weapons systems. We testified at hearings for conversion of the economy from dependence on military production, redirecting funds for killing to funding social needs and reducing poverty.

We did Mideast peace work, among the first to bring Palestinians and Jews together for dialogue, and brought to the U.S. peace figures from the region who were pushing for a path that involves meeting the just needs of both peoples. We helped promote the study and practice of nonviolence.

We worked to raise the

moral issues associated with the University of California operating the nation’s nuclear weapons laboratories and organized faculty and student opposition to continued UC operation of development facilities for weapons of mass destruction. We set up public speaking events and media interviews for figures such as Helen Caldicott, Dan Berrigan, Richard Feynman, and Dan Ellsberg. We coordinated the press work for the California Nuclear Freeze Initiative, helping pass it. CBG’s Pauline and Richard Saxon helped create Physicians for Social Responsibility-LA, and we helped them put on international conferences about the risks and consequences of nuclear war.

In 1979, in a discussion with Pauline Saxon and Dan

Hirsch, Helen Caldicott pointed out one of the main difficulties in getting people to address the nuclear arms race: it seems too remote, too overwhelming to think about. She suggested one needed to bring the nuclear arms race home to people, show them the pieces of it that were local and the effects they were having. Around the same time, the Three Mile Island reactor accident occurred.

So we began a research project into whether there were any problematic nuclear operations in our area. Within a few months we discovered that five bomb-worth of weapons-grade uranium was stored at the UCLA reactor in a filing cabinet; that the federal government operated a facility for nuclear development and missile testing at the Santa

Susana Field Lab, where there had been a secret partial meltdown; that nuclear power sources for the military had been unsuccessfully launched from Vandenberg, one of which fell back in the S. California area; and that radioactive wastes had been dumped off Point Hueneme and roughly 50 other locations off both coasts, where they were leaking into the ocean. Thus began the next phase of our work, dealing with nuclear risks, which continues to this day.



Pauline and Richard Saxon

“Every gun that is made, every warship launched, every rocket fired signifies, in the final sense, a theft from those who hunger and are not fed, those who are cold and are not clothed.”

Dwight Eisenhower



THE UCLA REACTOR & THE BANNING OF WEAPONS- GRADE URANIUM IN REACTORS

WE DIDN'T HAVE TO look far. A mile from our office, virtually unknown to the public, was a nuclear reactor, in the basement of Boelter Hall at UCLA. D'On Voelzke quickly discovered that for years the reactor had been leaking a radioactive gas, argon-14, into the environment. Because the operators of the reactor had miscalibrated the radiation monitor, they were giving out 300 times more radioactivity than they had thought, resulting in concentrations 50 times the regulatory limit. The most radioactive place on campus, it turned out, was in the Math Sciences Building next door, because the reactor exhaust stack was directly upwind of the main air inlet for that classroom building.

It got worse. We soon discovered that some years after the reactor was originally built, its operators decided to quadruple the amount of its "excess reactivity," a measure of whether the reactor can

blow up in a kind of small nuclear explosion called a "power excursion." In such an accident, if you pull the control rods out too far and too fast, the power increases exponentially in a fraction of a second, the fuel melts or even vaporizes, and the water coolant flashes to steam and the reactor blows apart in a steam explosion. A similar reactor, the SL-1, had been destroyed in such a power excursion at a remote Idaho testing site in 1961 when a worker accidentally withdrew a control rod too far; the reactor blew up, killing the workers and spreading radioactivity into the surrounding desert.

Because of the far greater consequences were such an event to occur in the midst of a campus of tens of thousands of students, staff, and faculty, surrounded by the densely populated Westwood community, the UCLA reactor was initially designed with a stringent excess reactivity limit. But some years later, the reactor

was "souped up," increasing the excess reactivity to a level that the reactor's own hazards analysis indicated could result in a power excursion. Because of errors made in the analysis, the risk was even greater. Should a mistake be made (not out of the question for a reactor operated by students), doses as large or larger than those possible from a large reactor accident were possible. That was because, unlike big power reactors, this one had no containment structure to keep radioactivity from being released and no exclusion zone or buffer area to dilute radioactivity before it reached the public.

To top it off, unlike U.S. power reactors which use fuel of about 4% enrichment, which cannot be used directly for a nuclear bomb, the UCLA reactor used 93% enriched uranium-weapons-grade. In addition to several bombs' worth in the reactor core, they stored enough fresh fuel for five nuclear bombs in a filing cabinet! The security was not much better than for the campus bookstore. Yet if someone stole that extraordinarily dangerous material, it could be used to make atomic explosives.

We intervened in the UCLA license renewal

proceeding before the U.S. Nuclear Regulatory Commission, the first contested relicensing case in the country. It was an extraordinary, dramatic five-year battle, a tiny non-profit against the University of California. Former Los Alamos weapons designer Ted Taylor, the world's pre-eminent expert on the nuclear proliferation and nuclear terrorism risks if someone were to steal the UCLA reactor's bomb-grade uranium, was an expert witness for us. So was Herbert Scoville, the former Deputy Director of the CIA for science and technology and former official of the Arms Control and Disarmament Agency. Jim Warf, former head of the inorganic chemistry section of the Manhattan Project, testified about the risks of a fire in the reactor's graphite. Michio Kaku, a now-famous physicist from City College of New York, testified about the risks of a power excursion, as did the reactor physicist Boyd Norton, who had "blown up" one of the SPERT reactors in an excess reactivity test at the National Reactor Testing Site in Idaho, the results of which UCLA had misrepresented in its safety analysis. Roland Finston, head of radiation

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Steve Aftergood, John Bay, and Dan Hirsch holding the reactor control panels and mock fuel bundle given to CBG as "trophies"

Outlawing Ocean Dumping of Radioactive Waste Internationally



BURROWING THROUGH card catalogues (remember those?) in a government repository of old Atomic Energy Commission (AEC) reports, one day we came across a reference to a radioactive waste dumpsite off the Southern California coast. The problem was that the report was on micro-card, a technology that

predates microfiche and microfilm, and there was only one micro-card reading device in LA, and it was broken. We eventually found a shop owned by an old man who could fix it, and when he did, we discovered that thousands of barrels of radioactive wastes from AEC and other nuclear operations had for years been transported to Long Beach, placed on an ocean-going tug, hauled up the coast to the Channel Islands, and dumped overboard. If the weather were poor, they engaged in “short dumping,” throwing the radioactive waste into the sea before they got to the ocean dumpsite.

It turned out that no effort had been made beforehand to determine if the practice or chosen location would be safe. Years later a submersible was sent to scout around and found that many of the barrels had imploded because of the water pressure and were leaking. Michael Rose did further research

and Freedom of Information Act requests and discovered that there were approximately 50 such U.S. ocean dumpsites off the East and West Coasts and in the Gulf of Mexico. He prepared tables showing the latitude and longitude of the dumpsites and what the records indicated as to how many barrels and how much radioactivity had been dumped at each. The U.S. Environmental Protection Agency contacted us and asked for help because they had lost track of the great majority of the dumpsites! We testified at a Congressional hearing about the matter, did a news conference with a San Francisco legislator concerned about the similar dumpsite at the nearby Farallon Islands, and pushed for a federal ban.

One day we got a telegram from officials of a Pacific Island nation asking us to help them over their concerns related to plans by Japan to dump much of its radioactive waste in the ocean nearby. A colleague of ours from UC Santa Cruz, Professor Jackson Davis, went, and when he returned we came up with a strategy to ban the practice of ocean dumping of radioactive waste internationally. It turns out that there is an international entity, the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, generally known as the London Dumping Convention, that could take such an action. To propose it, one needed to be a member. Only nation states could be members. So we urged the Pacific Island nations of Kiribati and Nauru, with whom we were working, to join. They were tiny (Nauru has the world’s second smallest national population, after Vatican City) but they were nations and had the right to join LDC and propose a ban.

We co-authored a lengthy report, “Evaluation of Oceanic Radioactive Dumping Program.”

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UCLA - CONTINUED

safety at Stanford, testified for us against the head of radiation safety at UCLA over the radiation releases from the reactor. Attorneys Dorothy Thompson and Dean Hansell and a team of remarkable students from the UCLA Environmental Law Society—among them Michael Schwartz, John Bay, Allen Blumenthal, and Roger Kohn (who also had a Ph.D. in physics)—helped defeat the attorneys for the Regents of the University of California.

The case ended dramatically. The 1984 Olympics were to be held in part at UCLA, a few hundred yards from the reactor; national media had reported that the UCLA reactor would be

a prime target for terrorists. Rather than responding to our evidence of gross weaknesses in security for the reactor, UCLA and the NRC staff instead contended UCLA was not required to have a security plan against either theft of the bomb-grade uranium or against radiological sabotage of the reactor and was never inspected by the NRC for security. When we made sure that the administrative law judges were able to review the inspection reports and security plan and could see that those statements were untrue, the angered judges issued an order suspending the proceeding and brought the lawyers for UCLA and the NRC staff up on charges of misconduct.

In the meantime, the reactor suffered an accident during a seismic simulation, pinning the control blades so they couldn’t be moved. Just before the Olympics were to begin, UCLA announced it was withdrawing its license renewal application and would permanently close the facility. We had won.

After decommissioning, Chuck Ashbaugh, the reactor operator who had become a friend despite our efforts to close his reactor, dropped by the CBG office with boxloads of components from the dismantled reactor, including the control panels with the key still in it, giving them to us as trophies, saying “You’ve won them fair and square.”

The victory went far beyond this one reactor. Our revelations about weapons-grade uranium at research reactors like UCLA’s were a catalyst for a remarkable policy change nationally and internationally. We helped push the NRC to adopt regulations generally banning the use of bomb-grade uranium in research reactors nationally and such exports to research reactors abroad. Highly enriched uranium that could, if stolen or diverted, be used to make nuclear bombs, has been removed from about 100 research reactors here and abroad as part of that initiative, eliminating enough material for hundreds of atomic explosives.

CLOSURE OF THE HANFORD N REACTOR

& Ending US/Russian Plutonium Production for Weapons

IN APRIL 1986 THE Chernobyl reactor in Ukraine exploded and caught fire after a power excursion. The Soviets tried to keep it secret until radiation monitors in Scandinavia picked up the plume. The graphite in the core burned for weeks, driving immense amounts of radioactivity into the global environment.

Dan Hirsch was in Washington DC during the accident, serving on an NRC advisory panel about the weak design requirements for U.S. reactor containments, and was called over to Capitol Hill to sit in on a briefing of legislators and committee staff by the Department of Energy (DOE). DOE was telling them not to worry, “it can’t happen here.” Why not, asked the legislators? Because Chernobyl was a graphite-moderated, uncontained, unlicensed reactor, DOE said. Hirsch interjected that in fact DOE itself had graphite-moderated, uncontained, unlicensed reactors, for example the “N-reactor” at the Hanford Nuclear Reservation in Washington State.

The DOE staff got nervous and said that there were differences. What were those differences, they were asked. DOE said the fuel at Chernobyl was

uranium dioxide, whereas the Hanford reactor used uranium metal. Why was that better, they were asked. Uranium metal melts at a lower temperature, DOE said. Hirsch had to point out that you don’t want nuclear fuel to melt—when it does it releases its radioactivity—and that, unlike uranium dioxide fuel which is already oxidized, uranium metal will burn, driving out more radioactivity.

Not trusting what DOE said, the Subcommittee Chair asked Hirsch to assemble a team of independent experts and fly to Hanford to inspect the N-reactor with him, which Hirsch, UCSC Professor Jackson Davis, and USC Professor Jim Warf, former head of the Manhattan Project’s analytic chemistry sections, did a few days later. Our tour was shocking. The reactor was ancient; key safety features non-existent. We asked to see the fire response plan and were told we couldn’t see it. Why not, we asked, it couldn’t be classified. Finally they said we couldn’t see it because they didn’t have one. How could you not have a fire response plan, we asked. Nothing in the reactor is combustible, they said. How can you possibly say that, when the reactor is made primarily out of graphite, we asked.

We were flabbergasted when they responded that graphite (which is carbon) cannot burn, at precisely the moment that halfway around the world the Chernobyl graphite was burning, sending out massive amounts of radioactivity throughout Europe.

The next day Hirsch, Davis, and Warf testified about our findings at a dramatic Congressional hearing. We disclosed a series of fundamental safety problems at the N-reactor—“Wigner energy” stored in the graphite that could suddenly be released and trigger a fire, positive “reactivity” coefficients in parts of the graphite that could contribute to a runaway power excursion, swelling of the graphite making inserting the control rods difficult, and most of all, a fire risk with no fire response plan. We called for an end to

the lack of independent safety oversight of the DOE nuclear complex. There was significant national press coverage.

DOE announced it would ask the National Academy of Sciences to review the safety of the Hanford reactor and DOE reactors at Savannah River. The NAS study confirmed our findings and raised similar concerns about Savannah River.

The Hanford and Savannah River reactors were shut down, ending U.S. plutonium production for nuclear weapons. This contributed to the U.S.-Russia 1994 agreement “Concerning the Shutdown of Plutonium Production Reactors and the Cessation of Use of Newly Produced Plutonium for Nuclear Weapons,” which resulted in an end to plutonium production for weapons by both the U.S. and Russia.

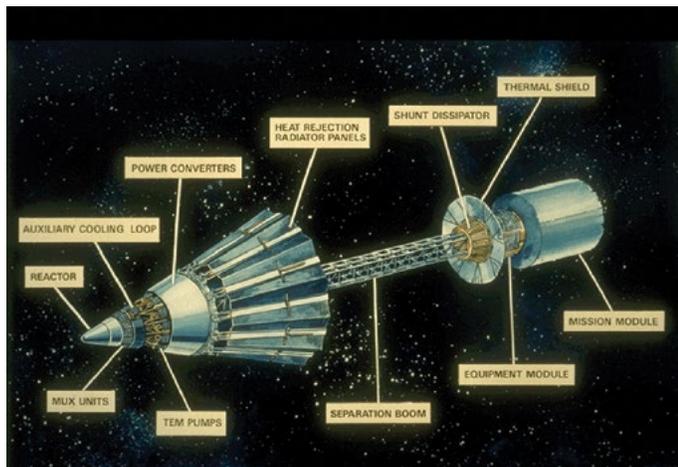


right to left: Congressman Jim Weaver, unidentified Dept. of Energy staffer, Dan Hirsch, Jackson Davis, James Warf after inspecting the Hanford reactor

OCEAN DUMPING - CONTINUED

We helped expose studies that showed radioactivity leaking from such sites was getting into lower parts of the oceanic food chain, then concentrating as it moved up the food chain, into edible portions of edible fish. What we were dumping into the ocean was coming back to us in the fish we ate. We served on a state legislative advisory panel on the subject. We worked with national TV news reporters to get new

parts of the story out. All of these efforts, with much of the credit going to Jackson Davis, along with substantial work by Greenpeace International, contributed to the London Dumping Convention first adopting a moratorium, and then finally, a permanent ban on dumping radioactive waste in the ocean. For more than twenty-five years now the seas have been protected, worldwide, from this environmental injury.



BANNING ORBITING NUKES

BOMB-GRADE URANIUM on campus, radioactive waste in the ocean—these, alas, are not the only arenas where nuclear materials have been placed in hazardous fashion. The U.S. and the former U.S.S.R. launched, or attempted to launch, dozens of nuclear power sources into orbit. Steve Aftergood researched the troubled history and revealed that approximately 15% of both American and Soviet nuclear space devices suffered accidents, launch aborts, or other failures. Steve, now at the Federation of American Scientists, was CBG Executive Director for a decade spanning the 1980s and played critical roles in the successful fights over the UCLA reactor and this work on space nukes.

We disclosed that two such launches from Vandenberg Air Force Base failed. One, carrying a plutonium-238 power source, failed to reach orbit and burned up in the atmosphere; the plutonium fell out around the world. A second failed

to get even that high and fell back in the Southern California area. The failure was not publicly disclosed, but the government monitored milk around LA trying to locate the plutonium source by determining if it was contaminating milk and if so, where the cows were located. In the end, the radioactive source was determined to have come back to earth near the Channel Islands.

When President Reagan proposed the Strategic Defense Initiative, popularly known as Star Wars, arms control experts opposed it. They did so partially because it could never work and partly because it would trigger an expanded arms race where one had to build more and more weapons to be confident that enough would get through the defenses. To help sell it, Reagan promised it would be non-nuclear, like a safe rainbow above us to protect us from incoming nuclear missiles.

CBG disclosed through the news media, however, that SDI depended upon

orbiting battles stations powered by nuclear reactors and nuclear bombs. We brought to public attention through the media the past failures for much smaller nuclear power sources in space and exposed details about the new SDI space nuclear programs.

In 1988, during the Gorbachev glasnost period, Dan Hirsch went to Moscow, as part of a delegation sponsored by the Federation of American Scientists and the Soviet Academy of Sciences, to help draft a proposed treaty banning nuclear sources in earth orbit. While there, a Soviet nuclear-powered satellite space reactor, Cosmos 1900, was at risk of re-entering the atmosphere. The U.S. government could get no information about Cosmos 1900 from direct channels with the Soviet government. In the midst of this crisis, while in Moscow, Hirsch was called into the Soviet Foreign Ministry. In an extraordinary meeting, they provided him with details of the failure. He asked if he could share that information with the U.S. government when he returned to Washington, and was told yes. It was, in fact, clear that the Soviets intended for Hirsch to be the means by which the details of the space nuclear failure were communicated to the U.S. government.

Back in Washington, he briefed the State Department on the details of the failure, the backup systems that were also failing, and the Soviet plans for last ditch efforts to get the nuclear reactor boosted further into orbit so that it wouldn't fall back to earth spreading its radioactivity. Then Hirsch

and Aftergood testified at a dramatic Senate hearing that had been called in part to boost plans for space nuclear power for Star Wars. The Cosmos 1900 failure occurring at precisely the same time cast a pall on those plans. The head of the SDI and numerous other high government officials testified, and then we did.

We explained the dangers of nuclear sources in orbit, exemplified by the Cosmos 1900 failure, but also detailed the history of past failures, U.S. and Soviet. Hirsch had been authorized by Roald Sagdeev, head of the Soviet Space Research Institute and our host while in Moscow, to present to the Committee the draft treaty to ban orbiting nuclear devices the American and Soviet scientists had written during our meetings. The government witnesses on the panel before us had evaded the Chair's questions about what would happen if the Soviet space reactor fell on Washington; we then answered the question, causing significant discomfort for the advocates of SDI space nukes. After the hearing, we asked Committee staff how they thought the hearing went and were told they thought the government witnesses had done more poorly than they had hoped and we had done better than they had wished.

At the last moment, the Soviets regained communications with the satellite and were able to get it pushed into a higher orbit. The work we did opposing "Chernobyls in space" resulted in the cancellation of the SDI space nuke programs. No nuclear source, American or Russian, has been put into orbit since then.

PROTECTING REACTORS FROM TERRORIST ATTACK

OUR EXPERIENCE WITH the inadequate security at the UCLA reactor caused us to turn our attention to the risks of terrorist attack at large nuclear plants. Each contains a thousand times the long-lived radioactivity of the Hiroshima bomb. Release of a substantial fraction of the radioactive inventory could produce significant numbers of prompt deaths and tens of thousands of cancers while rendering uninhabitable much of a state. An accident, be it from worker error, equipment failure, or earthquake, could cause a loss of cooling and resulting meltdown. But what can happen accidentally can also be made to occur intentionally—i.e., an act of sabotage or external terrorist attack. This would give to terrorists a quasi-nuclear capability, without an atomic bomb. Using conventional means, they could disrupt the plant's cooling, and although there wouldn't be a nuclear explosion, the radioactive release could be comparable.

We quickly uncovered records showing that despite the magnitude of the risk, the Nuclear Regulatory Commission's security requirements for nuclear plants, however, were woefully inadequate. The NRC's "Design Basis Threat" – the maximum terrorist threat a nuclear plant's security plan had to be designed to withstand – at the time required protection against no more than three external attackers, operating as a single team,

on foot, utilizing weapons of no greater sophistication than hand-held automatic weapons. If there were four or more terrorists, if they operated as more than one team, if they used a vehicle loaded with explosives—none of this was required to be able to be protected against. The truck bomb risk was particularly concerning, as they were being used with increasing frequency worldwide.

Stephanie Murphy, Dan Hirsch's research assistant at the Program on Nuclear Policy he directed at UCSC,

"our long efforts to improve reactor security resulted in requiring protection against truck bombs and larger numbers of more capable terrorist attackers, a significant improvement in protection"

discovered in an NRC report a brief mention of a Sandia Labs study that concluded, "The results show that unacceptable damage to vital reactor systems could occur from a relatively small charge at close distances and also from larger but still reasonable size charges at large setback distances (greater than the protected area for most plants)." Yet no protection against vehicular bombs was required by the NRC. We also revealed that roughly half

the nation's nuclear plants failed the NRC's own "force-on-force" security tests, even though limited to three mock terrorists on foot and having given the reactor operators a year's advance notice of when the mock attack would occur (something real terrorists, of course, wouldn't do.)

Stephanie Murphy, Dan Hirsch, and Bennett Ramberg, a UCLA scholar and later, CBG's Research Director, co-authored a detailed study of the problem as well as an article in the Bulletin of the Atomic Scientists, and testified before the NRC's Advisory Committee on Reactor Safeguards, and Hirsch testified before Congress. CBG, working with the Nuclear Control Institute, submitted petitions

intrusion at the undamaged Three Mile Island reactor, we tried again. The NRC finally reversed course and approved our repeated proposals to change its rules so as to require protection against truck bombs and against more than three attackers.

NRC still resisted requiring protections against attacks from the air. When the World Trade Center was again attacked, on 9/11 in 2001, this time by air, and it was revealed that the attackers had flown by the Indian Point Nuclear Plant on their way, concern mounted about the vulnerability of such plants to attack by planes. The NRC quickly issued a statement that all of its reactors were designed to withstand such an attack. Dan Hirsch and the Nuclear Control Institute's Paul Leventhal met with the NRC Chair to point out this wasn't true, that only one plant in the country was designed to withstand the crash of a fully loaded jumbo jet, and the NRC the next day had to issue a correction.

Joel Hirsch proposed a solution to the problem, constructing I-beams around reactors so an incoming plane would crash into the girders rather than the reactor. Actor Martin Sheen did the narration for an animation we produced of the risk of such an air attack and how Joel's "Beamhenge" protection could block it. But to this day, the nation's nuclear plants remain vulnerable to attack by planes. Nonetheless, our long efforts to improve reactor security resulted in requiring protection against truck bombs and larger numbers of more capable terrorist attackers, a significant improvement in protection.



WARD VALLEY

The Epic Fight Against a Proposed Nuclear Waste Dump that Could Have Contaminated the Colorado River for Thousands of Generations

In the late 1980s, the nuclear industry proposed to dump vast quantities of long-lived radioactive wastes from nuclear power plants in unlined trenches at Ward Valley, less than 20 miles from the Colorado River, the main water source for much of the Southwest. Thus, working in coalition with the Fort Mojave, Chemehuevi, and Colorado River Indian Tribes, as well as Physicians for Social Responsibility, Greenpeace, the Nuclear Information and Resource Service, Americans for Safe Future, the Natural Resources Defense Council, and others, we began an eventually successful fight to block the proposal, which consumed much of our energy for a dozen years.

A nuclear reactor produces 50 years of power, but 500,000 years of waste. That radioactive garbage needs to be isolated from the human environment for periods far longer than any human institution has existed—indeed, far longer than human civilization has existed. Some of the

radioactive waste is irradiated fuel, but much is stuff like irradiated reactor components as well as filters which concentrate radionuclides that leak out of the fuel. It contains the same radionuclides (e.g., plutonium-239, strontium-90, cesium-137) as the irradiated fuel, with the same toxicity and half-life. It is that material that was proposed to be dumped at Ward Valley, on land important to the nearby Native American tribes.

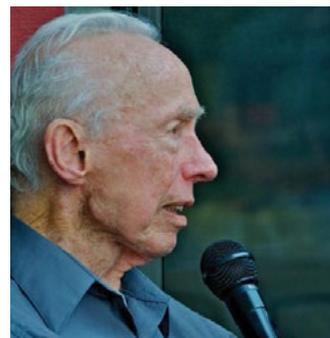
Much of Bridge the Gap's work consisted of pouring over tens of thousands of pages of technical documents to find the critical information buried at the back. Here, US Ecology, with a history of operating leaking nuclear dumpsites elsewhere, asserted that no rainfall could penetrate the 100 feet from the surface to the waste trenches in less than about 10,000 years and thus couldn't carry radioactivity down into the aquifer beneath. Near the back of the tenth or so volume of the license application, however, we found a

brief acknowledgment that tritium, a radioactive isotope of hydrogen, had already been found that far down. Tritium, which forms radioactive water molecules, has a half-life of 12.3 years and is primarily produced by nuclear weapons tests. If tritium was found 100 feet beneath the surface of Ward Valley, it had to have infiltrated there within the last few decades as there were no atom bomb tests before 1945, and given the half-life, couldn't have come from anything that wasn't recent.

Thus radioactivity, if dumped in unlined trenches at Ward Valley, could quickly contaminate the aquifer below. We also identified several hydrologic pathways by which that aquifer apparently drained into nearby groundwater basins that led to the Colorado River. Therefore, dumping radioactive waste at Ward Valley could result in contaminating that extraordinarily important water source, for eons. We issued a detailed technical report on these problems by a panel including Dr. Robert Cornog, co-discoverer of tritium.

Based on a single sentence in the EIS for the project, we learned of, and then obtained and made public, a critical analysis by US Geologic Survey scientists raising similar points. We brought their initial review to

the attention of Senator Boxer, who interceded with the Secretary of Interior to allow the authors, led by a courageous geologist named Dr. Howard Wilshire, to perform a more detailed study. That work raised very serious questions about the safety of the project, which triggered the establishment of a National Academy of Sciences panel to review the Wilshire findings. The NAS panel, however, was assured by another USGS scientist that measurements he had conducted at a twin radioactive waste dump in Beatty, Nevada showed no migration could occur for ten thousand years.



Dr. Howard Wilshire, on his 90th birthday, 4 years ago. credit: John Nakata.

Dr. Joe Lyou, CBG's Executive Director for the decade of the 1990s, now President of the Coalition for Clean Air, and who did yeoman's work at CBG in the Ward Valley fight, called

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Dr. Bennett Ramberg (on left) and Dr. Joe Lyou (on right), CBG Research Director and Executive Director respectively, in CBG office.

FIGHTING THE DEREGULATION OF RADIOACTIVE WASTE

THE WARD VALLEY CONTROVERSY DEMONSTRATED how weak were the regulations for licensed radioactive waste disposal facilities. But as minimal as were those safety requirements, the nuclear industry and its captive regulator, the Nuclear Regulatory Commission (NRC), every few years put forth proposals to deregulate a large portion of the radioactive waste stream, which would allow such wastes to be disposed of in places neither licensed nor designed to safely handle them. Those proposals have beaten back, time and time again, with leadership by Diane D'Arrigo of the Nuclear Information and Resource Service (NIRS), only to re-emerge.

CBG disclosed that radioactive metals from the Santa Susana nuclear site had been sent to regular metal recyclers, where they got melted down into the consumer metal supply. We helped press the Department of Energy (DOE) to put in place a moratorium on recycling radioactive metals from the DOE nuclear complex. We disclosed that the Santa Susana site had sent radioactive waste to three regular local garbage dumps, designed for rotting cabbages, not plutonium. This led to legislation banning the practice statewide, which passed the legislature but was vetoed by Governor Davis. However, in vetoing it, he put in place a moratorium on such disposal in the state's municipal landfills that remains in place to this day.

Attorney Larry Silver, representing CBG, filed suit against the California Department of Health Services when it adopted regulations that would deregulate substantial amounts of radioactive wastes. We won and that victory remains in place. CBG's then-Sacramento Director and decades-long ally, Bill Magavern, played significant roles in these battles. Bill went on to head Sierra Club California and is



Bill Magavern

now Sacramento Director for the Coalition for Clean Air.

Radioactive waste generators continued to try to send their wastes to places not licensed or designed for radioactive waste, for example the dumpsites at Kettleman Hills and Buttonwillow in California's Central Valley, two low-income, farmworker, primarily Hispanic communities. Dan Hirsch served as the expert witness for Padres Hacia Una Vida Mejor in their Tanner Act Environmental Justice proceeding to stop the radioactive waste dumping in Buttonwillow; his testimony was instrumental in their victory on that issue.

However, there continues to be pressure for such deregulation. In a detailed study by Dan Hirsch and Ethan Miske issued by CBG, it was revealed that the Boeing Company had been disposing of radioactive waste in sites not licensed for it and at recyclers. With Consumer Watchdog, the Southern California Federation of Scientists, and Physicians for Social Responsibility-LA, we filed suit against the state toxics agency to stop it. Attorneys Beverly Grossman Palmer, Michael Strumwasser, and Andrea Ordin have to date successfully blocked approvals of any further such disposals of radioactive debris from Boeing buildings; the case is on appeal.

Early this year in the midst of the Covid-19 pandemic, the NRC quietly proposed to deregulate virtually the entire radioactive waste stream from nuclear reactors except the spent fuel, allowing the waste to go to regular municipal garbage dumps, or even vacant lots near schools. CBG, working closely with NIRS, Public Employees for Environmental Responsibility, and the Natural Resources Defense Council, has marshaled national opposition to this dramatically irresponsible proposal.

WARD VALLEY - CONTINUED

the USGS scientist. Over a period of a couple of hours Joe painfully extracted from him the admission that his study had actually found that the Nevada dumpsite had already failed and radioactivity leaked offsite. The news revelation resulted in the Ward Valley proposal, which was on the verge of approval, being pulled back.

Governor Pete Wilson was pushing aggressively for the dump. Dan Hirsch testified at the confirmation hearing of Wilson's

nominee to be Secretary of Health and Welfare, Russ Gould, expressing concern that Gould was refusing to allow an evidentiary hearing on these safety issues before approving the project. The Senate Rules Committee, in an extraordinary move, voted unanimously that Gould should meet with Hirsch that evening to see if Gould would not now agree to the evidentiary hearing. They negotiated for hours unsuccessfully, and then in a dramatic hearing the next morning at

which both testified, Gould eventually committed to the hearing and was confirmed. Governor Wilson a few weeks later broke the commitment, which led the federal government to refuse to transfer the land until such a hearing was held and new tritium tests conducted.

After many more such struggles—including critical work by Susan Clark and Catherine Lincoln (now CBG Board Member and Executive Director, respectively), and litigation led by Roger Carrick, Dan

Selmi, Fran Layton, and Fred Woocher—the project was dropped. CBG helped write state legislation that barred radioactive waste from ever being dumped at Ward Valley and set strict design criteria (e.g., prohibiting unlined trenches) for any such project were one to ever be proposed for elsewhere in the state. It was an epic struggle, one that was won; and the Colorado River and those who depend on it were protected from this large radioactive threat.

CLOSURE OF THE SAN ONOFRE NUCLEAR PLANT

On the coast midway between Los Angeles and San Diego is the now-shuttered San Onofre nuclear power plant. An accident or terrorist event there could have taken out much of Southern California.

We opposed it from the beginning. Dr. Sheldon Plotkin, a safety engineer and long-time CBG Board member, testified as an expert witness during the licensing proceeding that the emergency plan could not possibly work. Freeways were already jammed much of the time, even when there was no nuclear accident to escape from. If there were a nuclear evacuation ordered, there was simply no way to get people out in time.

Southern California Edison (SCE) had assumed in its analysis that essentially every square foot of freeway would be filled with cars, with no space between them, and all cars going 65 miles an

hour, with no traffic jams, crashes, or other impediments. Dr. Plotkin showed how this couldn't work, but the NRC rubber-stamped the approvals anyway.

In January 2011, CBG launched its "Truth to Power Campaign" headed by S. David Freeman, who had previously run the Tennessee Valley Authority, the LA Department of Water & Power, and the Sacramento Municipal Utility District. It was aimed at rapidly phasing out nuclear power and replacing it with renewables, and soon focused on shutting down California's nuclear plants, San Onofre and Diablo Canyon.

In 2012, the year after



Dan Hirsch addresses rally in front of San Onofre reactor.

the Fukushima accident, San Onofre was unexpectedly shut down because of rupture of some steam generator tubes and associated release of radioactivity. SCE was cagey about how many tubes were damaged and the seriousness of the problem. We immediately recognized, however, that the situation was considerably more worrisome than SCE had disclosed.

Steam generators are critical features of a nuclear reactor. They help extract heat from the nuclear fuel, essential to preventing it from melting, and they provide a pathway for radioactivity to be released from the containment structure into the environment. San Onofre's steam generators were supposed to last the lifetime of the reactor, but wore out prematurely, so SCE had to buy new ones (they are huge and very expensive) and replace them. The new ones were only a year or two old when they failed.

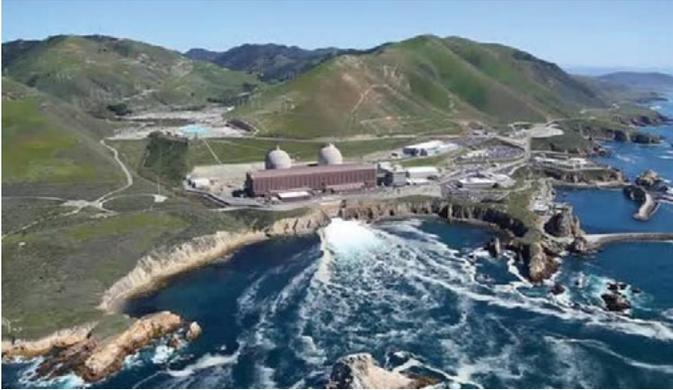
In a tense exchange at a huge public meeting, Dan Hirsch got SCE to admit that

not just a few but thousands of steam generator tubes were damaged. Dorah Shuey and Dale Bridenbaugh helped produce a detailed CBG report examining the history of steam generators nationally that showed that the San Onofre failures were orders of magnitude greater than experienced virtually anywhere else. Senator Boxer provided our report to the NRC Commissioners at a Senate hearing, calling on all of them to review it and respond. Dan Hirsch then testified before the NRC about the problems.

An Atomic Safety and Licensing Board was established to review SCE's request to restart one of the San Onofre reactors without fixing the steam generators. Citing in part the CBG report, the Board refused to allow it, requiring instead a full license amendment hearing on the safety of restart. SCE then withdrew the request and announced the reactors would be permanently closed, an astonishing victory.



Dry Cask Storage system being put in place adjacent to the beach at SONGS



CALIFORNIA TO BE NUCLEAR-FREE:

The Phase-Out of Diablo Canyon

THE ENVIRONMENTAL leader David Brower once defined a nuclear power plant as a complex technological device for locating earthquake faults in California. Wherever the industry decided to site a nuclear reactor, earthquake faults were soon discovered.

When Pacific Gas & Electric (PG&E) proposed a nuclear plant at Diablo Canyon, near San Luis Obispo, it claimed there were no active faults within 30 kilometers. It therefore designed the plant to withstand only a modest quake.

During the construction permit hearings before the Atomic Energy Commission licensing board, the local intervenor group asked to be able to put on an afternoon of testimony by a local geologist about the prospect of a nearby fault. PG&E in its wisdom, objected, and the AEC board refused to hear the evidence. Tom Pigford notably dissented, saying shouldn't we find out before they pour concrete whether there is a fault nearby? The AEC granted the permit nonetheless.

A few years later, and when the plant was already 80% built, two oil industry geologists discovered the Hosgri Fault, coming within 4 kilometers of the plant, and capable of causing ground motion far in excess of what the plant was designed to withstand. The NRC allowed the plant to go forward, nonetheless, with some minor upgrades. But even those PG&E managed to

screw up. Because the reactors were built to mirror image blueprints of each other, PG&E put the pipe supports and whip restraints in all the wrong places, because they used the wrong set of blueprints.

Subsequently the San Luis Bay Fault was discovered near the plant; then the Los Osos Fault; and then finally, the Shoreline Fault, coming within 600 meters of the plant. And they were found to be interconnected. Working with geologists Dr. Jerry Weber (who years earlier had discovered part of the fault system) and Dr. Sam Blakeslee (who had been a State Senator representing the Diablo area), we demonstrated that the new seismic information resulted in potential ground motion at the plant in excess of what the plant was designed or licensed for. A massive nuclear accident was thus possible.

Blakeslee and Hirsch testified before the U.S. Senate Environment Committee. CBG played a role with the State Water Board to assure Diablo continued to be required to install cooling

towers to stop the killing of massive numbers of fish by its current intake of ocean water for cooling and discharge of heated water. CBG uncovered the fact that the leases from the state for use of the submerged lands off Diablo for outfalls and inlets was expiring, giving the State Lands Commission power to close the plant by simply not approving extensions of the leases.

The seismic revelations, the cooling tower requirements, and the expiring leases, as well as economic factors resulting from increased reliance on cheap renewables, led PG&E to agree to phase-out the reactors by 2024 and 2025. This was the culmination of years of work by Mothers for Peace, the Natural Resources Defense Council (particularly long-time CBG ally Joel Reynolds who represented the Mothers in the licensing fight going back thirty years), Friends of the Earth, and CBG. Shortly, California will be nuclear free.



When Diablo Canyon was built, it was assumed there were no active earthquake faults within 30 km.



Now we know there are 4 active faults nearby.

Slides by Evan Morgan

HUNTERS POINT NAVAL SHIPYARD

THE NUCLEAR ARMS RACE COMES HOME

ON JULY 16, 1945, THE USS INDIANAPOLIS DEPARTED Hunters Point Naval Shipyard carrying components of a bomb code-named “Little Boy,” including half of the highly-enriched uranium then in existence in the world. Two hours later, after receiving word that the “Trinity” test of the first nuclear explosion on earth had succeeded earlier that day at Alamogordo, New Mexico, the Indianapolis was allowed to leave San Francisco harbor carrying its cargo to the island of Tinian in the Pacific. On August 6, a plane christened the Enola Gay left Tinian and dropped the assembled atomic bomb on Hiroshima.

About a year later, the nuclear arms race returned to Hunters Point. The first post-war nuclear tests, called OPERATION CROSSROADS, were conducted at the Bikini Atoll in the Marshall Islands in the Pacific, involving 42,000 sailors and more than 240 target and support ships. The tests went badly awry, contaminating the ships. More than 80 of the most contaminated ships, from this and subsequent tests, were brought back for “decontamination” to Hunters Point, then, as now, a predominantly low-income Black community. This process involved sandblasting the radioactivity off the ships in the open air, transferring the contamination from the ships to the surrounding area.

In 1989, Hunters Point was made a Superfund site, listed as one of the most polluted places in the country. Since then, the cleanup has been botched beyond description. CBG, working with Public Employees for Environmental Responsibility, pried out of EPA and made available to the news media EPA documents concluding that the Navy’s contractor had apparently fabricated or otherwise falsified radioactivity measurements at 90-97% of the survey units at the site. \$250 million in taxpayer money was wasted; the tests would have to be redone.

CBG has issued a series of detailed reports on the problems at Hunters Point, which have been given significant press attention (e.g., front page of the San Francisco Chronicle, major TV news stories on NBC Bay Area). These studies—based on intensive research by CBG staffers Devyn Gortner, Maria Caine, Taylor Altenbern, Haakon Williams, and Audrey Ford, and a score of interns—disclosed that the problems went far beyond the fabrication of measurements. CBG revealed that radioactivity use at the site was far more extensive than generally realized, with numerous pathways for transporting contamination throughout the entire shipyard and into the neighboring community; that 90% of sites at Hunters Point had not been tested at all; that for those sites that were, 90% of the radionuclides of concern were not tested for. We showed that the cleanup standards employed by the Navy were decades out of date and far, far weaker than current EPA standards, which are required to be used at Superfund sites.



Operation Crossroads, 1946. Note ships beneath the mushroom cloud. NATIONAL SECURITY ARCHIVE

We disclosed that the Navy, after having promised to remove the contamination so that the site could be released for unrestricted residential use, shifted gears and decided to leave much of the contamination and just cover it with thin layers of soil or asphalt. Because the site is planned to be the largest redevelopment project in San Francisco history since the 1906 earthquake, those thin covers will have to be torn up and the contaminated soil beneath them excavated to build the more than 12,000 homes planned, exposing and lofting the contamination into the air. Drs. Howard Wilshire and William Bianchi prepared companion reports that showed that plant roots and burrowing animals would also bring the contamination back to the surface. We have prepared detailed critiques of testing plans by the Navy and the health department showing that they were incapable of detecting contamination at the levels requiring cleanup.

Three quarters of a century after the nuclear arms race set sail from Hunters Point, the toxic legacy remains for that impacted community, a victim of environmental injustice. We will continue our efforts to assist them, as they frankly have no one on their side from the parties responsible—the Navy, its contractors, and the captured regulators. Hunters Point is a striking reminder that the nuclear arms race threatens us globally and locally.

"CBG revealed that radioactivity use at the site was far more extensive than generally realized, with numerous pathways for transporting contamination throughout the entire shipyard and into the neighboring community..."



The Santa Susana Field Laboratory MELTDOWN AT HOME

WITHIN WEEKS OF THE March 1979 Three Mile Island partial meltdown, CBG research into local nuclear risks uncovered that there had been a partial meltdown of a reactor in the LA area that had been kept secret for twenty years. We made it public and have worked ever since to get the contaminated site cleaned up.

Wendy Schnelker, who had grown up near the Atomics International site (now called the Santa Susana Field Lab), prodded us to focus on it. Michael Rose came across a letter at the CBG office that we had received from a Washington DC scientist who had been researching various nuclear accidents across the U.S. It included a brief reference to an unspecified “incident” at the Sodium Reactor Experiment (SRE) at the Atomics International facility, located in the hills above the Simi and San Fernando Valleys.

Michael requested Atomic Energy Commission documents from a remote annex of a government repository and

did Freedom of Information Act requests. And what he found in those records was extraordinary—a partial nuclear meltdown had occurred in the LA area in 1959, in an AEC reactor with no containment structure to prevent the release of radioactivity into the environment. Indeed, radioactivity had been intentionally vented into the atmosphere for weeks. The AEC had lied about it. A third of the fuel elements had experienced melting. We even obtained AEC photos of “melted blobs” on the damaged fuel and film footage.

We brought the documents and footage to Warren Olney and Pete Noyes, then heading the investigative unit at KNBC TV in LA. They ran a week-long series on the nightly news. On the last day of the series, a woman from Newbury Park called Olney to say her child had leukemia and she knew of eight other children in her neighborhood similarly affected; could it be related to releases from the meltdown or other problems at Atomics International? Olney told her to call us, and

Core group of SSFL cleanup activists celebrate the signing of the 2010 cleanup agreements

we promised to help—a promise at the time that we had no idea would extend over four decades.

Our further research uncovered that there had been ten reactors there, at least four of which had suffered accidents. There was also a plutonium fuel fabrication facility, which had released plutonium, perhaps the most dangerous substance on earth. Highly irradiated nuclear fuel from around the country was also shipped to the site to be taken apart in a “Hot Lab,” where numerous radioactive fires occurred. Radioactive and toxic chemicals were illegally burned for decades in two open-air burn pits, ignited by shooting at them with rifles, releasing the contamination widely. Tens of thousands of missile and rocket engine tests, for example for the MX missile, were conducted, discharging huge toxic plumes in the air; a million gallons of carcinogenic TCE were used to flush the rocket engines and then allowed to percolate into the soil and groundwater.

In 1989, we began working with an extraordinary bunch of local residents to stop the nuclear work, and

then the rocket testing, at SSFL. Dawn Kowalski, Marie Mason, Holly Huff, Barbara Johnson, Sol and Jeanne Londe, George and Eleanore Rembaum, Mark and Estelle Lit, Jerry, Bunny and Dorri Raskin, Bonnie Klea—the absolute salt of the earth. All of them who are still alive (we have, alas, lost a few) are still fighting the battles.

Together we intervened in the NRC license renewal proceeding for the hot lab, resulting after long struggle in a withdrawal of the application and the shutting down of all nuclear work at the site, permanently. It is, we believe, the first time that community efforts resulted in the closure of an unsafe Department of Energy nuclear facility. Eventually we got the rocket testing to stop as well.

Next the community wanted independent epidemiological studies to ascertain the risk from the site. Generally, government agencies that run dangerous sites such as the Department of Energy control the studies of whether they harmed their workers or the public, dramatically skewing the results. We succeeded in getting the

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SANTA SUSANA - CONTINUED



Then-LA City Attorney Rocky Delgadillo, Dan Hirsch, & NRDC's Joel Reynolds announce SSFL lawsuit at LA City Hall, 2004.

SSFL studies conducted by independent teams of experts, chosen and overseen by the community, a model nationwide. The studies, by UCLA and others, found significantly elevated worker cancer rates associated with their exposures. Other studies found migration of contamination offsite and elevated cancers among the neighboring community associated with their proximity to SSFL.

The third goal, cleanup of the site, has proven far more difficult. Boeing, NASA, and the DOE, who are the parties now responsible for the pollution, have resisted mightily cleaning up the toxic mess. The state regulators long failed to require cleanup of the contamination.

CBG, the Natural Resources Defense Council, and the City of Los Angeles jointly sued the Department of Energy, winning a major victory in 2007, largely due to the extraordinary work of attorneys Howard Crystal and Geoff Fettus. Subsequently, when Boeing tried to overturn state law

requiring a full cleanup, Dan Selmi, Professor of Environmental Law at Loyola Law School, diligently litigated on CBG's behalf. Countless others gave their all in the battles.

After years of work, we finally succeeded in 2010 when a courageous Secretary of CalEPA, Linda Adams, negotiated cleanup agreements with NASA and DOE to clean up all the contamination in their areas of SSFL, to return it to the condition it was in before being polluted. There was immense joy in the community when those agreements were signed.

The agreements required cleanup be completed by 2017. We are now ending 2020 and the required soil cleanup has not even begun. NASA and DOE recently announced they intended to break the legally binding agreements and leave the great majority of the contaminated soil not cleaned up. Boeing has similarly reneged on its cleanup commitments. As this is written, despite repeated public pledges to do so, the state has so far failed to take any serious action to enforce the cleanup agreements.

Keeping one's word is a holy matter. The irony of the Santa Susana fight is that we and the people who live near the site with whom we work, who had nothing to do with creating the contamination in the first place, have fought diligently and long for its cleanup, having kept our word to do so. The parties responsible for the contamination, and the agencies who regulate them, have not. We intend to continue to carry out our promise, made four decades ago, to try to help this impacted community,

and to do that we must keep pressing the polluters and their regulators to start living up to their promises.

The fight has been strengthened by the marvelous addition of committed people like Melissa Bumstead and Jeni Knack of Parents Against SSFL, which was established by parents of children with pediatric cancers which they associate with living near the contaminated site. The community further owes a great debt of gratitude to Ventura County Supervisor Linda Parks, Congressmembers Julia Brownley and Brad Sherman, former State

Senator (now LA Supervisor) Sheila Kuehl, among many, many others. Additionally, the community does not know how deeply indebted it is to Bill Craven, until recently the top staffer for the State Senate Natural Resources Committee, who has fought like a bulldog for them for years and years. And most importantly, none of the fight would have been possible without the extraordinary diligent, skillful, steadfast work of Denise Duffield jointly sponsored by CBG and Physicians for Social Responsibility-LA. The struggle continues.

Denise Duffield



A special note of immense gratitude for Denise Duffield is in order. Extraordinarily dedicated, hard-working, energetic, and skillful, she has coordinated joint CBG-Physicians for Social Responsibility work on Santa Susana for years, including the SSFL Work Group. There are very few people in this world who are willing to put in the hard labor, from beginning to end, to make justice happen. Denise is one of those very rare and special people.

UCLA Releases Oral History of Dan Hirsch & CBG

UCLA's Oral History Program has just released its oral history of Dan Hirsch and Bridge the Gap. In a series of five interviews recorded over a five-year period stretching from 2012 to 2017, Jane Collings, principal editor and interviewer for the UCLA Center for Oral History Research explored the history of the Committee to Bridge the Gap with President Dan Hirsch. The oral history has recently been posted on the UCLA Oral History website, where you can listen to the tapes. We have posted a link on our website, committeetobridgethegap.org; on our main page pull down on "About Us" in the top menu. Select "UCLA Oral History of CBG & Dan Hirsch." This will take you to the Dan Hirsch/CBG interviews page of the UCLA Digital Library.

Wendy Schnelker

FOR MUCH OF A DECADE Wendy Schnelker was the heart and soul of Bridge the Gap. It is she who got us involved in the Santa Susana issue and she worked tirelessly on it. The UCLA reactor case simply wouldn't have been won without her. She contributed significantly to the effort to ban ocean dumping of radioactive waste and engaged in civil disobedience over the Diablo Canyon plant. She worked in the Nuclear Freeze Campaign and other campaigns against nuclear weapons. She led efforts against U.S. military



involvement in the wars in El Salvador and Nicaragua. At the same time, she gently embodied how our lives need to be consistent with our principles: to live simply so



that others may simply live, to protect the earth by how we grow our food and how we eat, to love the extraordinary beauty of nature and to defend it, to care for the



orphan and the refugee. Much of what Bridge the Gap has done and tried to be would simply not have been possible without her.

IN MEMORIAM: MICHAEL ROSE

The Gifted Investigator Who Revealed the Partial Meltdown at Santa Susana

On September 7, 2020, Michael Rose, a dear friend and key Bridge the Gap figure for 45 years, died of complications from a bone marrow transplant for leukemia. He uncovered some of the most important nuclear hazards in the country, which contributed to their elimination. Michael was the best researcher and investigative journalist we have ever met, and a gentle and caring soul, and he will be missed more than words can express.

After the accident at the Three Mile Island nuclear plant, Michael came across a letter from a physicist we had just received in the CBG office that included an oblique reference to a nuclear "incident" that had occurred at the Atomics International facility, now known as the Santa Susana Field Laboratory. He began digging in technical archives and, with the aid of Freedom of Information Act (FOIA) requests, was able to bring to the news media evidence that a partial meltdown had occurred in the LA area and, until his disclosures, had been kept secret for twenty years. The revelations eventually resulted in the closure of the nuclear testing site.

This was by no means all he uncovered. Using FOIA requests and his extraordinary research skills, Michael soon identified the locations of fifty dumpsites for radioactive waste off the East and West Coasts and in the Gulf of Mexico. He revealed their precise longitude and latitude and the amount



of radioactive waste dumped at each. The federal government had lost track of them—the EPA wrote us asking for help in locating their missing radioactive waste dumps! Michael's work on the ocean dumping issue formed the basis for our Congressional testimony. Decades later, a reporter for the Wall Street Journal spent several days at Bridge the Gap poring over Michael's ocean dumping documents, resulting in a major article and an interactive map showing the dumpsites Michael had uncovered. Michael's research contributed significantly to the London Dumping Convention banning the practice of dumping radioactive waste in the oceans internationally.

Michael was also key to Bridge the Gap uncovering the safety and security problems at the UCLA reactor. Michael helped put on a packed news conference where the findings of CBG's investigation were revealed. When a TV reporter asked what we were going to do about it, Michael suggested that we would intervene in the relicensing proceedings for the reactor, beginning a five-year struggle that resulted finally in the closure of the reactor.

Michael was a gentle, thoughtful, soft-spoken, caring person of great talent, and a beloved friend. Much of Bridge the Gap's work for decades has been carrying out battles on matters he uncovered, and that work—his work—will continue.

Special Thanks

Sister Veronique and Redwoods Monastery: CBG's Spiritual Advisors

A REMARKABLE RELATIONSHIP began 44 years ago between Bridge the Gap, out in the secular world fighting battles for justice and peace, and a Trappist Monastery, a place of silence and peace in a remote corner of Northern California. Over the years, the monks at Redwoods have provided haven and counsel to us. For several years, indeed,

Bridge the Gap's Northern California office was in the rooms in which Thomas Merton had stayed before his death. In the contemplative heart of this place of serenity and simplicity, Dan Hirsch fought the Ward Valley battle.

On its face, it is a totally improbable relationship. But as the monks often tell us, Bridge the Gap is trying to do

in the outside world what they are trying to do in the inner: bring about peace. And, in the end, one can't do one without the other.

Sister Veronique and Dan Hirsch have talked by phone every week for years. When the battles become too much, the pain too hard, the adversities seemingly overwhelming, this Flemish nun in her late 80s, living amidst hundreds of acres of monastic silence, has brought him healing and great truths. Bridge the Gap's ability to find the strength to continue to fight polluters and



war-makers and their powerful allies has been sustained by this remarkable Cistercian community, and our gratitude is beyond expression.

IN MEMORIAM: SHELDON C PLOTKIN, PH.D, P.E.

Dr. Sheldon Plotkin, a mainstay of CBG and an unflagging force for science in the public interest, died April 11, 2020, at age 93. He played key roles in the shutdown of the Santa Susana Field Laboratory and the fight to clean it up. He served as an expert witness in the UCLA, Diablo Canyon, and San Onofre nuclear reactor cases. He was central to the establishment and operation of CBG's longtime partner organization, the Southern California Federation of Scientists. In the fifties and sixties, he fought a long and eventually successful fight against the McCarthy era's withholding of security clearances. He was a gentle and modest man, yet he left behind a lifetime of work for justice, peace, and protection of this planet.



and made major contributions to the work that led to the closure of the site. He served for years on the panel overseeing the epidemiological studies of the SSFL workers and then the studies about the offsite impacts. He also served for decades on the SSFL Work Group, holding agencies' feet to the fire over broken promises for cleanup. He liked to recount how, when he was touring the facility, he asked an Atomics International staffer how radioactive contamination got outside the Hot Lab.

He was told it was because the roof leaked—rainwater leaked into the building housing highly irradiated nuclear fuel, picked up contamination, and then leaked out again! There would always be a roar of laughter from Shel as he told this, because, as an engineer, these were the kind of "failure modes" that weren't supposed to happen, and always did for nuclear power.

We first met Shel and his late wife Millie at a block party they were organizing against the Vietnam War in their neighborhood. They joined the Bridge the Gap Board in 1974 and always demonstrated a deep commitment to its mission. Millie served on the Board 34 years and Shel for 46 years until his recent death.

Shel was central to the successful intervention over the UCLA nuclear reactor. Shel loved to tell the story of how he, as part of an inspection in preparation for testifying before the NRC's Atomic Safety and Licensing Board, easily defeated the rudimentary motion detectors in the reactor room. The reactor operators were plagued by false alarms—every time the ventilation fans went on, the alarms went off—so they turned down their sensitivity. Knowing how such devices worked—detecting only a motion greater than a certain distance in a specified time Shel got down on his hands and knees and crawled through the reactor room slowly, never setting off the alarms. The reactor was permanently shut down, and the NRC adopted new regulations to require such reactors to cease using highly enriched uranium that, if stolen, could be used to make a nuclear bomb.

Shel played critical roles in CBG's exposure of the reactor accidents at the Santa Susana Field Laboratory

In the 1970s, Bridge the Gap prodded professionals in medicine and the sciences to use their technical skills to address the nuclear threat. In part as a result, Richard and Pauline Saxon established Physicians for Social Responsibility-LA, and Shel helped start the Southern California Federation of Scientists (SCFS). Shel was the essential center of SCFS for decades, helping it engage in the fundamental mission of "science for the people."

Tradition holds that the world is held together by thirty-six righteous people at any one time, whose work is performed without calling attention to themselves. What is needed is not charity but justice, and the highest form of justice is that which is done anonymously, done because the world needs it, not to feed the ego of the doer. Shel could be stubborn about some things, but at his core he was a gentle, gentle soul, who tried quietly, bit by bit, to make this war-torn and environmentally damaged world a better place. Shel was one of those righteous ones who worked steadily and quietly, simply because it was right. We have lost one of the righteous ones, but somewhere in the distance another one is being born.

GRATITUDE TO OUR EXTRAORDINARY BOARD

Jack Miles, Pulitzer Prize and MacArthur “Genius” Award Winner, has been involved with CBG for 45 years. His series of editorials for the Los Angeles Times helped bring about an end to the proposed Ward Valley nuclear waste dump.

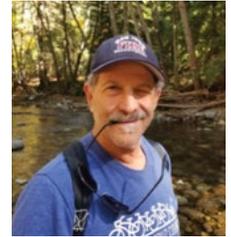
Susan Clark, a distinguished actress, has been associated with Bridge the Gap for thirty years, since helping lead the Ward Valley battle.

Tony Zepeda, an attorney, has worked with CBG since his student days twenty years ago.

Dan Hirsch, former Director of the Program on Nuclear Policy in the 1980s and the Program on Environmental & Nuclear Policy in the 2010s at UC Santa Cruz, has worked with CBG since its inception 50 years ago.

Cindi Gortner, who lives near the Santa Susana Field Lab and long fought for its cleanup, has been active with CBG for more than a decade.

We welcome **Ron Pomerantz** who joined the CBG Board after Shel Plotkin’s death in April of this year. As a UC Santa Cruz student from 1969-73, he participated in student actions to stop the Vietnam War. He served in the Peace Corps in Venezuela from 1973-4. Subsequently, while demonstrating to stop the Diablo Canyon Nuclear Power Plant, he met his future wife, Jane Weed, a life-long social change activist. He served 29 years on the San Jose Fire Department as a Firefighter, Haz Mat Inspector, and Fire Captain. He was an actively engaged union member, handling emergencies and helping people in need. He has served 7 years as Board member and Chair of the Santa Cruz County Housing Authority, on the Executive Committee of the Santa Cruz Sierra Club Group for 6 years and remains a Board member of the ACLU Santa Cruz, with a focus on police accountability and immigration issues.



A SPECIAL NOTE

Pauline Saxon, 96 years young, who has been active with Bridge the Gap for an amazing 48 years. She worked mightily to end the Vietnam War; to promote peace in the Mideast; and most importantly, with her beloved and much missed husband Richard, to reverse the nuclear arms race, before it obliterates the planet. As she says about our years of peace work together: “We were workers, not talkers.” To this day, she is the rock-solid source of wise counsel and support as we struggle with difficult times. The love and gratitude we have for who she is and what she has done simply cannot be adequately expressed.

CBG Team Update 2020

COMMITTEE TO BRIDGE THE GAP, LIKE MILLIONS of others across the country, has been working remotely during the Pandemic. In the Zoom meeting (at right), the team gathered recently to meet with Melissa Bumstead and Jeni Knack of Parents Against SSFL to discuss the ongoing fight to ensure cleanup of the site. This year, CBG welcomed two new staff members, Xiomara Duran and Nicolas Synder, while bidding farewell to Associate Director Taylor Altenbern in November after four years with CBG. Research Associate, Maria Caine left last summer to start law school.

As students returned to the UCSC campus this fall, CBG once again looks to help train a new generation of environmental activists as a new group of interns has begun work remotely. Interns this year are Brian Banh, Bella Bond, Alejandro Montague, Nakia Sukal-Fukuda, Archie Taylor, Anna Wada, and Nicholas Yung.

As we look back on 50 years, there are so many to thank for offering their talents and support over the years. Special thanks are due to Megan Garrett, our Graphic Designer for the past 12 years, for her insight and talent as she turns reports from CBG’s front lines into a stunning newsletter that one wants to read cover to cover.



From top row left to right, Melissa Bumstead, Haakon Williams, Catherine Lincoln, Jeni Knack, Dan Hirsch, Audrey Ford, Xiomara Duran and Nicolas Synder.

We also acknowledge our gratitude to Michael Fontanello, our longtime accountant and superb support for our non-profit mission.

A special, deeply heartfelt thank you is due to Laura Giges. Laura is our bookkeeper, but much, much more than that. She has been an integral part of the CBG team for over 20 years. She has been an extraordinary source of moral support, shared vision and values, wise counsel, and deep commitment to our mission - and an absolutely great friend.



Laura Giges

Huxley Center

LAURA HUXLEY, THE widow of novelist and essayist Aldous Huxley, was an extraordinarily close friend of Bridge the Gap from its inception until her death in 2007—and beyond, by a final act of remarkable generosity.

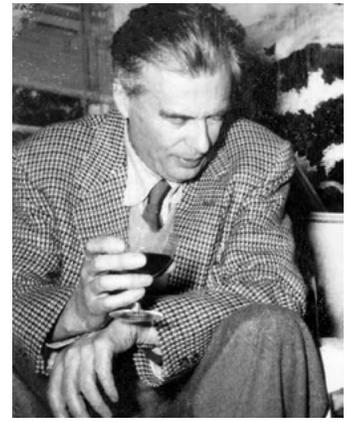
Aldous is best known for *Brave New World*, his warning about a society in which technology has run amuck and people give up their freedom in exchange for empty material things that make them temporarily feel good. He was also early to warn of the risks of environmental destruction, the dangers of nuclear weapons, and the infatuation with war. Laura was an insightful leader in the movement to more fully

tap human potential, to break through the barriers inculcated in us from an early age that make us socialized, regimented, and cut off from the divine spark within.

When Laura died, she left Bridge the Gap two great additional gifts: a few percent of the royalties from sales of Aldous's books and her own, plus their manuscripts and other papers, with direction that we arrange for those materials to be acquired by UCLA's Special Collections Library. We saved the proceeds from the sale of the Huxley papers to help us get through rough times, and those funds have helped us weather the pandemic (so far). The annual

royalties from the book sales have provided about a third of our modest annual budget, and made a big difference in making possible Bridge the Gap's work.

Laura saw at the outset that what Bridge the Gap was trying to do was a combination of what Aldous and she had called for – resistance to environmental destruction, war, and assaults on freedom on the one hand while trying to raise the consciousness of people about our interconnectedness and potential to live in a more aware way. For decades, she steadfastly helped us in our work and bolstered us when we were down. We think Aldous and Laura would be pleased that their legacy has gone to concrete efforts that carry out their vision of a world with less unnecessary suffering.



top: Aldous Huxley
bottom: Laura Huxley
trimming Ram Dass' beard

CBG Needs Your Help!

Dear Friends,

Committee to Bridge the Gap needs your support. As I have helped put together this special 50th anniversary CBG newsletter, I have been just astonished at how much has been accomplished by a small, scrappy and committed group like CBG. And the work continues.

Supporting this work requires money. Your contribution is crucial to CBG's important work especially now, in the midst of the pandemic which has reduced both grants and donations that CBG relied on in the past.

Please take a moment to show your support – there are lots of ways! **Send a check in the enclosed donation envelope or give online at committeetobridgethegap.org using PayPal or credit card.**

CBG is a 501(c)(3) non-profit organization—donations are tax-deductible.

Thank You!

Catherine Lincoln, Executive Director

Questions about donating? Call (831) 336-8003 or email committeetobridgethegap@gmail.com

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