Thanks so much for your interest in the 2009 Sacred Peace Walk!
In this packet you will find background materials to help you prepare for the walk. It contains spiritual reflections about walking and the desert as well as information on nuclear issues and the unmanned aerial vehicles (UAVs) at Creech Air Force Base.

We will be walking through a highly militarized zone: Nellis Airforce Base hosts 1000 nuclear bombs; the Nellis Bombing Range and the Nevada Test Site have been site of Depleted Uranium testing and disposal; unmanned Predator and Reaper “aerial vehicles” or “drones” which are firing missiles and dropping bombs in Iraq, Afghanistan and Pakistan are controlled from Creech Airforce Base at Indian Springs; and the Test Site itself has seen 1,044 nuclear bombings. Yet we will also be walking through the desert, a place of great holiness in many religious traditions. Thank you for bringing your healing power and your longing for healing to the Nevada desert, a place truly located between heaven and hell.

In this packet you will find:
- Article “Walk in Peace for Peace” by Brian Kimmel (p. 2-3)
- Overview of NDE and Desert Spirituality from Ken Butigan’s book Pilgrimage Through a Burning World (p. 4-6)
- Article on Desert Spirituality: “Desert Attentiveness, Desert Indifference: Countercultural Spirituality in the Desert Fathers and Mothers” by Belden Lane (p. 7-16)
- Article on Depleted Uranium by Craig Etchison, Ph.D. (pp. 17-19)
- Health concerns at the Nevada Test Site (pp. 20-23)
- Briefing on the Nevada Test Site from Western States Legal Foundation (pp. 24-37)
- Factsheet on Complex Transformation from Friends Committee on National Legislation, FCNL (pp. 38-39)
- Factsheet on the Reliable Replacement Warhead Program from FCNL (pp. 40-41)
- Article by Fr. Louis Vitale about the Drone UAVs at Creech AFB (p. 42)

Please check our website for the Peacewalk Logistics Packet and for recent news and updates to the schedule:
http://www.nevadadesertexperience.org/programs/peacewalk.htm

On the website you will also find:
- Peacewalk map and schedule (subject to change)
- What to bring (please bring your own tent and sleeping bag!)
- Registration form and outreach materials about the walk, rituals and demonstrations
- Sample letter for recruiting sponsors for the walk (this helps raise money for our movement and is much appreciated!)
- “Walk-a-thon” style pledge sheet (very effective at raising $15 at 25 cents per mile for example)
- Links to other background information and fact sheets about nuclear issues, the drones, the desert and native land issues.

If you have not yet formally registered, please download a registration form from the website, or email us with your name, phone, address, arrival date, transportation and other needs. We ask for a registration fee of $175-125, which covers food and other expenses, with a $50 deposit to start with. We’ll help you fundraise, but if cost is a deterrent, please contact us about other possibilities. We will provide snacks and healthy, simple meals. Please let us know if you have any dietary restrictions. If you would like us to mail you a hard copy of this welcome packet, we’d be happy to mail it to you! Also, we hope you’ll consider downloading outreach materials to share with others.

Please join us for the walk orientation scheduled for Monday, April 6 at 2 pm, with lunch beforehand at noon. We will be gathering at the Las Vegas Catholic Worker house at 500 W. Van Buren Ave, Las Vegas. Please don’t hesitate to contact us if you need help with transportation or if you need special sleeping accommodations.

At the end of the walk, everyone will be given a ride back into Las Vegas.

With love and excitement, The NDE Team
702-646-4818
415-828-2506 (Jim’s cell)
702-574-7420 (NDE cell)
WALK IN PEACE FOR PEACE by Brian Kimmel

War had been my distant cousin, until one day I saw the war was in me. All wars are in me. When I was twenty-four I finally read my grandmother's autobiography about her life in Japanese occupied Indonesia during WWII. I read of the toil of a young girl, running for her life when the soldiers threatened to kill her uncle before her. Just as I turned the page, the blood of his slaughter ran through me.

War is never an impersonal thing. We think, even, we can suffer ourselves in silence, without anyone or anything to witness, but when we suffer we commit that suffering to the collective consciousness. As chief Seattle once said, "We are all connected."

Surely, when one of us experiences war, that war is infused like tea into a cup of hot water...surely our cup is filled with enough suffering to last for generations, enough wars to keep our hearts submersed over generations in the killing fields.

When we walk for peace, it isn't peace we walk 'for'. When we walk for peace, it must be our peace that is walking with us. Each step we can arrive into the Promised Land, the Kingdom of God. Each step we arrive home.

When we step with the left foot we can say 'Arrive'.
When we step with the right foot we can say 'Home'.

Arrive, Home.

Our embodiment of peace is our message. Our body, as the body of peace, is our social action.

My teacher Thich Nhat Hanh says, "All the elements for your happiness are already here. There is no need to run, strive, search, or struggle. Just be. Just being in the moment in this place is the deepest meditation." (TNH 153 parallax press, 1998).

Surely we can take this wisdom into our actions toward world-peace. Even if we are voicing our concerns about nuclear weapons, if we are speaking out against fighting in Iraq, even if we are defending ourselves in court for a traffic ticket, or arguing with a friend about what we want to eat for dinner, act as if you have already arrived…see that which you desire most is already a part of you. See that this moment contains all.

If we are to walk for peace, walk in peace. Let our loving smile show the world that peace is possible, and that no wars, no amount of weapons can take away our freedom, our happiness, our love.

Freedom is available anywhere, at anytime. It is often the most difficult situations that offer the greatest opportunity for enlightenment. It is the freedom from suffering that I talk about. Because as long as we continue to hate, continue to build walls between each other, to have prejudices, blame, guilt, shame and even loneliness, even if our hands are no longer bound, and the bombs are no longer falling from overhead, freedom will not be found.

Freedom is something that must be developed internally as well.

I wrote an article once that was published in the New Times of Seattle called from "Abuse to Peace." A line from the article was captioned in bold print near the crease of the page: “...the war is and has always been
within. We cannot end this war without going inside and recognizing our own thoughts contributing to the suffering, fear, and anger in the world.”

I wrote it after 9/11/01. But the article was about how I loved my former stepfather after he sexually abused me. He was convicted after my testimony in an open courtroom when I was twelve years old. Love saved me. I remember many people asking me to get angry, to punch a punching back, to express rage. Many in my family said, "I hate him for what he did to you." But I could not hate, I loved him. My love saved me, and saved him from suffering more.

Because when I am angry, and I blame another person for my anger, that person suffers a lot, I suffer a lot with that anger inside of me. Most of us get hurt from something on the outside and continue to blame that thing, to point our finger, to raise our voices, to close our hearts in anger for that thing.

Non-violent social action demands us to speak out against injustice without engaging in partisan conflict. It means that we see that both sides are suffering, both sides come from a common origin of ignorance, confusion, fear and violence. Four of the Fourteen Trainings of the Order of Interbeing are: Openness, Non-attachment to Views, Freedom of Thought, and Awareness of Suffering.

I wrote in my diary after the National Peace Rally this January, "Love is a deepening in the connection with the whole." If we love, we are available to listen deeply. If we are listening deeply we are not offering advice, not offering our opinion, but we are seeing into the heart of that person or thing. Meditation is deep-listening. Freedom is love.

About the Author
Brian Kimmel is an ordained lay member of the Order of Interbeing, a community of monks, nuns, laymen and laywomen under the guidance and tradition of Vietnamese Zen Master, Thich Nhat Hanh. He lives in Las Vegas and leads the Tuesday Night Mindfulness Group. He is also a gifted pianist, singer and songwriter and has written many beautiful songs for peace.
the Los Angeles Catholic Worker before relocating to Las Vegas to open a Catholic Worker house there.) Many Catholic Workers journeyed to the Nevada desert to join in NDE activities over the years, especially those marking Day's 90th and 100th birthdays (1987 and 1997) that were celebrated with workshops, liturgy, and nonviolent civil disobedience at the gates of the test site. The experiments in nonviolence that Dorothy Day had pioneered—including the rituals of civil defense resistance—were part of the lore and tradition that shaped the identity and praxis of succeeding generations of Catholic Workers. This transmission of a culture and spirituality of a particular construction of nonviolent action directly influenced those who organized faith-based resistance at the U.S. nuclear proving ground in Nevada.

**NDE and Desert Spirituality**

If we are to be pilgrims for justice and peace, we must expect the desert.

—Dom Helder Camara

From the beginning, the desert played an unavoidably central role in the conceptualization and dramatization of NDE's contemporary pilgrimage to the test site. In the growing NDE vision, the desert was not regarded as "backdrop" or even primarily as "victim" of a relentless and merciless bombing campaign. It became a spiritually vibrant terrain that nurtured, taught, and transformed. The themes of the desert as place of spiritual temptation and personal testing, of apophatic kenosis or emptying but also inexplicable richness and satiation, of being a "devastatingly holy place," recur in people's accounts of their experience of NDE.

While it is true that the desert can evoke intimations of dread and fascination in many human beings simply because of its extremity—and a nuclearized desert can magnify this awareness of awesome power, horror, and in its broadest sense the sublime—it is nonetheless true that such extremity is ultimately not a "given" but an interpretation informed by one's store of metaphors or interpretive lenses. As Lakoff and Johnson have shown, our conceptual system and its range of metaphors define our reality. This view of the Nevada terrain was not a "given." It was seen through certain lenses constructed through a long meditation on "desert" beginning in the Hebrew scriptures, highlighted in the Second Testament with Jesus' forays into the wilderness, embodied in the lived experience of the first Christian hermits in the Egyptian and Palestinian deserts of the fourth century C.E., enunciated recursively throughout the history of Eastern and Western Christian monasticism, and even reframed by European settlers in North Amer-ica, whose settlements were regarded as edenic outposts surrouned the formless chaos of the "desert" of its wilderness, even that distorted and discounted the view of this same terrain by the ind people already living there. As Boniface Ramsey suggests, the desert in Christian symbology is inhospitable and represents the place of spiritual testing. The stands for the arena in which one, while submitting to the test, either the spiritual salvation or one's spiritual doom. It is life its starkest form. Those who go to the desert for religious reasons precisely with the intention of entering this arena and facing the ness that presents itself there.

These Christian interpretations of the desert are rooted in the and Second Testaments. The paradigmatic "desert experience" Hebrews was the exodus from Egypt and their forty-year trek into the desert that brings them finally to the Promised Land. The disj of this Jewish "founding narrative" of liberation plays a key role in ing and testing the identity of the community. The desert also fig the psalms and the Elijah cycle (1 Kings 17ff). Ramsey points at Origen later conceives of "the journey across the desert of Sinai" as various crops, a symbol of the individual Christian journey thrownals to the height of virtue, while in other ancient writings Elijah a as a model for monks." In the Second Testament, John the Baptist in the desert, and Jesus faces temptation and testing there before ning his ministry (Matthew 4:1–11).

In *Thoughts in Solitude*, Thomas Merton views nuclear tes a symptom of spiritual danger. "Look at the deserts today," he "What are they? The birthplace of a new and terrible creation, d ing-ground of the power by which [the human being] seeks to un what God has blessed." This analysis flows from Christian monasticism's spirituality and theology of the desert. As Merton shows he elsewhere, Western monasticism traditionally views the desert arc as the great school, where the human being passes from dr and unreality to a life involving "a total commitment to reality," be it is there that one must rely entirely on God alone. The desertography that, by Christian monastic definition, does not rely support life; therefore, whatever life endures there is necessarytained by God. It is in this physical, spiritual, and existential terr humans come face to face with the Creator, because such a life is with God only. Merton writes that, for the Desert Fathers and Mo the great spiritual significance of the desert derived from its inverted the hierarchy of the values of the dominant culture. They believe the wilderness had been created as supremely valuable in the e
God precisely because it had no value to [human beings]. There was nothing to attract. There was nothing to exploit.\textsuperscript{8} For the Christian monks of the fourth century, the desert functions as the symbolic province of nothingness not because it is utterly devoid of sensible realities, but because it exists outside the framework of established social arrangements, including the economic valuation prescribed by prevailing society. The social construction of this view of "nothingness" has persisted throughout the history of Christian spirituality as a dynamic and potent element of the disciple's spiritual journey. Just as Jesus' mission is framed in terms of \textit{kenosis} and emptying—dramatized most starkly and vividly in the crucifixion—Christian practitioners, including many considered saints, mystics, and contemplatives have experienced Christianity as the via \textit{negativa}, the absence of God, or the apprehension of nothingness.

At the same time, because it is not a locus or bearer of those social values, the desert threatens the person who clings to them. For this reason, in the Christian monastic vision this place of God is also the place of demons that signify the insanity and death, which a site located outside the penumbra of social structures threatens to inflict. The desert is a terrain of madness and devils. The first hermits who withdrew to the deserts of Egypt and Palestine searched for God but knew that the way to this "great unknown" was by way of an ongoing battle with The Adversary.\textsuperscript{9} In this symbology of Christian spirituality, the desert is thus a rich symbolic site where one is freed of all that blocks intimacy with the mysterious and hidden—but sustaining and nurturing—Source. At the same time, it is a setting where one contests the forces within and without that seek to interfere with this intimacy and relationship with that Source. It is not by accident that commentators refer to the desert as an \textit{arena} where this contest is fought; just as the "sandy arena" in Rome was a place of grisly, imperial spectacle, where early Christians were tested, so too the early monks self-consciously were engaged in another struggle in another, sandy setting. The desert has become the new stage or theater of a dramatic, if more hidden and subtle, \textit{agon} where Christianity is performed in a new way.

The desert—and the quest it contextualized—was a forbidding environment. As scholar Douglas Burton-Christie puts it, desert monasticism was a "hand-to-mouth" spirituality. It began as a lay movement; it had no literature at the beginning except the Bible; and it could be fairly free-form and somewhat disconnected from the larger Christian community. Primitive Christian desert spirituality was marked, Burton-Christie shows, by several key elements: eschatology (an awareness of the coming judgment); the struggle with the forces of evil; freedom from care; recovery of paradise; \textit{pathos} or compunction; pure heart, and the cultivation of obedience, simplicity, poverty, non-ment, and love. Key to all of these dimensions of desert spirituality is humility, interpreted in this context as the process of decentering self and recentering it in the life of God, Pride and ego-attach block spiritual advancement.\textsuperscript{10}

Echoing this, theologian Belden C. Lane summarizes the mental elements of the Christian desert tradition as God-as-desert God beyond all words and knowing), self-as-desert (emptied so as to be God and God's love at its center), and the role of ascetical and liturgical practices in revealing this hidden source of love and transformative power.

The metaphor and experience of "the desert," as formulated in Christian tradition, suggestively illuminate NDE's ongoing experience in the American Southwest and California desert. The exodus from nuclearism, entering a place dedicated for decades to its propagation, spiritualizing counter-culture, testing one's own understanding of the human condition and discovering its plenitude. Struggling with apocalyptic evil but also with humility and, in the doing of it, beginning to glimpse the spiritual values the desert teaches: compunction and nonjudgement and freedom from care. Entering the desert of God and of self, and doing so with the ascetical and liturgical performances contextualized to respond to dilemmas of a nuclearized world.

These and other themes have been repeatedly sounded by the pilgrims. In March 1988 Patricia McCarthy wrote about her NDE participation in this way:

On the surface a call to the desert could be a comforting embrace of solitude among the raw beauty of unrood sand and pebble. In every creature, color and texture carefully blended, designed for survival. But this is a new day, we go to a new desert, a desert being destroyed by radiation and shock, a desert being born from producing and selling of greed. Jesus went into the desert, he was the first to cross the line, he dared to look evil in its faceless reality and say, "Away with you Satans... God alone shall you adore." He went ahead of us to show us how to worship, how to be the people of God we were created to be. He knew we could never be human with each other as long as we had gods of metal and iron. And he knew that we could not disarm our hearts from them without the truth of God. "Idols tremble at the accents of the truth of God."

The desert is the place in us where we affirm the truth of God and admit that it doesn't fit with the reality of destruction and violence.
Going into this place doesn’t require heroism, it demands surrender to the awesome person of God and abandonment to his heart. From there his will and desire consume us, transforming hearts of stone to hearts of flesh.

Jesus returned from the desert to minister to his people, confident that he was of God and with God; and because of him, we do the same.33

In the same year, the Nevada Desert Experience published a booklet entitled Notes on Nonviolence.44 This short work, deploying a contemplatively sparse and lyrical prose, summarizes NDE’s vision of the desert:

An hour drive from Las Vegas,
Cold mornings then hot sun.
Flowers, Cactus, Snakes, mice, songbirds. Silence.
Another Test Site vigil.
People from near and far gather in the early hours of the morning…
In every direction is desert, the Great Basin.
Vigilants retreat into the desert for the inner work of nonviolence.
Those who know the desert and those who do not are quieted to their core.
In the desert there is a natural order,
An instinctive putting of first things first.
With ease, simplicity and grace.
This is sacred ground. The Paiutes named it, “Ground Afire.”
In the desert, inner peacemaking is easier because luxury, position and status account for nothing. Solitude strips away the need to maintain false appearance.
Here we can face ourselves without illusion or pretense. A desert experience is seeing ourselves for who we are within the solitude of God.
Silence. Hours of silence.
We have not come to the desert to hide from ourselves or the world.
We intend to look long and hard, and act. Our experience of soul searching is by design and location an experience in soul force.
The desert prayer deepens. The vigil becomes embodied prayer.46

Vast political, cultural, sociological, economic, and environmental factors were incalculably important in catalyzing the historical matrix from which the Nevada Desert Experience and other antinuclear organizations emerged. At the same time, NDE’s vision, character, and practice were shaped as well by particular persons who, rooted in specific religious and political traditions, gradually synthesized a vision and a set of practices as a response to the challenges of that historical and existential moment. The people who created the Nevada Desert Experience discov-
DESERT ATTENTIVENESS, DESERT INDIFFERENCE: COUNTERCULTURAL SPIRITUALITY IN THE DESERT FATHERS AND MOTHERS

by Belden C. Lane

Cross Currents, 0011-1953, , Vol. 44, Issue 2

On the far side of emptiness, where brokenness and disorientation overtake us, where death awaits us, we learn to care--and not to care.

In December of 1935, Antoine de Saint Exupery, on a mail flight between Paris and Saigon, crashed in the Libyan Desert west of the Nile. It was in the same vicinity to which the desert fathers and mothers of the fourth century had withdrawn to seek the face of God in a landscape of emptiness. Saint Exupery's story of survival, in his now classic Wind, Sand and Stars, evokes the same desert discipline practiced by those who had preceded him there centuries earlier. No one lives for long in the desert without acquiring its crusty virtues of attentiveness and indifference. It was only because of these that Saint Exupery survived.

Over a period of three days he walked 124 miles without water through desert sands, stumbling at last, half-dead, into a remote Bedouin camp. He had been told that no one could survive more than nineteen hours in the desert without water; the eyes then filled with a ghostly light, and death soon followed. What saved him were two things. First, he was meticulously observant of his surroundings, noticing an unusual northeast wind, full of moisture, retarding the dehydration of his body and bringing a light dew he could collect on parachute silk. Secondly, he remained stubbornly indifferent to the panic, pain, and despair which preyed on his mind. Learning to be fiercely attentive, he learned also not to care -- to ignore everything that was unnecessary, everything unrelated to the primary task of staying alive.

When he finally crawled into the Bedouin camp, he looked like some desert rat, crazed and blistered. Unable to raise any saliva, his lips had sealed together with a kind of glue. His tongue was like plaster-of-Paris. There was a rasping in his throat, a horrible taste in his mouth. In the last hours, he had been waiting for the tell-tale cough to begin, the throat to close up, the shining spots to appear before his eyes, spots that would soon change to flames, and then the end. This, he had learned in talking to others, was the pattern of desert death he could expect as his own.( n1)

Having once known the desert in a way as intimate as this, Saint Exupery could never again succumb to the naivete of desert romanticism. Those of us whom the desert has never touched find it much easier to imagine only the beauty and glory of desert spirituality -- thumbing our way through old copies of Arizona Highways and dreaming of desert retreats. We suppose arid and empty terrain to be naturally solicitous of our human need for contemplation. But the stark, unsettling truth is that the desert doesn't give a damn. Its capacity for indifference seems almost infinite. Precisely this sense of danger and disregard fed the spiritual vigor of early desert monasticism.

There is an unsolicitous and ungenteel quality about the desert Christians that makes them especially attractive in our current climate of sentimentalized, feel-good spirituality. Much of popular contemporary piety is so individualistic and ego-centered, so prone to the cultivation of niceness, so disconnected from questions of justice, that it risks anything to avoid giving offense or making demands. The spiritual life of mainstream American churches and synagogues is eminently unexceptionable, generically inoffensive, culturally correct. We substitute amiability for friendship, agreeableness for dialogue, pleasantry for compassion. The acrid smell of the desert is lost.

By contrast, one almost has to speak of the surly, discourteous piety of the desert fathers and mothers. They were resident aliens in a world that fostered gentility and comfort. They simply did not fit. As Bruce Berger
observes, "the desert notoriously harbors the loner, the misfit, the only child."(n2) It attracts a people who are downwardly mobile, often cantankerous, ill at ease in polite society. Shun the city and all of its niceties, growled Jerome from his desert lair. His Christianity required the harsh solace of open spaces.

The desert has always been the abode of dingbats, visionaries, and half-crazed fools. It invites departure from every form of civility. "Never forget," warns one contemporary desert writer, "that it was in the Mojave that the first claimed UFO sightings took place, and the pioneer conversations with little green men from Venus. In a landscape where nothing officially exists (otherwise it would not be 'desert'), absolutely anything becomes thinkable, and may consequently happen."(n3) The desert, as a place where one expects nothing, becomes the source of the hauntingly unexpected: this unpredictability formed the robust spirituality of the desert monks.(n4)

Not surprisingly, their God was no different. Theirs was not, in John Crowe Ransom's phrase, a "God without thunder," having been thoroughly housebroken and made presentable to the cultural elite of their day. Their God remained mystery -- feared certainly and much loved, but never understood. They would have agreed entirely with John Muir's assessment that in God's wildness lies the hope of the world.(n5) They were quick to recognize "the wildness of God" as a theological category too often ignored by the rest of the church.

Agrupnia and Apatheia

The threat of desert landscape -- from its grudging stinginess with water to its poisonous lizards and waiting vultures -- has a way of eliciting the sharp, lean qualities of attentiveness and indifference. Both are desert virtues, honed by exposure to the elements. The one is necessary for survival. No one lasts in the desert without constant attentiveness to exterior and interior landscapes alike. One must keep an eye out for landmarks, the position of the sun in the sky, tracks in the sand, threatening clouds. But equally important is staying attuned to one's inner condition -- the progress of fatigue, the irritation of blisters, the forgetfulness to which the mind is prone, the slow rise of panic at the fear of being lost. The desert fathers and mothers spoke of this attentiveness as agrupnia, the spiritual discipline of "wakefulness," the crucial importance of being aware, paying attention.

The other virtue of "indifference" is the more slowly-learned attitude of abandonment that grows from prolonged desert experience.(n6) It means learning to ignore the unimportant, being able -- as one prepares for desert travel -- to know what to leave behind. It, too, is directed toward interior as well as exterior landscapes. One must learn to accept the empty silence, to ignore sun and heat, to be untroubled by the sparsity of food -- by the sparsity of everything other than space. Yet, even more importantly, this indifference must be aimed inwardly at the self. It means not taking the ego too seriously, being able to watch one's compulsive needs wilt under the discipline of inattention. The desert invites an ignoring of the ego, its separation from the inner audience to which it continually plays for sympathy and admiration. The desert fathers and mothers spoke of this indifference as apatheia, the spiritual discipline of "detachment" or "dispassion," the practice of apathy with respect to matters of unimportance. "Indifference" is offered here as an intentionally provocative translation of the term, understood after the pattern of Ignatius Loyola's "active indifference." It doesn't suggest diffidence, laziness, or disinterest so much as the rigorous ordering of one's desires, a reducing of everything to the demanding measure of God's will.(n7)

Attentiveness and indifference are, respectively, the constructive and deconstructive poles of the spiritual life. They tell us when to pay attention and when to let go, what to concentrate on and what to ignore, how to survive and how to abandon everything that isn't necessary. T. S. Eliot, in "Ash Wednesday," prayed for both: "Teach us to care and not to care."(n8) John Climacus, the crusty old abbot of the monastery at Mt. Sinai in the seventh century, understood these virtues as two of the most important rungs in his Ladder of Divine Ascent, a guide to the spiritual life without parallel in all of Eastern Christianity.(n9)
They stand in paradoxical relation to each other, these two disciplines of the spirit: how to pay attention and how not to pay attention (and when to apply which of the two standards). Nothing else is more important or more difficult in one's faltering practice of a life of prayer.

Learning to Pay Attention

The talmudic sage Rabbah bar bar Hana, traveling in the wilderness of Sinai in the third century, spoke of meeting an old Arab merchant who "by taking up sand and smelling it," could tell how far he was from the nearest water. The rabbi tested him with sand that was eight parasangs away from the nearest oasis, then again with sand that was three parasangs away. In each case, even when the rabbi tried to fool him with sand substituted from another place, the old Arab proved infallible in his sense of smell. (n10)

People who dwell in wilderness, living close to the land, often evince powers of attentiveness that seem magical by comparison to others. But the difference really is only one of discipline. Most of us have little experience in paying careful attention to anything. We marvel at a naturalist like Louis Agassiz of Harvard who once said he had spent the summer traveling, only to get half-way across his back yard. We can't imagine spending that much time on that narrow a field of attention.

That's why the life of the monk seems so utterly foreign, even frightening, to us. Our conditioning as members of a consumer society prevents us from abandoning hope that, with sufficient planning, we might yet be able to see and do everything. To move slowly and deliberately through the world, attending to one thing at a time, strikes us as radically subversive, even un-American. We cringe from the idea of relinquishing, in any moment, all but one of the infinite possibilities our culture offers us. Plagued by a highly diffused attention, we give ourselves to everything lightly. That is our poverty. In saying yes to everything, we attend to nothing. One can love only what one stops to observe.

The desert, as a lean and arid landscape of few distractions, is a place that can teach us well this truth. With its uncluttered horizon, its tendency toward simplicity and repetition, it offers little to the eye and provides great clarity in what it offers. (n11) Stars, for example, are far more brilliant in its dry, night air, stripped of humidity, than anywhere else. The desert serves as an optimal place for sharpening one's skills at paying attention. Survival demands it. The five senses are heightened by wilderness experience and apophatic prayer alike. Disciplined familiarity with emptiness is an exercise the desert teaches equally well to body and soul. (n12)

But there are never, of course, any guarantees. The desert occasions no simplistic environmental determinism, as if entering a dry and barren terrain automatically assures one of spiritual insight. People go to Las Vegas and Reno every day, finding in the desert absolutely nothing. The place may invite them to a deeper reflection on the nature of the nothing they have found, but few pause long enough to listen on their way out of town.

The desert fathers and mothers, by contrast, took all the time necessary to attend to the desert's subtle, taciturn wisdom. Abba Abraham praised the barren landscape of the wilderness at Scete because of its having nothing whatever to offer. Its very lack of fruitfulness meant that men and women would not be distracted by thoughts of cultivation, production, yield per acre. (n13) Its yield had to be measured in the increase of emptiness and abandonment, the slow growth of attentiveness. The discipline of the desert was gradually acquired in the methodical weaving of palm fronds into mats and baskets, the practice of long exposure to desert loneliness, the reduction of life to a radical simplicity. Growth in the spiritual life came to be measured in micro-parameters, in how much could be given up, how much one could be emptied.

Tom Brown, author of The Tracker and The Search, sees this process of emptying as part of one's learning to pay attention in wilderness settings. He teaches wilderness survival and nature observation skills in the Pine Barrens of New Jersey. On entering the desert, he knows one must learn to be quiet enough to distinguish
disturbances in the surrounding landscape from those within the soul; (n14) to distinguish between exterior and interior deserts. Otherwise, we recklessly charge into the wilderness, imagining ourselves being followed on unfamiliar trails, jumping at startling sounds, projecting an inner turmoil onto the outer world. One's internal baggage makes true attentiveness impossible.

Saint Exupery speaks of waiting one night for a late flight to depart from a remote landing field in the Sahara. Feeling vaguely uneasy as he walked out in the desert air, he heard dragonflies striking their wings against an oil lamp nearby. It was a sound that vaguely disturbed him, though he didn't know why. The unsettling feeling required a sorting of inner and outer landscapes, checking the one against the other.

Back home in France, the flight of moths around a candle flame at night would have been perfectly common, provoking no particular interest. But there in the desert the sudden presence of insects meant something entirely different. Swept hundreds of miles from their inland oases, the dragonflies were clear signs of impending danger. A savage sand-storm was on its way, sweeping every living thing before it.

Saint Exupery was grateful for the warning that had come, but was moved even more by the powerful experience of having been attentive in an unfamiliar environment -- having been able to distinguish the mystery of the land from the mystery of himself. "What filled me with a barbaric joy was that I had understood a murmured monosyllable of this secret language, had sniffed the air and known what was coming, like one of those primitive men to whom the future is revealed in such faint rustlings; it was that I had been able to read the anger of the desert in the beating wings of a dragonfly." (n15)

Desert attentiveness of this sort is not easily acquired, as people from Antony of Egypt to Mary Austin and Edward Abbey have learned. The desert Christians sought it carefully in the pattern of prayer they adopted for themselves, paying meticulous, repetitive attention to the subtle presence of God in a sparse and meagre landscape. They shared the hard-won wisdom of desert naturalists like Joseph Wood Krutch who never tired of attending to the ordinary. "In nature," he said, "one never really sees a thing for the first time until one has seen it for the fiftieth." (n16)

The practice of paying attention is the rarest of gifts because it depends upon the harshest of disciplines. So uncommon is it for us to grasp the beauty and mystery of ordinary things, that -- when we do so -- it often brings us to the verge of tears. (n17) Appalled by our own poverty, we awake in wonder to a splendor of which we’d never dreamed.

Ignoring What Doesn't Matter

But the compelling mystery of the desert is even more pronounced in what it is able to ignore. One easily becomes lost, physically as well as figuratively, in its vast indifference, in the great emptiness to which it bears witness. The desert is a place fraught with the danger of disappearance. Its ability to absorb people into the terrifying nothingness of its boundless space is legendary.

The "Lady Be Good," a bomber attached to the Allied Forces in North Africa during the Second World War, took off on its first combat mission in 1943. Within hours, all radio contact was lost and the plane disappeared, apparently swallowed up by the desert's vast expanse. Seventeen years later the plane was found in the sands of the Libyan desert, perfectly preserved, offering no clue to what might have gone wrong. (n18)

The desert is like that. It cares little. Stories are repeated in desert towns of the American Southwest about people who have vanished into thin air, their tracks fading away in some remote canyon. The desert, apparently, consumed them. Such was the case of Everett Ruess, a desert enthusiast whose love of Zion National Park took him often into the wilds of the Escalante River system in southern Utah. On one of those trips, in 1934, he disappeared. His boots were later found, but nothing else. There were no signs of animal attack or foul play.
Only an inscription on the doorway of an Anasazi ruin nearby, in his handwriting, of the words "Nemo 1934." Nemo, in Latin, means "no one." (n19)

What (or who) was it that Everett Ruess encountered in the awesome nothingness of the Escalante wilderness? What terrifying -- and yet joyous -- freedom is discovered in the desert's enormous capacity for indifference? These are questions posed by the desert's grand disinterest in all the affairs that preoccupy our attention. The desert scoffs at much that we hold dear.

This harsh virtue of desert indifference seems to conflict with its opposite impulse of careful attentiveness, the one taking away what the other gives. Actually the two principles operate very much in tandem. Indifference serves as a corrective lens, indicating what does and doesn't deserve attention. It provides the negation that gives meaning and direction to the broad field of one's concentration. If focusing one's attention is half of the desert art of contemplation, the other half is a matter of knowing when and how to withhold it.

For the early fathers and mothers, the immensity of the desert's indifference -- suggesting for them the even greater immensity of God -- offered great clarity about what did and did not matter, about what they would attend to and what they would ignore. In the calm, critical judgment of divine insouciance, bold decisions could be made about how the community of faith would conduct itself in the world.

To use the provocative language of Stanley Hauerwas and William Willimon, the desert Christians understood the church as an alien community no longer caught up in the anxious, self-interested preservation of the world-as-it-is. Their practice of indifference to the dominant social values of their age, exercised from the desert's edge, stood in stark contrast to the accommodating spirit of post-Constantinian, urban Christianity. Indeed, they understood their "oddness" to be an essential part of their faithfulness to Christ and the new community being formed in their midst. (n20)

The indifference practiced by this desert colony of believers took shape in response to the social and political preoccupations of a compulsive world. In their reading of the gospel, they knew that a person's worth could never be measured by reference to any contemporary cult of success. The story is told, in the sayings of the desert fathers, about a brother who came to Macarius the Egyptian, asking the great abbot of the monastery at Scete how he could achieve a reputation in holiness. The older monk told him to go to the cemetery and abuse the dead, yelling at the most prestigious among them for all he was worth, even throwing stones. The young man thought this strange, but did as he was told and then returned to his teacher.

"What did they say to you?" Macarius asked. "Nothing," the brother replied. "Then go back again tomorrow and praise them," answered the abbot, "calling them apostles, saints, and righteous men. Think of every compliment you can." The young man once more did as he was told, then returned to the cloister, where Macarius asked, "What did they say this time? .... They still didn't answer a word," replied the brother. "Ah, they must, indeed, be holy people," said Abba Macarius. "You insulted them and they did not reply. You praised them and they did not speak. Go and do likewise, my friend, taking no account of either the scorn of others or their praises." (n21)

Becoming equally indifferent to the praise and blame of the world was a primary goal of spiritual discipline in the desert. Learning not to care was a matter of utmost importance. Yet the desert masters were always careful to distinguish between "true" and "false" indifference. "True" indifference was a fruit of contemplation, a direct result of disciplined attentiveness. The "no" of desert apatheia could emerge only out of deep certainty about the "yes" of the gospel. Detachment from the world and its values required informed, deliberate choices about what does and doesn't matter in light of Jesus and the inbreaking of his kingdom. True indifference was rooted in a very conscious caring.

"False" indifference, by contrast, was seen as an easy, casual matter of choosing haphazardly by neglect. It dissolved very readily into the worst of the seven deadly sins -- sloth or accidie, the lazy sullenness and
despairing indiscipline of not caring about anything. Maurice Sendak whimsically satirizes this vice in his tiny "cautionary tale" for children entitled Pierre. The constant refrain of his young protagonist is "I don't care." All threats are empty, all promises void for children who, like Pierre, live beyond hope. In the desert experience of the early Christians, such was the temptation of despair that often struck at noon—with the sun high overhead, the heat oppressive, mind and body giving in to the weary, monotonous passing of time.

False indifference is the scourge of a domesticated Christianity, tired and worn-out, readily accommodating itself to its culture, bowing to the social pressures of the status quo. It remains so tame as to fear nothing so much as the disdain of sophisticated unbelief. Such indifference is what allows the church to abandon its call to radical obedience to Christ in the world. It becomes the driving force behind every injustice, allowing dominant cultural forms to remain unchallenged... by people too indifferent to care.

But indifference properly understood can become a source of profoundly liberating power. Adopted as a discipline of ignoring what isn't important -- in light of the truth of the gospel -- it becomes a counter-cultural influence of great significance. People who pay attention to what matters most in their lives, and who learn to ignore everything else, assume a freedom that is highly creative as well as potentially dangerous in contemporary society. Having abandoned everything of insignificance, these are people not easily coopted. They have nothing to lose. Apart from being faithful to their Lord, what happens to them no longer matters. (n22)

Were Christians to practice this stubborn desert discipline today, they would find a freedom that is refreshing and contagious to some, but also threatening and intolerable to others. Unjust societal structures and people addicted to power will not tolerate being ignored. They are profoundly threatened by those not subject to their influence, no longer playing by the accepted rules. To cease to be driven by the fear of what other people think is to become a threat to the world as we know it. Only at great personal risk does one become indifferent to the accepted standards and expectations of the dominant culture.

Yet the people willing to assume this risk— the ones who find the center of their existence outside the cultural milieu -- are those who model for us today the vitality of Christian faith. A marginal character in William Golding's novel The Paper Men seems strangely unaffected by everyone else's compulsive craving for attention and success. "The things you could see that woman had no need of," an acquaintance cries out in astonishment and envy. (n23) Such a declaration may be the highest praise possible in a commodity culture like our own. But it was common reality among desert Christians. People in the fourth century were dumbfounded by all the things of which the monks seemed to have no need.

The Moral Equivalent of Desert

Where, then, does one go to learn such freedom? Can the gruff virtues of the desert be cultivated in contemporary urban life? Is physical proximity to an arid landscape necessary for the practice of desert spirituality? The answer is both yes and no. Clearly the desert, as desert, teaches attentiveness and indifference with great finesse. For some of us there is no substitute for wilderness. Nothing is able to take the place of periodic forays into the land of little rain. The desert feeds something that is fragile, but insistent in the modern soul.

Even for those who never enter the land of cholla and creosote bush, the mere existence of wilderness is important. "We simply need that wild country available to us," Wallace Stegner argued, "even if we never do more than drive to its edge and look in." The desert answers to deep purposes of the human spirit. Something in us requires its presence. (n24)

But the practice of Christian discipline has never been limited to specific physical environments. The truth of the desert fathers and mothers has to be transferable, able also to be lived out in the canyons of our great cities -
- where steel and glass cliffs of mirrored indifference border the street corners of lonely anonymity at Madison and State, Fifth Avenue and Fifty-Seventh Street.

Where, in the modern landscape of our lives, do we find the moral equivalent of desert? What are the places in our experience where desert abandonment is forced on us with the same threatening insistence provided by fierce geographical terrain? In what hazardous contexts does an alien community of faith struggle even now to survive?

All of us know desert Christians who have never been to Egypt, never wandered the dry arroyos of northern New Mexico. But they have been no strangers to the most terrifying of desert landscapes. They have known intimately the parched and cracked land of an AIDS hospice, the steep cliffs beyond the waiting room of Radiation Oncology. Through their struggle with cancer and AIDS, they have acquired much of the attentiveness, explored many of the deep caves of indifference mapped out by desert Christians centuries before them.

We know others who have trod the high country of abuse, who have --through poverty or prejudice-- dealt with levels of indifference for which we have no language. Still others have dwelt in the harsh desert of addiction and mental illness, knowing the sustained pain of divorce, unemployment, or physical disability. The possibilities of desert experience in contemporary life are more varied than we ever might have thought.

Certainly a distinction has to be drawn here between voluntary and involuntary desert experience, between those who intentionally embrace the vulnerability of self-emptying and those inadvertently thrust into the dark night of body and soul. A crucial question of our time is how to provoke people into practicing the former while identifying in solidarity with those suffering the latter. In early monastic practice, the desert served a double function of comforting the afflicted as well as afflicting the comfortable. (n25)

The desert, as metaphor, is that uncharted terrain beyond the edges of the seemingly secure and structured world in which we take such confidence--a world of affluence and order that we cannot imagine ending. Yet it does. And at the point where the world begins to crack, where brokenness and disorientation suddenly overtake us, there we step into the wide, silent plains of a desert we had never known to exist.

We cross its sands--unwelcomed, stripped of influence and reputation, the desert caring nothing for the worries and warped sense of self-importance dragged along behind us. There in the desert everything is lost. Absolutely everything. The extent of its unrelenting indifference is devastating. This awareness, at first, is terrifying. But if we stay long enough, resisting the blind panic that gnaws at our minds, we discover--beyond hope and all caring--that "in the end we are saved by the things that ignore us." (n26) The desert's silent immensity is able to absorb every grief and anxiety, all the fears and brokenness we are able to pour into it. In being emptied of everything, oddly enough we know ourselves to be loved in unconditionally--for the first time in our lives. The deepest mystery of love is never realized apart from the experience of having nothing to offer in return. Only there does love reveal itself in unaccountable wonder. (n27)

In that place, we discover ourselves to be no longer alone. In the wilderness we meet other wizened souls who have weathered sun and heat, all of them healed of the same wound. There is a wildness in their eyes. They don't give a damn for things they used to find so terribly important. Hardly fit for polite company, they nonetheless love with a fierceness echoing the land through which they have passed. Like Abba Simeon and Amma Syncletica, theirs is "a harsh and dreadful love," pure as it is lean. (n28) The desert has taught them well. They are what the church has been summoned to be--a community of broken people, painfully honest, undomesticated, rid of the pretense and suffocating niceness to which "religion" is so often prone. They love, inexplicably and unflinchingly, because of having been so loved themselves.
The desert, unquestionably, is a hard schoolmaster. Its discipline is fierce and unrelenting. Mark Twain proclaimed in Roughing It, his own ornery account of desert survival, that "Prov'dence don't fire no blank ca'tridges, boys." (n29) All the games in the desert are played for keeps. D. H. Lawrence described the arid terrain of New Mexico as a place of "splendid silent terror." (n30) Hundreds of nineteenth-century travelers succumbed to the heat and rattlesnakes along a thirsty stretch of land known as El Camino del Diablo on the southern Arizona border.

The desert kills. But it also gives life... robust and insistent life. Nothing is more beautiful than the red splash of desert sky after a late-afternoon storm, no flower more lovely than the cactus bloom that opens but once a year. If, in biblical imagery, the desert is a place of fiery serpents and scorpions an occasion for brokenness and failure (Deut. 8:15), it is no less a place of beauty and romance. Yahweh remembers walking hand in hand with Israel, as lovers in the lonely desert of Sinai (Jer. 2:2). The landscape of terror becomes also a land of allure and love. (n31) Even in its darkest mysteries, the desert reveals its beauty. The sacred datura, or moonflower, blooms only at night, its white, trumpet-shaped flowers as rich in ghostly dreams as they are in fragrance. "All things excellent," says Edward Abbey, "are as difficult as they are rare." (n32)

Through all its stern lessons in attentiveness and indifference, the desert points to a beauty and wholeness found only on the far side of emptiness. In desert wildness we meet an untamed God who upsets every expectation, destroys all order as we have known it. Our plane crashes in the desert and burns. Everything... is lost. Death, most likely, is nineteen hours away. Never have we been so alone or so empty. But in the clarity of that moment, in the reckless wilderness beyond all hope, we are somehow met. Inexplicably and without reason. We discover something worth paying attention to, something more beautiful than ever we had imagined in all of our lives. We realize how very little everything else matters, by comparison. In our absolute nothingness, we are loved unreservedly by a God on whom we have no claim.

"Teach us to care and not to care," the Ash Wednesday prayer intones. Nothing else seems quite so important for those who have been to the desert and back. Attentiveness and indifference form the foundation of the desert discipline by which their lives continue to make sense in a world increasingly desperate for meaning.

Notes


(n2.) Bruce Berger, The Telling Distance: Conversations with the American Desert (Portland, Ore.: Breitenbush Books, 1990), 1.

(n3.) Peter Reyner Banham, Scenes in America Deserta (Salt Lake City: Gibbs M. Smith, 1982), 44.


(n6.) Apatheia is defined here as "indifference," echoing the early Christian use of the word as referring to one's struggle with temptation in the spiritual life. Active indifference became a way of focusing one's attention on that which was most worthy of love.


(n9.) John Climacus, Ladder of Divine Ascent, steps 20, 29.


(n11.) Walter Kaufmann argues that, in Islam, religious architectural design suggests to the worshipper what is "left out" in the process of entering a courtyard to pray. Religions in Four Dimensions (New York: Reader's Digest Press, 1976), 373.

(n12.) Carol Ochs urges that "all of the time spent in the desert after the Sinaitic revelation was time spent in education for remaining open to Presence amidst daily life." Cf. "The Presence in the Desert," Cross Currents 43, no. 3 (Fall 1993): 305.

(n13.) John Cassian, Conferences, XXIV, 3, 4, 12.


(n21.) Apophthegmata Patrum, Macarius of Egypt, 23. P.G. LXV, 272C.

(n22.) In this vein Thomas Merton spoke of the contemplative as cutting against the grain of a dominant culture. The Wisdom of the Desert (New York: New Directions, 1960), 4-5.


(n26.) Andrew Harvey, A Journey in Ladakh (Boston: Houghton Mifflin, 1983), 93.

(n28.) The phrase is that of Fr. Zosima in Dostoyevsky's The Brothers Karamazov.

(n29.) Mark Twain, Roughing It (Hartford: American Publishing Co., 1872), 388.


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By Belden C. Lane

Belden C. Lane, professor of theological studies at St. Louis University, is the author of Landscapes of the Sacred: Geography and Narrative in American Spirituality (Paulist Press, 1988). Copyright of Cross Currents is the property of Association for Religion & Intellectual Life and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.
Depleted Uranium: Pernicious Killer Keeps on Killing
By Craig Etchison, Ph.D.

The Questions
I live a few miles from an ATK (Alliant Tech) plant that produces depleted uranium (DU) tank shells for the military. Tank shells destroy and kill, and they, along with all military hardware, are a constant reminder of our failure as a civilization. But DU weapons and tank shells are only two of many items that raise questions that even our violence prone society needs to address. Since shortly after Gulf War I, soldiers and civilians have been questioning the safety of these weapons which are made of radioactive material. The more questions raised, the more the military-industrial complex has hauled out studies showing the safety of DU munitions. One CEO called DU the "skim milk" of uranium in an article penned for my local paper. An Air Force officer is even stalking the internet, trying to intimidate anyone who suggests DU is anything but benign.

Yet the numbers suggested that something insidious happens when DU munitions are used. How to explain the exploding rates of cancer, birth defects, and radiation poisoning among Iraqis in the Basra region? How to explain a Department of Veterans Affairs study of 21,000 veterans of the Gulf War that found rates of birth defects were twice as great for male vets and three times as great for female vets who served in the Gulf War compared to vets who did not? How to explain a Washington Post report in January of 2006 that 518,00 of the 580,000 Gulf War veterans were on disability, over half on permanent disability. How to explain over 13,000 dead Gulf War veterans when only 250 were killed and 7,000 injured in the war itself?

Finally, through the work of internationally recognized research scientist, Dr. Rosalie Bertell, we may have an answer to these questions. The answer has to do with using an analytical methodology appropriate to low level radiation, as opposed to inappropriate methodologies used to date that show DU is harmless, and, equally important, understanding that DU has both a radiological component as well as a heavy metal component, and the two in combination are far more toxic than either is singly.

What is DU and Why Is It a Problem?
Depleted Uranium (DU) is the waste left after the isotope uranium-235 (used for bombs and nuclear reactors) has been removed. DU (mostly U-238) makes up the largest amount of radioactive waste other than uranium mining waste worldwide and has a half-life of 4.5 billion years. In the United States, DU can only be handled by persons trained in radiation safety procedures. DU must also be isolated from the environment.

Much of the scientific evaluation of uranium oxide has come from analysis of uranium mining and milling, but this ignores a major fact—that battlefield uranium oxide is very different from uranium oxide produced at normal temperatures. When a DU shell hits a hardened target, it bursts into flame and creates an invisible metal fume, often called an aerosol. (Tests carried out eight to ten years after Gulf War I found that the DU aerosol from the battlefield had been carried to Basra and Baghdad, though no fighting occurred in those areas.)

Aerosolizing DU involves temperatures between 3,000 and 6,000 degrees centigrade, which turn the oxide into a nano-sized ceramic particle that is insoluble in body fluids. If these nano particles are inhaled, they provide contact radiation and a source of heavy metal poisoning. These high temperatures will also aerosolize other heavy metals in the area such as steel, nickel, aluminum, and iron, which can be inhaled. Nano-sized uranium oxide [along with other metals] is roughly the size of a virus [scientifically: nanometer-sized], invisible, able to penetrate the lung-blood barrier and can be carried throughout the body. Nano particles can reach sensitive targets, including the lymph nodes, spleen, heart, and access to the central nervous system.

Uranium-238 is an alpha particle emitter. The range of these alpha particles is only about six cells; therefore, it is highly localized. Because DU has less radioactivity than natural uranium, many consider DU to be low-level radiation and not harmful to people. But research does not bear this view out.

Assessing the Effects of DU
A major problem with most DU assessment is that many effects of alpha radiation on cell structure, including DNA proteins that release biochemical signals and important cell metabolic enzymes, are ignored by nuclear physicists who use dose estimates based on uranium dust in mines, a completely inappropriate approach for a
battlefield aerosol. Many medical professionals believe the protein problem is responsible for various neurodegenerative diseases evidenced by Gulf War veterans.

As Dr. Bertell writes, "Heavy metal exposure (including uranium) can cause loss of cellular immunity, autoimmune diseases, joint disease such as rheumatoid arthritis, and diseases of the kidneys, circulatory system, and nervous system.... Decline in functional mitochondria is most damaging to the heart, kidney, brain, liver, and skeletal muscle, in that order." Loss of cellular immunity opens an organism up to viral, bacterial, and mycoplasmal invasions connected to a variety of diseases.

Equally important, scientists have found that tiny amounts of DU too small to be toxic and only mildly radioactive seem to reinforce each other in terms of causing cancers and risk to offspring. The Armed Forces Radiobiological Research Institute has even admitted that DU can cause cancer.

Humans are normally exposed to about 1.9 micrograms of uranium a day in food and water, with between one and two percent absorbed. The rest is passed in feces. Humans screen natural uranium quite effectively. But our screening system won't eliminate nano particles that are ceramic and enter through the lungs. These particles won't dissolve and won't lose their radioactivity.

International Condemnation

The special investigator of the UN Sub-Committee on the Promotion and Protection of Human Rights has declared DU munitions illegal under existing humanitarian law. DU weapons also produce a toxic metal fume that violates the Geneva Protocol on the Use of Gas in War, which the US signed in 1975.

Why Ignore the Evidence?

We have enough evidence to suggest with considerable certainty that DU munitions break the four basic laws and customs that govern modern weapons use: that the weapon is confined to the battlefield, that it does not kill after a battle is over, that it doesn't cause inhumane suffering, and that it doesn't have a negative effect on the natural environment. We certainly have enough evidence to stop using these weapons until further research by independent scientists has been done. And yet we continue to produce, sell, and use DU munitions. How can this be justified?

Perhaps looking at the paradigm of Agent Orange gives insight. Our government ignored veterans affected by Agent Orange for thirty years before admitting Agent Orange was, in fact, the cause of many physical problems endured by Vietnam veterans. By then, the most seriously affected veterans were dead. The government incurred a far smaller financial liability than if the government had owned up to the problems earlier.

If the government ever admitted what it has done in Iraq-between 1,000 and 2,000 tons of DU ordnance expended according to most estimates-the financial consequences, not to mention the moral outrage engendered, is almost beyond imagination. Cleaning up the DU blanketing Iraq would entail enormous costs. And in a few years, soldiers who have served in the current debacle-many with two or three tours-are going to start coming down with the same diseases that have struck Gulf War I veterans. Some who got good doses of DU have already seen their lives ruined by multiple physical problems.

We must also consider the real possibility of Iraq as an uninhabitable wasteland, with the residue of the DU aerosol blowing in the wind and flowing in the waters to adjacent lands, a residue with a half-life of 4.5 billion years. Is this outlook too bleak?

Dr. Jawad Al-Ali, director of the Oncology Center at the largest hospital in Basra said the following in 2003. "Two strange phenomena have come about in Basra which I have never seen before. The first is double and triple cancers in one patient.... We have 58 families here with more than one person affected by cancer.... My wife has nine members of her family with cancer." He went on to point out that these were families with no history of cancer. After Gulf War I, the United Kingdom's Atomic Energy Authority estimated that DU contamination could kill half a million Iraqis.

Conclusions

I suspect the military-industrial complex will stonewall admitting the effects of DU for as long as possible to avoid accepting responsibility, not to mention liability, for their reckless actions. When John Hanchette, a founding editor of USA Today tried to publish stories about DU, he received a phone call from the Pentagon asking him to desist. He was later replaced at USA Today. The World Health Organization's chief expert on radiation and health had his report on DU suppressed. Dr. Asaf Durakovic, then a colonel in the U.S. Army, was asked to lie about the risks of DU to humans. So the stonewalling will continue, even as cancers rage among our
soldiers and Iraqi civilians, even as our soldiers die, or commit suicide to escape the horrific pain, even as birth defects proliferate across Iraq and among our veterans.

But what of that? DU is a moneymaker for corporations like ATK. And turning DU into munitions helps the government solve a big problem-what to do with mountains of DU it must store and, by law, keep out of the environment. What better solution than giving it free to the munitions makers, who then sell the munitions back to Uncle Sam at a handsome profit? Everyone wins.

Unless we continue to fight for the truth, and to cry out for justice, our soldiers and Iraqi civilians will suffer and die in increasing numbers. Estimates of how many may die in Iraq are truly staggering - up to 11% of Iraq's 27 million population. This is a massive crime against humanity that remains in the shadows.

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For More Information:

Much of this article is based on the work of Dr. Rosalie Bertell. See her article, "Depleted Uranium: All the Questions About DU and Gulf War Syndrome Are Not Yet Answered," in the International Journal of Health Services, Volume 36, Number 3, pages 503-520, 2006. E-mail requests for a summary of Dr. Bertell's article can be sent to cetchison@allegany.edu.

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Health Concerns at the Nevada Test Site

by Fred Galluccio

Many people have asked about possible health effects of visiting the Nevada Test Site, either to the entrance where we gather, or for taking a tour of the test site. The answers are not as simple as people would like them to be. We need to weigh the risks of exposure with our reasons for being there and take sensible precautions. Radiation is part of our everyday world even away from the test site and we need to look at the type of contamination we face and its potential effect on us.

Taking Risks
Precautions to take
Health effects on the body
A deeper explanation of radiation

Taking Risks

We all need to recognize that risks are often relative. We all make choices and decisions regarding risky behavior on a regular basis. Skiing, smoking, traveling by car and other choices contain different risks that many of us are willing to take. As we learn more about the risks, we may change our choices over time.

Many people who come to the test site to pray or to protest subscribe to the principles of non-violence as taught by Gandhi. Gandhi observed that there were many causes for which he was prepared to die, but none for which he was willing to kill. Many who come to the test site are willing to take some risks, with the hope and expectation that the risks they are undertaking will have an effect of reducing the nuclear risks for the rest of the world.

The exposure to external radiation at the test site is relative as well. Recent measurements at the entrance to the Nevada Test Site have shown that the radiation is essentially that of background radiation – radiation emitted from the sun, rocks, and other natural sources. In contrast, measurements at the Sedan Crater deep inside the test site (and a site visited on tours of the test site) reveal that a one-hour exposure is essentially the same as receiving a chest x-ray. Those who fly to the test site are exposed to a larger dosage of external radiation during their flight than they are at the entrance to the test site, since exposure to solar radiation increases with altitude.

We are exposed to external sources of radiation in our daily lives. Background radiation from the sun or from radon comprise two major sources for people in the US. Studies have shown that we are all downwinders; we have all been exposed to radioactive fallout over the years as a result of testing. However, the greatest concentration of fallout landed in the immediate area of the tests. Most of the radioactive particles have been bound up in the soil, but the soil can be disturbed, releasing some particles into the air. Ingesting radioactive particles through eating, drinking, or breathing does present a higher risk at the test site than in other parts of the country.

Steps and Precautions to Take

At the entrance to the test site.

The first precaution that people can take in coming out to the test site is to eat meals that are properly balanced with key elements and minerals, such as calcium and iodine.
Some folks wear surgical masks when there is a lot of wind stirring up dust in the area at the entrance to the test site.

Wash clothes thoroughly after returning from the test site.

**For those taking a tour.**

Teenagers and young women of childbearing years should probably not take the tour of the test site, even though they might come to the entrance. This is the recommendation of Sr. Rosalie Bertell, an epidemiologist. With increased radiation inside the test site, especially near old craters such as the Sedan Crater, there is an increased risk of ingesting radioactive particles.

People should place a handkerchief over their mouths or wear surgical masks when they get out of the bus at the Sedan Crater.

Wash clothes thoroughly after returning from the test site.

**In general**

In addition to maintaining an appropriate diet for general well being and resisting disease, it is helpful to maintain a prayerful attitude. Centering prayer is good at relieving stress. Stress reduction is helpful for resisting disease. In particular, pray for:

Those who have been subjected to radioactivity at the site – the military, journalists, and workers.
Those who are downwind from the test site – who were most affected during the testing era.
The healing of mother earth
Those who still see nuclear weapons and testing as necessary.
Those around the world who are expressing opposition to nuclear weapons, particularly those in prison.

**Health Effects**

Radiation has varying effects on people. Exposure to high doses of radiation usually results in radiation sickness that is apparent soon after the exposure. However, lower doses may affect body chemistry and molecular biology in a way that leads to cancer, which may not be detected for many years. It is impossible to state acceptable exposures with any precision. Different people respond to radiation differently, and the same person may respond to a radiation dose one way when they are healthy and have a balanced diet, but another way when exposed while their body is out of balance due to sickness.

Most radiation standards are based on external exposure or the amount of radiation that penetrates the body and organs through the skin. This is completely different than the dosages that might enter the organs due to ingestion. Once radioactive particles have entered the body through eating, drinking, or breathing, they will be absorbed into the blood stream and pass through various organs. The dosage obviously depends on the amount of material ingested. Each organ responds differently to radiation applied within the organ, compared to external radiation.

Most radiation studies have been for high doses or for intense dosage over short periods of time. Most government scientists have used these data to estimate the effects of low-dosage exposure or exposure over time. They have been coming up with standards that are much more relaxed than epidemiologists like Dr.
Rosalie Bertell agree with. Her studies, and those of others, have been revealing that low dosages can have a greater impact on health than previously thought, especially when the radioactive materials are ingested.

**How Radiation affects tissues in the body**

When charged particles, such as radioactive particles, enter tissue, they interact with the atoms and molecules in the surrounding area. This interaction is a way for the charged particles to trade charges with other atoms and create new molecules. These molecules then start changing as well. Many of the original molecules are crucial for stability of cells within the body. As the original molecules change, the rest of the cell begins to change as well. These biological changes may be limited to affecting only a few cells, but there can be wider changes that take years to detect. The cells may mutate and reproduce in a mutated version that leads to genetic changes. The cells may also become cancerous and eventually grow into a larger cancer that affects the body. The cells may also simply die or not be affected by the changing molecules.

**How the radioactive particles got there.**

Radioactive particles that have been the result of atomic testing have settled to earth over a period of time since testing occurred. Some were widely scattered by the wind throughout the United States and farther. Many of these particles have been absorbed into plants, soils, and animals. Most of the alpha particles have short lives and are no longer a threat. However, in the area around the test site, some of these particles have settled in the soil. With rainwater washing the soils, a lot of these have settled in the dry arroyos in the area. They do not generally present a problem unless people stir up the dust in the washes. Government observers have noted that the soils in Nevada appear to have bound (or captured) atomic particles more than the soils near the testing in Australia or elsewhere.

Most radioactive isotopes mimic other elements that the body uses naturally. If our bodies do not contain enough of the proper elements, then the radioactive elements will be absorbed in their place. For example, strontium-90 and iodine-131 imitate calcium and iodine. If the body does not have a sufficient amount of iodine, then the strontium will enter the body and be absorbed like iodine would. As the strontium releases its radioactive charge, it can damage the cells.

**Basics in chemistry and radiation**

All materials tend to decay and revert to their original form over time. Normally this is not a problem. Iron products tend to oxidize to form iron oxide, which is the condition in which iron ore is found. This process of rusting is a reversion to a more natural state. When some elements decay, they emit radioactive particles while in the process of decaying and changing to another material.

Some of the decay by-products are themselves radioactive. Each element has a different rate of decay and produces different types of radioactivity during the process. The decay rate is usually measured in a unit known as a half-life. The half-life of an element is the length of time it will take for half of the mass to decay into other products. At the end of the half-life, there is still half of the mass that is giving off radioactivity, so many half-lives are needed to reduce the material to a state that does not emit radioactivity. Additionally, many of the by-products are themselves radioactive. Each one of those materials has its own half-life.

**Other possible steps**

In examining data about nuclear exposure and its effects on the body, there is a wide range of interpretation of the same data. Much of the information distributed by the government about the safety from radiation at the test site refers to general exposure and background radiation. Yet the workers at the Test Site and Yucca are very aware of the dangers of ingesting radioactive particles.
Many who attend events at the Test Site are also proponents of healthy nutrition and diets. Some people have suggested that there are dietary precautions that can protect or avert the dangers of the effects of ingested particles. As mentioned above, some of the radioactive particles imitate other minerals in the body, so that they get absorbed in the system and do damage. Some people believe that by eating miso soup, or ingesting larger amounts of iodized salt before a visit, or by taking supplemental calcium and other minerals, the body will contain enough nutrients so that the radioactive particles do not get absorbed. This is a theory, but it is a theory that has not been established or verified through controlled testing of nutrition on the body. Overall, NDE suggests that everyone attending events consider the risks and evaluate why they are visiting the Test Site and how the risks balance the effect that the public witness will have.
The Nevada Test Site: Desert Annex of the Nuclear Weapons Laboratories

Introduction

The Nevada Test Site (NTS), an immense tract of desert and mountains northwest of Las Vegas, is the test range where the United States government set off over 900 nuclear explosions during the Cold War phase of the arms race. For most Americans, the Test Site is only a symbol of a closed chapter of history, a time of great danger that now is over. Even those who know that the Nevada Test Site still is used for “subcritical” testing of nuclear weapons materials and components underground may think operations largely have been suspended, with unused facilities retained only against the eventuality of a return to full scale underground nuclear testing. But the Test Site remains an important part of the nuclear weapons complex, both a remote site where dangerous activities can be conducted with little public knowledge and a weapons laboratory unto itself. High risk programs involving nuclear material, such as nuclear criticality experiments, are slated for transfer to the Test Site, and it also is being considered as a location for a proposed factory to mass produce plutonium pits, the atomic explosive “triggers” at the core of most nuclear weapons. In addition, a wide range of other weapons testing takes place at NTS, ranging from flight testing of unmanned air vehicles to new types of conventional explosives. And as is true today of many military research laboratories, the NTS has an increasingly entrepreneurial culture, run with an eye to increasing its “market share” of tax dollars for its for-profit corporate managers.

Nuclear Testing at the Nevada Test Site: Out of Sight, but Never Ending

The first nuclear explosion at the Nevada Test Site, code-named Able, was conducted on January 27, 1951. Since then, 99 more tests were detonated aboveground there, and 804 were done underground. Twenty four underground tests were conducted jointly with the United Kingdom, which used NTS for the development of its own considerable nuclear arsenal. Some underground tests involved more than one nuclear explosion.¹ In a nuclear arms race that saw the development of weapons ranging from bombs that could destroy entire cities to atomic explosives that could be fired from an artillery shell, a mind-boggling array of nuclear tests were conducted. Nuclear explosives were “dropped from planes, shot as rockets, detonated on the surface, shot from a cannon, placed on top of towers, and suspended from balloons.”² Structures like houses and underground parking garages were built and subjected to nuclear detonations to study the effects of nuclear war on cities. Animals were penned up where they would be burnt, blasted, or irradiated to death, and thousands of soldiers were deployed to the site to study their response to a nearby nuclear explosion. Much of the population of the United States, living in the great part of the country east of Nevada, were unknowing participants in these experiments as well, with fallout distributed thousands of miles downwind.³

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1,000+ U.S. NUCLEAR TESTS SINCE 1945

_denotes "subcritical" test

Aardvark 1962
Abejas 1970
Ablame 1968
Able 1946
Able 1951
Abe 1961
Abe 1952
Abe 1985
Acab 1987
Ace 1994
Adana 1963
Adobe 1962
Ade 1968
Agle 1967
Agnolli 1962
Agnoli 1994
Ahtian 1963
Ajao 1966
Ajo 1976
Akau 1961
Akbar 1972
Akoma 1998
Alemann 1996
Algodeas 1971
Algate 1985
Alemont 1969
Aldegemny 1962
Alma 1962
Almond 1973
Alpaca 1965
Almonte 1973
Alva 1964
Alvise 1975
Amarillo 1969
Anacostia 1962
Ancyov 1963
Androscoggin 1962
Angus 1973
Anzie 1953
Ander 1961
Apache 1956
Appaloosa 1971
Apple-1 1955
Apple-2 1955
Apshar 1963
Arabic-Blue 1970
Arabic-Green 1970
Arabic-Red 1970
Argus 1958
Argus II 1959
ArgusII 1960
Arkansas 1959
Armadas 1983
Armadillo 1962
Armardo 2004
Armitage 1970
Arnica-Yellow 1970
Auba 1967
Arnesa 1972
Artelia 1970
Arcon 1976
Asago 1976
Aspen 1958
Aranz 1972
Abrasco 1992
August 1963
Auk 1964
Auten 1980
Aven-Akermes 1970
Aven-Assemble 1970
Aven-Cream 1970
Aven-Cream 1970
Azelio 1962
Bagg 1979
Backb 1978
Backgammon 1979
Bagwell 1964
Bagger 1953
Bagpipe 1998
The last full-scale underground nuclear explosion at NTS took place on September 23, 1992. At that time, the U.S. government initiated a voluntary moratorium on nuclear explosive testing, a moratorium that continues to this day. The United States signed the Comprehensive Test Ban Treaty (CTBT) in 1996, but the Senate refused to ratify it, and it has since been repudiated by the Bush Administration.

Although the United States no longer explodes nuclear weapons underground, it continues to conduct a wide range of nuclear weapons research, and to develop and deploy nuclear weapons with new military capabilities. Budgets for the Department of Energy nuclear weapons laboratories today match those during the frenzied Cold War arms buildup, with the labs constructing an array of new nuclear weapons experimental facilities that will provide the capacity to simulate various aspects of nuclear explosions and study the resulting data in unprecedented detail. (See sidebar, Stockpile Stewardship: Nuclear Weapons Research and Production for the 21st Century) The Bush Administration’s Fiscal Year 2006 budget request includes funds for work at NTS to allow the United States to resume full scale underground testing more quickly should the government choose to do so.

And despite the absence of full-scale underground nuclear explosions, the Nevada Test Site continues to play a central role in nuclear weapons research. “Subcritical” tests are conducted underground at the NTS U1A complex, a vast warren of tunnels deep beneath the desert. These tests are called “subcritical” because they use fissile materials but there is no self-sustaining nuclear chain reaction. Most subcritical tests employ weapons grade plutonium (Pu-239), which is implode with high explosives or shocked in various ways. The data from these tests is integrated with that from a variety of other physical experiments in a continuing effort to expand nuclear knowledge that both sustains the huge existing U.S. nuclear arsenal and contributes to efforts to develop nuclear weapons with new capabilities. (See sidebar, Nuclear Testing and the Quest for More Useable Nuclear Weapons).

In addition to providing information useful for nuclear weapons research, subcritical tests also play a central role in keeping the test site in a state of readiness:

Because of such factors as their inclusion of plutonium, their location— almost 1000 feet down at the NTS—and their complexity, the greatest proportion of test readiness is derived from the program of subcritical experiments.

When conducted underground at the same site used for full-scale nuclear weapons tests, subcritical experiments make verification of a test ban more difficult, and manifest to the world both the existence of a vigorous nuclear weapons research program and the intention to retain the capability for full-scale underground tests. As was the case with full scale tests, the Los Alamos and Livermore National Laboratories each conduct subcritical tests, competing in an intramural arms competition intended to sharpen the skills of nuclear weapons design teams and to encourage creative and varied approaches to the constant refinement of weapons of mass destruction. To conduct these and other activities, the nuclear weapons laboratories maintain a permanent presence at the Test Site. In addition, NTS personnel work at the weapons laboratories; they will, for example, hone skills relevant to nuclear testing by developing diagnostics for the National Ignition Facility, an enormous laser fusion project that will create small thermonuclear explosions in a steel containment vessel.
STOCKPILE STEWARDSHIP: Nuclear Weapons Research and Production for the 21st Century

...[A]n ability to innovate and produce small builds of special purpose weapons, characteristic of a smaller but still vital nuclear infrastructure, would act to convince an adversary that it could not expect to negate U.S. nuclear weapons capabilities. The development and subsequent modification of the B61-7 bomb—converting a few of them into B61-11 earth penetrator weapons—is a case in point. John Gordon, Administrator of the National Nuclear Security Administration (NNSA)⁸

The 2001 Nuclear Posture Review called for “revitalized defense infrastructure that will provide new capabilities in a timely fashion to meet emerging threats.”⁹ A significant part of this infrastructure is the Department of Energy (DOE)/National Nuclear Security Administration (NNSA) nuclear weapons research, testing, and production facilities. To sustain this vast complex, the U.S. is spending more than six billion dollars a year on the “Stockpile Stewardship” program, including billions on new and more advanced nuclear weapons research and production facilities.

These facilities include:

- The National Ignition Facility (NIF), now nearing completion at the Livermore National Laboratory in California. The NIF is a laser driven fusion machine the size of a football stadium, designed to create very brief, contained thermonuclear explosions. It is slated to be used for a wide range of applications from training weapons designers in nuclear weapons science to nuclear weapons effects testing. NIF experiments, together with other fusion research being conducted at the nuclear weapons laboratories, could, in the long run, lead to the development of pure fusion weapons, not requiring plutonium or uranium.

- The Dual Axis Radiographic Hydrotest Facility (DARHT). Located at the Los Alamos National Laboratory in New Mexico, DARHT is one of several facilities where mockups of primaries or “pits,” the first stage of a thermonuclear weapon, are imploded while very fast photographic or x-ray images are generated, thus allowing scientists to “see” inside the implosion. DOE/NNSA already is developing technology for an even more sophisticated “hydrodynamic testing” facility, the Advanced Hydrotest Facility.

- Pulsed power technologies: Further experiments exploring the extreme conditions created in a nuclear weapon explosion are studied using various types of “pulsed power,” in which a large amount of energy is stored up and then released very quickly in a small space. The energy source can be chemical high explosives or stored electrical energy. Pulsed power facilities at both DOE and Department of Defense laboratories are used to explore nuclear weapons function and effects and directed energy weapons concepts, and could play a role in the development of a wide range of high technology weapons, including new types of nuclear weapons.

The data streams from these and other experimental facilities, along with that from “subcritical” tests conducted at the Nevada Test Site and the archived data from over 1000 past U.S. nuclear tests, will be integrated via the Advanced Strategic Computing Program. This multi-billion dollar supercomputing program reaches beyond the weapons laboratories, seeking to incorporate the nation’s leading universities into an effort to attract and train yet another generation of nuclear weapons designers. Finally, smaller, modernized nuclear weapons production processes are being developed to allow flexible, small lot manufacturing, with planning underway for a new plutonium pit factory, the Modern Pit Facility, for large-scale production.

The DOE is pursuing a wide range of other programs to modernize its nuclear weapons production infrastructure. These range from a smaller pit manufacturing capability at Los Alamos National Laboratory in New Mexico to upgraded nuclear weapon component manufacturing facilities at Oak Ridge National Laboratory and tritium facilities at Savannah River, Georgia. In addition, the government has begun producing tritium for nuclear weapons at civilian nuclear power plants operated by the Tennessee Valley Authority (TVA). A Department of Energy advisory panel recently recommended an even more ambitious restructuring of the nuclear weapons complex, with manufacturing activities involving nuclear materials and explosives, including plutonium pit production, consolidated at a single facility several decades from now. The panel envisioned the Nevada Test Site as one possible location for this plant, and also recommended consolidating other dangerous activities, such as high explosive testing and certain tests using special nuclear materials, at the Test Site.¹⁰
The Nevada Test Site: Weapons Lab Today, Weapons Factory Tomorrow?

In addition to weapons experiments that take advantage of the infrastructure and skills developed for underground nuclear testing and that help sustain capabilities, the Nevada Test Site supports a growing array of nuclear weapons facilities:  

- The Big Explosive Experiment Facility (BEEF) allows non-nuclear high explosive tests too powerful to be conducted at high explosive testing facilities at the nuclear weapons labs in Livermore and Los Alamos. BEEF can be used to test new types or configurations of conventional explosives, and also for “hydrodynamic” experiments, in which the high explosive components of nuclear weapons can be tested, using substitutes for fissile materials that are similar in their physical characteristics but will not result in a nuclear explosion.

- The Joint Actinide Shock Physics Experimental Research Facility (JASPER) is a large gas gun that tests the characteristics of plutonium and other materials by blasting them with high speed projectiles.

- The Atlas pulsed power facility, relocated from the Los Alamos National Laboratory, instantaneously releases large amounts of stored electrical energy in a small space to simulate certain aspects of nuclear explosions, will be to NTS. It resumed operation in July 2005.

- The Device Assembly Facility (DAF), a complex of thirty buildings reinforced with steel and covered with earth, is one of the two sites, together with the Pantex Plant in Texas, where special nuclear materials—plutonium and uranium—can be combined into either nuclear weapons or configurations for nuclear weapons tests, such as the subcritical experiments conducted at NTS. The DAF originally was built to assemble nuclear weapons for underground tests, and is jointly operated by the Los Alamos andLivermore National Laboratories. Located far from population centers and surrounded by layers of security, the DAF is one of the largest and most modern facilities available to the U.S. government for operations involving both nuclear materials and high explosives, including assembly of nuclear weapons. A 2005 Secretary of Energy Advisory Board Report has recommended that the DAF be used to assemble the proposed next generation of “Reliable Replacement Warheads” until a new nuclear weapons assembly plant is built.

With no full scale underground tests on the immediate horizon, the DAF is being given other roles involving nuclear materials. Test assemblies for subcritical experiments are put together at the DAF. Criticality experiments, which involve significant quantities of such weapons usable materials as highly enriched uranium and which study the behavior of these materials at or near the conditions where they generate a self-sustaining nuclear chain reaction, are being transferred to the DAF from Los Alamos. Some criticality experiments still may be conducted at Los Alamos, but those involving larger quantities of weapons-useable nuclear material will be moved to NTS. The move is expected to involve relocation to NTS of 2.6 tons of special nuclear material (probably plutonium and enriched uranium), as well as 11 tons of depleted uranium and thorium.

The Nevada Test Site also is being considered as one possible location for the Modern Pit.
Facility, a factory to mass produce plutonium pits, the key component of the atomic explosive trigger at the heart of most modern nuclear weapons. Current plans call for a facility that could produce at least 125 pits per year, with the capacity both for a larger “surge” capability and for “modular expansion” to increase base capacity without costly modifications. By comparison, China, the world’s third leading nuclear power after the United States and Russia, is believed to have about 400 nuclear weapons. And even if the Modern Pit Facility isn’t built at NTS, the Test Site’s managers, Bechtel Corporation, are determined to compete for an ever larger piece of the burgeoning high-tech weapons pie. As Frederick Tarantino, President and General Manager for NTS manager Bechtel Nevada, put it, “[i]f we don’t get it, that’s OK.... We’ll go after something just as a large.”

Nuclear Weapons Testing on Indigenous Lands

The existence of nuclear weapons in the world causes ecological devastation, even if they never are used in warfare. A half century of testing has contaminated vast reaches of the planet, and has resulted in millions of premature deaths by causing birth defects, cancer, and other diseases. Nuclear explosions at the Nevada Test Site have left millions of curies of strontium, cesium, and plutonium underground. In addition, hundreds of thousands of cubic yards of radioactive waste have been buried at NTS. Above ground nuclear testing, along with plutonium dispersal experiments and depleted uranium ammunition testing, caused additional contamination. For an overview of radioactive contamination at NTS, see Arjun Makhijani, Howard Hu, and Katherine Yih, Nuclear Wastelands: A Global Guide to Nuclear Weapons Production and its Health and Environmental Effects, (Cambridge, Massachusetts, MIT Press: 1995), pp.224-227

“...[Of] the eight nations in the world that have detonated nuclear weapons during the last 55 years, five have used the lands of indigenous peoples. The United States, Russia, Britain, France and China have tested their nuclear might on lands held sacred by the people of First Nations. The Western Shoshone nation of North America, the Marshall Islanders, and other South Pacific Islanders, Australian Aboriginals, the Kazaks, and Tibetans are but a few of those whose land has been consistently contaminated with nuclear poison....” Richard Salvador, Pacific Islands Association of NGOs, NGO Presentation, “Indigenous Perspective” to the NPT Review Conference Preparatory Committee, New York, April 2002

“No Developed nation tests its nuclear weapons on its own lands. All nuclear testing is done on indigenous people’s lands... The Western Shoshone are the rightful custodians of this land, affirmed by the Treaty of Ruby Valley in 1863. With over 900 bombs exploded, they are the most bombed nation in the world.” Raymond D. Yowell, Chief, Western Shoshone National Council, Healing Global Wounds event invitation, The Test Banner, American Peace Test, Summer/Fall 1992.

For more on the impacts of nuclear weapons research, development, testing and production on indigenous peoples worldwide, see the the fact sheet and resource links, “Indigenous People and the Nuclear Age: Making the Connections,” prepared by the Women’s International League for Peace and Freedom, at http://www.reachingcriticalwill.org/technical/factsheets/indigenous.html
A Full Service Test Range

The Nevada Test Site also is used for a variety of military tests besides those linked directly to nuclear weapons development. Over the years, NTS has been used to develop systems ranging from missile re-entry bodies to ballistic missile defense. Depleted uranium munitions were tested at NTS, with experiments including “controlled burns” and live firing. A small facility capable of manufacturing biological weapons was built at the Test Site in the 1990’s, as part of a “counterproliferation” program aimed at determining how difficult it would be for countries or non-state organizations to do the same and at developing detection technologies. NTSC also operates a hazardous materials spill facility, where large quantities of dangerous chemicals can be released for a variety of purposes, such as developing response and cleanup techniques or sensors to detect chemical weapons or their components. Recent military tests have included unmanned aircraft fitted with sensors to detect chemical weapons and the “thermobaric” bomb, a powerful explosive that was rushed into production for use against tunnels and caves in the Afghanistan war. Tunnel complexes at NTS are being used for a variety of tests aimed at developing additional ways to destroy targets buried in cave and tunnels, such as missile operations or command and control facilities.

The Nuclear Non-Proliferation Treaty, the Comprehensive Test Ban Treaty, and U.S. Nuclear Weapons Policies

Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control. Article VI, Treaty on the Non-Proliferation of Nuclear Weapons, Signed at Washington, London, and Moscow July 1, 1968. Entered into force March 5, 1970.

Ending nuclear testing has been seen as a key stepping stone towards the elimination of nuclear weapons virtually since efforts to control nuclear weapons began. The United States and the other parties to the 1963 Limited Test Ban Treaty, which banned all but underground nuclear test explosions, proclaimed as their “principal aim” the “speediest possible achievement of an agreement on general and complete disarmament under strict and effective international control.”
Nuclear Testing and the Quest for More Useable Nuclear Weapons

The push by elements inside and outside the government for nuclear weapons with new military capabilities slowed for a brief period after end of the Cold War, with Congress placing some restrictions on research on nuclear warheads with a yield below 5 kilotons, and an official Clinton Administration policy of no “new” nuclear weapons. Despite this policy, U.S. nuclear weapons research continued throughout the 90’s. The goals of these efforts were twofold: to develop capacities to destroy difficult types of targets, and to design nuclear weapons that would be politically feasible to use. A 1999 Department of Defense planning document identified as a priority the ability “to provide national leaders with improved options by increasing the responsiveness of strategic forces and developing more discriminate options, as done most recently with the introduction of the B61–11 earth-penetrating weapons.” The B61-11 earth penetrating nuclear bomb, developed in the late 1990's, was a modification of an existing design. It was developed without underground nuclear explosive testing, using the component testing and computer simulation capabilities of the Department of Energy “Stockpile Stewardship” program. Research also continued on nuclear weapons effects, focusing on the “need to hold evolving enemy targets at risk using the reduced stockpile, and recognizing greatly increasing political and environmental constraints.”

With the ascendance of the Bush Administration, the push for nuclear weapons with new military capabilities has intensified. The 2001 Bush Nuclear Posture Review (NPR), a major policy document that outlined plans for strategic weapons development, stated that

There are several nuclear weapon options that might provide important advantages for enhancing the nation’s deterrence posture: possible modifications to existing weapons to provide additional yield flexibility in the stockpile; improved earth penetrating weapons (EPWs) to counter the increased use by potential adversaries of hardened and deeply buried facilities; and warheads that reduce collateral damage.

In 2003, Congress removed the Clinton-era restrictions on low-yield nuclear weapons research and approved funding for initial research on a Robust Nuclear Earth Penetrator RNEP). Additional nuclear planning documents leaked in early 2003 revealed that the RNEP is only one of a number of modified or new nuclear weapons under consideration. A January 2003 Pentagon meeting attended by high-ranking officials from the Defense Department and the Energy Department nuclear weapons programs set the agenda for further planning sessions that would evaluate “[r]equirements for low-yield weapons, EPWs, [earth penetrating weapons] enhanced radiation weapons, [and] agent defeat weapons” (weapons intended to destroy chemical or biological agents). Issues to be covered included “[e]ffects modeling capabilities to effectively plan for these weapons,” “testing strategy for weapons more likely to be used in small strikes,” and “the strategy for selecting first ‘small builds.’” Research also is going forward on new strategic missiles with greater range, accuracy, and maneuverability, and with the capability to deliver both nuclear and conventional payloads.

Congressional opposition to continued nuclear weapons research, although largely limited to the development of particular warheads with new capabilities, began to have some effect in 2004, with FY2005 research funds for the RNEP reallocated to other weapons programs. Nonetheless, the Administration again requested funds for the RNEP for FY2006. This funding would cover further design studies as well as impact tests involving the B83 bomb, a weapon with a one megaton yield (although some commentators have speculated that only its fission primary could be employed to provide a reduced 1-10 kiloton yield). The Administration’s FY2006 budget request also includes funding to study integration of the RNEP with the B-2 stealth bomber.

Despite opposition to the RNEP, Congress has approved funding for a program intended to replace the Cold War stockpile with a new generation of modernized nuclear weapons designed to last for many decades to come. This program aims to develop a “Reliable Replacement Warhead,” combining new manufacturing techniques with greater design margins, in some cases taking advantage of the less demanding requirements in terms of yield and weight than was deemed necessary for Cold War missions. If successful, the program could provide a long-lasting nuclear arsenal with capabilities comparable to existing weapons, and possibly additional capabilities crafted for new missions as well.
In 1959, the United States Senate voted not to approve ratification of the CTBT, and has chosen not to revisit the matter since that time. The Clinton administration and its allies, rather than trying to rally disarmament supporters as a counterweight to the powerful interests represented by the nuclear weapons states, had portrayed the CTBT as a means to preserve the decisive technological advantage in nuclear weaponry held by the U.S., and as a way to prevent non-nuclear weapons states from acquiring nuclear weapons, rather than as a step on the road to disarmament. This view was reaffirmed by Secretary of State Madeline Albright even after it had proved a losing strategy in the CTBT ratification campaign: “We simply do not need to test nuclear weapons to protect our security. On the other hand, would-be proliferators and modernizers must test if they are to develop the kind of advanced nuclear designs that are most threatening. Thus, the CTBT would go far to lock in a technological status quo that is highly favorable to us.”

In 2000, the NPT parties, including the United States, reiterated their commitment to disarmament, agreeing to a set of “practical steps for the systematic and progressive efforts to implement article VI of the Treaty...” These steps included, once again, ratification of the CTBT, recognition of a “principle of irreversibility” to apply to nuclear disarmament, and “an unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals leading to nuclear disarmament, to which all States parties are committed under article VI.” Since that time, the U.S. has repudiated the CTBT, ramped up efforts to increase nuclear test readiness, and continued its ambitious program to refurbish its nuclear complex. The goal is to maintain nuclear supremacy in all conceivable circumstances by building facilities able to mass produce nuclear weapons should the “need” some day arise, while at the same time being able to design and build new kinds of nuclear weapons quickly:

For example, a future adversary nation seeking to gain some nuclear advantage would be forced to conclude that its buildup could not occur quicker than the United States could act to reconstitute higher force levels. Alternatively, an ability to innovate and produce small builds of special purpose weapons, characteristic of a smaller but still vital nuclear infrastructure, would convince an adversary that it could not expect to negate United States nuclear forces, for example, by seeking to house vital command and control functions in hard, deeply buried installations.

The nuclear weapons laboratory testing and simulation technologies that comprise the U.S. “Stockpile Stewardship” program, and similar though far less ambitious programs in other nuclear weapons states, makes a
Comprehensive Test Ban simultaneously less “comprehensive” and more necessary. A ban on nuclear explosive testing can limit, but not stop, advanced nuclear weapons development. It has little effect on existing arsenals, which can be maintained at high levels of readiness without explosive testing using technology now decades old. The U.S. can upgrade existing nuclear weapons while remaining within the parameters of well-understood concepts and designs. It also is possible that substantial progress can be made towards more extensive design innovations, which could increase pressure for a resumption of testing. This would be of particular concern in a crisis, whether the consequence of real events like the 9-11 attacks or a determined and successful propaganda campaign like that preceding the 2003 Iraq invasion. We have seen that few in Congress will challenge a demand by a sitting President, bolstered by classified information about some looming threat, on matters involving “weapons of mass destruction.” A CTBT that has entered into force, which requires ratification by the United States, among others, could provide something of a “firebreak,” making the decision to resume testing in order to deploy new weapons more consequential.

The Preamble to the Comprehensive Test Ban Treaty expresses the intent of the treaty to cut off the development and modernization of nuclear weapons as a meaningful disarmament measure, recognizing “that the cessation of all nuclear weapon test explosions and all other nuclear explosions, by constraining the development and qualitative improvement of nuclear weapons and ending the development of advanced new types of nuclear weapons, constitutes an effective measure of nuclear disarmament and non-proliferation in all its aspects,” and “that an end to all such nuclear explosions will thus constitute a meaningful step in the realization of a systematic process to achieve nuclear disarmament...”

The CTBT interpreted literally may not ban expansive laboratory testing programs and subcritical tests. But the commitment made by the NWS at the 1995 NPT review and Extension Conference to achieve a CTBT as part of a program for the “effective implementation of article VI,” embodied in a provision which further stated that “[p]ending the entry into force of a Comprehensive Test-Ban Treaty, the nuclear-weapon States should exercise utmost restraint;” must be viewed in a different light. It clearly is bound to a broader interpretive context in which a CTBT is envisioned as a meaningful step along the road to nuclear disarmament, rather than an instrument for the permanent preservation of a two-tier world, in which a few states claim the right not only to possess unlimited weapons of mass destruction, but to destroy any state that dares to develop such weapons themselves.

Before nuclear arms racing can be reversed, it must be stopped. Real progress towards disarmament requires concrete steps by the nuclear weapons states to first control and then eliminate nuclear weapons research, development, and testing in all its forms. The United States, with nuclear weapons research programs that dwarf all others and with a stated policy of researching new kinds of nuclear weapons, bears the greatest responsibility...
here to take immediate, substantial, and unambiguous action. Because of their role not only in providing information useful for nuclear weapons design but in exercising capabilities needed to rapidly resume a full-scale nuclear explosive testing program, one logical starting place would be the termination of subcritical tests. Cessation of subcritical tests would both be a visible, concrete step towards controlling laboratory nuclear weapons research and would facilitate complete closure of all remaining underground nuclear test sites. In addition to simplifying verification issues, closure of the Nevada Test Site would further broaden the “firebreak” between simulation-based prototyping of some types of radically new nuclear weapons concepts and their deployment.

The elimination of nuclear weapons, still the gravest threat to humanity and growing once more as we enter a new century, will for a start require a clear commitment by the most powerful states, and the United States most of all, not only to nuclear disarmament but to a more peaceful world. The apparent determination of the most powerful countries to dominate the world by force of arms is eroding what remains of international order, and nuclear weapons are at the center of a growing global crisis of war and violence. The possibility that countries may obtain nuclear weapons is put forward as a principal rationale for a continuing U.S. high-tech and nuclear weapons buildup, and for preventive warfare without regard for the existing framework of international law. At the same time, the insistence by the existing nuclear weapons states, which also possess the most powerful conventional military forces, that nuclear weapons remain essential to their “security,” continues to undercut the fragile nonproliferation regime. As the International Court of Justice noted in its 1996 opinion on the *Legality of the Threat or Use of Nuclear Weapons,*

> In the long run, international law, and with it the stability of the international order which it is intended to govern, are bound to suffer from the continuing difference of views with regard to the legal status of weapons as deadly was nuclear weapons.41

Nuclear weapons, and the brutal ultimate power politics that their possession simultaneously makes possible and, to those in their thrall, seem to make necessary, themselves continue to escape all efforts at their legal regulation, and in the end render efforts to regulate lesser uses of force largely futile as well. And as the World Court then concluded,

> It is consequently important to put an end to this state of affairs: the long-promised complete nuclear disarmament appears to be the most appropriate means of achieving that result.42

In today’s mainstream U.S. political discourse, the daily grist of pundits, “electable” candidates, and “reasonable” experts, we hear barely a whisper about disarmament and the path to a more peaceful world for everyone, only endless debate over which new American weapons system can best destroy the weapons of others. Humanity will not survive many more decades of nuclear weapons and endless high-tech arms racing. It is long past time for us to take up the demand, made at the dawn of the nuclear age, “no longer a prayer, but an order which must rise up from people to their governments— the order to choose finally between hell and reason.”43
Information Bulletin for Western States Legal Foundation and Nevada Desert Experience by Andrew M. Lichterman

Notes

1. Some tests involved multiple nuclear blasts; the total number of underground nuclear detonations at the Nevada Test Site was 828, counted as 804 “tests.” See generally U.S. Department of Energy, “United States Nuclear Tests July 1945 through September 1992,” DOE/NV--209-REV 15


3. For a collection of materials on the health effects of U.S. nuclear weapons testing, including government studies and critical commentary, see the Alliance for Nuclear Accountability “Health Issues” page at http://www.ananuclear.org/healthpage.html


7. Statement of Dr. Frederick A. Tarantino, President and General Manager, Bechtel Nevada, before the House Armed Services Committee, Procurement Subcommittee, June 12, 2002.

8. John A. Gordon, Administrator of the National Nuclear Security Administration (NNSA), Written Statement to the Committee on Armed Services, U.S. Senate, February 14, 2002.


38. In 1978, long before the sophisticated new weapons testing facilities now being built by the United States were contemplated, three prominent U.S. nuclear weapons scientists, Norris Bradbury, Carson Mark, and Richard Garwin, wrote to President Jimmy Carter informing him that it would be possible to assure the safety and reliability of nuclear warheads without underground nuclear testing, so long as warhead designs were not significantly changed. They noted that

"[T]he assurance of continued operability of stockpiled nuclear weapons has in the past been achieved almost exclusively by non-nuclear testing--by meticulous inspection and disassembly of the components of the nuclear weapons, including their firing and fusing equipment. Problems encountered in this inspection are normally
validated by additional sampling and solved by the remanufacture of the affected components. This program is, of course, supplemented by the instrumented firing of the entire nuclear weapon with inert material replacing the fissile materials, and the entire program thus far described would be unaffected by the requirements of a CTBT. It has been exceedingly rare for a weapon to be taken from the stockpile and fired ‘for assurance.’

*It has been rare to the point of non-existence for a problem revealed by the sampling and inspection program to require a nuclear test for its resolution.* There are three acceptable approaches to the correction of deficiencies without requiring nuclear testing:

1) Remanufacture to precisely the original specifications

2) Remanufacture with minor modifications in surface treatment, protective coatings, and the like, after thorough review by experienced and knowledgeable individuals.

3) Replace the nuclear explosive by one which has previously been tested and accepted for the stockpile.

A fourth option, to replace the troubled nuclear system by one not already proof tested may result in improved performance, lesser use of special nuclear materials, or the like, virtues which have more to do with improvement of the stockpile than with confirming its operability....” Letter, N. Bradbury, C. Mark, and R. Garwin, to President Jimmy Carter, August 15, 1978, Appendix J to R.E. Kidder, “Maintaining the U.S. Stockpile of Nuclear Weapons During a Low-Threshold or Comprehensive Test Ban,” Lawrence Livermore National Laboratory 1987. (Emphasis added)

39. As Sandia National Laboratory Director C. Paul Robinson noted in his testimony to the Senate Armed Services Committee on the CTBT, while the national laboratories “cannot create completely new concepts without testing, many previously tested designs could be weaponized to provide new military capabilities.” Robinson observed that

“Proven designs of lower yield exist that might be adaptable for new military requirements in the future. I believe that such weapons could be deployed this way without the need for nuclear tests.” Statement of C. Paul Robinson to the U.S. Senate Armed Services Committee, October 7, 1999.

The Defense Science Board, in its 2004 *Report of the Defense Science Board Task Force on Future Strategic Strike Forces*, also noted that a variety of additional capabilities likely could be obtained by modifying existing nuclear warhead designs without underground testing, ranging from reduced yields and improved earth penetrating ability to enhanced radiation with reduced heat and blast. (At pp.7-10-7-11).


41. Legality of the Threat or Use of Nuclear Weapons(General List No. 95 (Advisory Opinion of 8 July 1996)) Para. 98.

42. *Id*.

Complex Transformation
The New Nuclear Weapons Complex

The Bush administration has a multi-billion dollar plan to rebuild the nation’s nuclear weapons production capabilities. The plan includes updating and constructing new bomb-making facilities that would mass-produce nuclear weapons for the first time in two decades. This new plan, called “Complex Transformation,” formerly Complex 2030, is a reversal of the goals of the nuclear Non-Proliferation Treaty (NPT).

The underlying premise of international efforts to stop the spread of weapons of mass destruction is that the United States and other nuclear weapons states would also work toward disarmament.

Building the next generation of nuclear weapons factories takes the United States in the opposite direction. The new plan also threatens U.S. and international security by undermining calls for Iran and North Korea to halt their nuclear programs.

What is the Nuclear Weapons Complex?

The Nuclear Weapons Complex is a network of facilities that develop and maintain the U.S. nuclear weapons arsenal. The Energy Department (DOE) is the federal agency that administers the Complex.

These facilities are scattered across the country at eight major sites with missions as diverse as laboratory work to explosives testing to weapon component manufacturing. DOE employees working in the Complex range from factory workers to nuclear physicists. Currently, the Nuclear Weapons Complex costs taxpayers over $6 billion per year.

What is Complex Transformation?

Complex Transformation is the administration’s plan to restructure and rebuild the Nuclear Weapons Complex. A key element of the plan is the updating and construction of new nuclear weapons production facilities. In addition, Complex Transformation would consolidate weapons-grade nuclear materials into fewer locations and reduce the Complex footprint.

The major planned new nuclear weapons support facility, the Chemistry and Metallurgy Research Replacement plant (CMRR), would enable the annual capacity to build 80 plutonium pits, or “triggers,” for new nuclear warheads. This would sharply increase U.S. capacity to produce new nuclear weapons, a capacity the United States has not had since the closure of the Rocky Flats Plant outside Boulder, Colorado, in 1989. The CMRR facility would be built at the Los Alamos National Laboratory, located northwest of Santa Fe, New Mexico. The Energy Department estimates that the CMRR would cost taxpayers over $2 billion.
Complex Transformation Undermines Security

The international community has worked for decades to construct the nuclear nonproliferation regime that has helped prevent the spread of nuclear weapons. The Complex Transformation proposal undermines these agreements that were created to reduce the nuclear danger. At a time when the U.S. government is demanding other countries adhere to the nuclear Non-Proliferation Treaty (NPT) and renounce nuclear weapons, the U.S. government is not meeting its own obligation to pursue disarmament.

In signing the NPT, the United States committed to working toward the goal of nuclear disarmament under Article VI of the treaty. Complex Transformation violates the spirit of this disarmament section because it would enable the United States to build new nuclear weapons.

While the U.S. government is pressing Iran and North Korea to abandon their nuclear programs, it is planning to buttress its own nuclear arsenal. This is an untenable and morally wrong policy of “do as I say, and not as I do.” Indeed, as Rep. Ed Markey (MA) has warned, “America cannot preach nuclear temperance from a barstool.”

Where Are We Now and What Can I Do?

The administration is seeking funds for Complex Transformation in its fiscal year 2009 (FY09) budget request. Specifically, the Energy Department (DOE) requested $100 million for the new nuclear bomb support facility, the Chemistry and Metallurgy Research Replacement facility (CMRR). The complete cost of CMRR is estimated to be greater than $2 billion.

The public has played a central role in curbing the nuclear arms race. In 2007, people across the United States mobilized against the Reliable Replacement Warhead and a proposed mega-scale bomb plant. Arms control advocates celebrated a major victory when Congress denied money for both programs. A similar movement is needed again. Here is what you can do:

• Express your views on new nuclear weapons directly to the federal government. The Energy Department is required to consider your recommendations on Complex Transformation and the proposed CMRR bomb support facility by holding public hearings and accepting public comments through April 30, 2008. You can submit comments directly by email to the DOE at ComplexTransformation@nnsa.doe.gov. For more information, visit www.fcnl.org/nuclear

• Urge your members of Congress to oppose new nuclear weapons by any name. Ask them to eliminate funding for the new bomb support facility, the Chemistry and Metallurgy Research Replacement facility, in the federal budget. Members of the House and Senate Armed Services Committees, and the House and Senate Appropriations Committees will play a key role in deciding the future of this bomb plant. If your representative or senators sit on these committees, it is particularly important that they know of your concerns about Complex Transformation and the new bomb-making facilities.

• Write a letter to the editor of your local paper explaining the dangers of rebuilding the Nuclear Weapons Complex and producing new nuclear weapons.

• Educate your friends and family. Numbers do make a difference, and legislators will be more inclined to vote your way if they feel that a groundswell of support exists for a particular measure or issue. Help create that momentum by educating your community.

Let FCNL Help You Take Action to Stop Complex Transformation

FCNL has many resources to assist you. Visit FCNL’s website at www.fcnl.org/nuclear to help you write a letter, review background information, and track congressional action. The website includes information on new weapons development, nonproliferation initiatives, nuclear weapons use policy, and weapons testing.

April 2008
Reliable Replacement Warhead: Another Unneeded Nuclear Weapon

Stymied by Congress’ refusal to fund the nuclear “bunker buster,” the Bush administration remains intent on developing another class of new nuclear weapons, the so-called Reliable Replacement Warhead, or RRW.

The administration has asked for $119 million for fiscal year 2008 to enable the Energy Department in conjunction with the Defense Department to design and develop a program to replace current nuclear warheads. Arms control advocates and some members of Congress are concerned that the program is a Trojan horse that could lead to the resumption of nuclear testing.

Researching and developing a new generation of “reliable” nuclear weapons could undermine arms control and nonproliferation objectives by setting off a nuclear arms race. It sends the wrong message to other would-be nuclear powers around the world. It could prompt Russia and China to modernize their nuclear arsenals. The program could also lead to the resumption of U.S. nuclear testing and end the current international testing moratorium.

Despite the “reliable” label of the proposed new program, the current U.S. arsenal is extremely reliable. The secretaries of Energy and Defense have certified to the president for the past 11 years that the present U.S. nuclear stockpile is safe, secure—and reliable.

The keystone of the Energy Department’s argument for RRW has been the aging of plutonium pits, an essential element of new nuclear weapons. Department officials had estimated that some pits in existing weapons would become “unreliable” in less than a decade and needed to be replaced. Yet, a congressionally mandated report by a scientific panel found that pits will remain “reliable” for more than twice the time originally estimated, with most pits having lifetimes of over 100 years.

The program would require new nuclear weapons plants that the Energy Department estimates will cost tens of billions of dollars. As a former White House budget official in the first Bush and Clinton administrations stated, “The weapons labs are more interested in job security than national security.”

Congressional leaders believe they can keep the RRW program within tight constraints, but the history of previous limits on the nuclear weapons program is not promising.

RRW and the Nuclear Non-Proliferation Treaty

Developing new nuclear weapons is at odds with the U.S. commitment to prevent the spread of nuclear weapons. It undermines the nuclear Non-Proliferation Treaty (NPT), an international agreement signed by 188 countries that has significantly limited the number of states that have nuclear weapons.

In 1970 as part of the NPT, the United States agreed “to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament” (Article VI). As the Vatican remarked at the United Nations in 2005, “In essence, the NPT promised a world in which nuclear weapons would be eliminated...” However, “it is evident that nuclear deterrence drives the development of ever newer nuclear arms, thus preventing genuine nuclear disarmament.”

The administration claims that new nuclear weapons are needed for some future “new threat.” However, such U.S. weapons programs make it easier for nuclear “hawks” in Moscow and Beijing to argue for new nuclear weapons for their own nuclear arsenals, undermining the process of disarmament.

Developing new nuclear weapons also undermines U.S. nonproliferation goals. As Rep. Ed Markey (MA), a leading congressional critic of new nuclear weapons, has stated, “America cannot credibly preach nuclear temperance from a barstool.” At a time when the United States is urging restraint in Iran and North Korea’s nuclear programs, the U.S. administration is intent on developing its own new nuclear weapons against an undefined, future threat.

Rather than building new nuclear weapons, it is time to honor the NPT and work towards, in the words of President Reagan, the elimination of “all nuclear weapons.” As former Secretary of State Henry Kissinger and other senior statesmen recently affirmed, “Reassertion of the vision of a world free of nuclear weapons and practical measures toward achieving that goal would be, and would be perceived as, a bold initiative consistent with America’s moral heritage.”

Where Are We Now and What Can I Do?
The administration is seeking $119 million for RRW in its fiscal year 2008 (FY08) budget request. The amount of money for the program will increase significantly in future years as funds are requested for engineering and construction.

Concerned citizens have played a central role in the past in curbing the nuclear arms race and preventing nuclear war. A similar movement is needed today. Here is what you can do:

- Communicate with your members of Congress. Urge them to eliminate funding for RRW in the FY08 budget. Funding could be included in three annual budget bills: the military authorization bill, military appropriations bill, and the energy and water appropriations bill. The members of the House and Senate Armed Services Committees, and the House and Senate Energy and Water Appropriations Subcommittees will play a key role in decisions on the future of RRW. If your representative or senators sit on these committees, it is particularly important that they know of your concerns about RRW.

- Write a letter to the editor of your local paper explaining the dangers of producing new nuclear weapons.

- Educate your friends and family. Numbers do make a difference, and legislators will be more inclined to vote your way if they feel that a groundswell of support exists for a particular measure or issue. Help create that momentum by educating your community.

Let FCNL help you take action to stop RRW
FCNL has many resources to assist you. If you do not have web access, we can mail written material to you.

Visit FCNL’s website at www.fcnl.org to view congressional actions, background information, advocate letters and statements, and links to other resources. The web site includes information on topics such as new weapons development, nonproliferation initiatives, nuclear weapons use policy, and weapons testing. Documents on RRW can also be found at StoptheBombPlant.org. If you do not have web access, we can mail written material to you.

February 2007

“DRONE WARRIORS”: ANOTHER THRESHOLD CROSSED
by Fr. Louis Vitale, OFM, co-founder of Nevada Desert Experience
(from the December, 2008 Desert Voices)

Journalist Keith Rogers, in a recent article in the “Las Vegas Review Journal”, quotes Colonel Christopher Chambliss, commander of the U.S.’s 432nd Wing, in exclaiming the new MQ3 Reaper, big brother to the MQ1 Predator, the latest in the U.S. fleet of “Unmanned Airborne Vehicles.” The colonel reflects on the time nine decades ago when military leaders were beginning to grasp the value of piloted aircraft that led the U.S. to domination of airspace and ultimately the intimidation of the world through the dropping of two atomic bombs on Japan.

Jonathan Schell’s latest book The Seventh Decade updates us on where we have come with the “atomic bomb” since that time. We have become the “Superpower” who holds the world in check through global domination with the fear of nuclear annihilation through our 12,000+ nuclear weapons available from air, land sites and sea. Noted psychiatrist and author Dr. Robert Jay Lifton has further illustrated the debilitation of the one dropping the bombs. He speaks to a severe “numbing” of the psyche that happens through the size of the weapons and the distance from the victims on the ground.

The new drones that are flown from Creech Air Force Base near Las Vegas (in the fashion of a video arcade) 7,000 miles from the target extend the numbing even farther. Here young enlisted men in the Air Force sitting side by side with more experienced pilots guide missiles to their targets as in a video arcade. But these are real missiles and with the “Reaper” even carrying 500 pound bombs. Our daily newspapers and TV broadcasts show us the impact on “family compounds,” schools, and hospitals. These bring the fleeting sense of dropping a bomb from 35,000 feet to an immediate sight of bodies in plain view. Commanders report on the impact on some of the crews, especially the sensors who handle the cameras and guide the missiles to their targets with their laser beams. The commander spoke of the difficulty of some of the younger crew members as they went home to their families after the days bomb runs and the need now to hire more chaplains and psychologists for their aid.

Long time observers of the impact of the Afghanistan/Iraq war, such as humanitarian/activist Kathy Kelly, who have experienced first hand the enormous sufferings of the 2,000,000+ victims are eager to travel to Waziristan and other frontiers between Afghanistan and Pakistan to see up close what the Predator and Reaper crews see on their screens (shown lately to BBC viewers world wide as they dramatized a British Reaper crew--our coalition partners-- to their viewers in the homeland.

Here in Nevada, with the Creech headquarters of the UAV 432nd Wing nearby, part of the same land space shared with the Nevada Test Site, the bombing range operated by Nellis Air Force Base, and other sites of new and lethal weapons, the scandal of Creech’s remote and earth-shattering war, we cannot dare fail to address the damage and destruction both on the Middle East battlefield and on its own crews.

With other Nevada partners we have begun vigils at the gate to the Drone base. We have carried out signs of concern, taken a letter to the base commander Colonel Chambliss and heard their ownership of “causing groans” and making “kills.” We pray and we weep. As with recent developments of torture, this is a frontier we did not want to pass. They intimidate the world and leave us all in fear and trembling.” We are pledged to call attention to the truth of these atrocities and take active measures to put an end to their existence.