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2013-2014 BIC Teaching Guide

Marta Moore Editor

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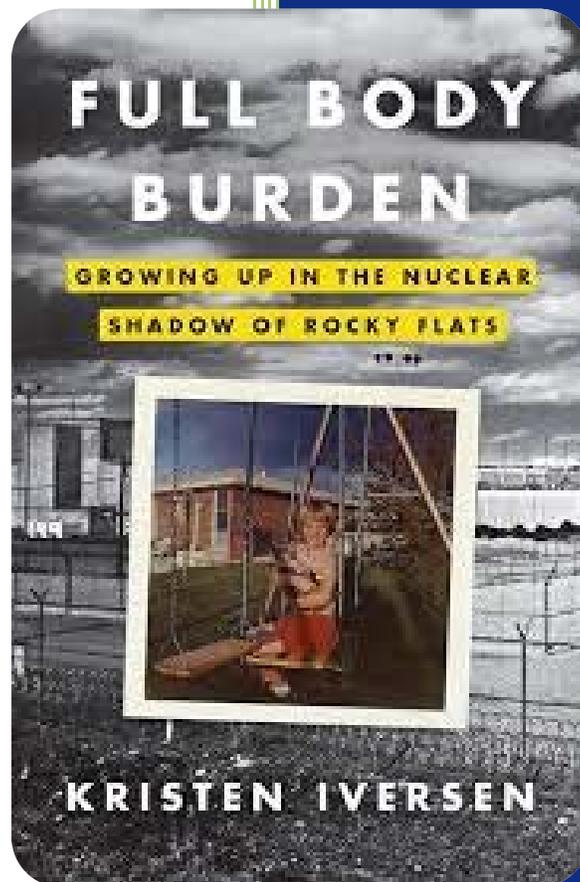
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2013-2014

Teaching Guide

Book-in-Common Committee



2012-2013 Book-in-Common

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To immediately access basic information and important dates associated with the Book-in-Common, please visit our website: <http://www.collin.edu/academics/bookincommon/>

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General Information

Kristen Iversen Biography

(from <http://www.kristeniversen.com/bio>),

Kristen Iversen grew up in Colorado and is the author of *Full Body Burden: Growing Up in the Nuclear Shadow of Rocky Flats*, winner of the 2013 Colorado Book Award and the Reading the West Book Award in Nonfiction. *Full Body Burden* was chosen one of the Best Books of 2012 by Kirkus Reviews and the American Library Association and Best Book about Justice by *The Atlantic*, and was a finalist for the Barnes & Noble Discover Award and the Andrew Carnegie Medal for Excellence. She is also the author of *Molly Brown: Unraveling the Myth*, winner of the Colorado Book Award and the Barbara Sudler Award for Nonfiction, and a textbook, *Shadow Boxing: Art and Craft in Creative Nonfiction*.



Iversen's work has appeared in *The New York Times*, *The Nation*, *Reader's Digest*, and many other journals and publications. She holds a Ph.D from the University of Denver and currently teaches at the University of Memphis, where she directs the MFA program in creative writing. She has two sons.

Iversen has appeared on C-Span, NPR's *Fresh Air*, and many other radio and TV programs.

Awards, Grants, and Honors

- The Colorado Book Award in Nonfiction, June 2013.
- Reading the West Award in Nonfiction, June 2013.
- Award for Journalistic Excellence, The Alliance for Nuclear Accountability, Washington, D.C., 2013.
- Nominated for the 2013 Alumni Award for Creative and Academic Achievement at The University of Memphis and the Humanities Tennessee Distinguished Artist Award.
- Louise Eisenhardt Award for creative and academic achievement, the American Association of Neurological Surgeons, April 2011.
- Creative Arts Fellowship, Colorado Art Ranch, 2009, 2010.
- Finalist, The Iowa Review Award for Nonfiction, 2006.

- Early Career Research Award and Faculty Research Grant for *Full Body Burden: Growing Up in the Nuclear Shadow of Rocky Flats*, The University of Memphis, 2005, 2006.
- Colorado Endowment for the Humanities Prize for *Chatelaine* (essay), 2004.
- Creative Arts Fellowship, San Jose Arts Council, San Jose, California, 2003.
- Colorado Book Award for Biography, the Fifth Biennial Barbara Sudler Award for Nonfiction, and finalist for the WILLA Award in Nonfiction for *Molly Brown: Unraveling the Myth*.
- Finalist, The Flannery O'Connor Award for Short Fiction, 1993, *The Shape of a Secret* (short stories), University of Georgia Press.
- Arts Fellowship, Rocky Mountain Women's Institute, Denver, Colorado, 1992.

Selected Publications

- “How to Be Tough in Creative Nonfiction.” *The Art of Friction II: (Meta)Writing in (Non)Fiction*. Jill Talbot, ed. University of Iowa Press, 2012.
- “An Interview with Kristen Iversen.” *The Art of Friction II: (Meta)Writing in (Non)Fiction*. Jill Talbot, ed. University of Iowa Press, 2012.
- “Kristen Iversen: Roaming Writer.” *Skirt Magazine*. June 2010.
- “Crash.” *The Normal School*. California State University, Fresno. Fall 2010.
- “Final Cut.” *Telling Stories Out of Court*. Ed. Ruth O'Brien. Ithaca and London: Cornell University Press, 2008.
- “Explorations in Nonfiction: A Discussion with Kristen Iversen, John Calderazzo, and Michael Gorra.” Robert Root, editor. *The Fourth Genre*. 2006.

Documentaries Based on Iversen's Work

- BBC: Picture This*. “Full Body Burden and the Rocky Flats Story.” November 2012.
- Reader's Digest*. “My Nuclear Neighborhood.” June 2012.
- Molly Brown: Biography of a Changing Nation*. National Endowment for the Arts, Historic Denver, and the Molly Brown House Museum, 2008.
- Molly Brown: An American Original*. Arts and Entertainment (A & E) Biography, 1997.
- Molly Brown*. Great Museums (PBS). 2004.
- What Happened After: The Titanic Survivors*. The History Channel, 2001.
- The Life and Legend of Molly Brown*. Knowledge Television, Echo Productions, August 1999.
- Beyond Titanic*. A & E Biography, March 1998.
- America's Castles: The Story of Molly Brown*. A & E Network, August 1998.

Information from the official DOE Website for Rocky Flats

(<http://www.lm.doe.gov/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=2963>)

Site Description and History

The Rocky Flats Plant was established in 1951 as part of the United States' nationwide nuclear weapons complex to manufacture nuclear weapons components under the jurisdiction and control of the U.S. Department of Energy and its predecessor agencies. The land, located 16 miles northwest of Denver, Colorado, in northern Jefferson County, was acquired beginning in 1951. Additional parcels acquired in 1974 and 1975 increased the size of the site to approximately 6,500 acres, including a small portion of the site that resides in southern Boulder County. The site is situated on a plateau at the eastern edge of the Front Range of the Rocky Mountains, at an elevation of about 6,000 feet. The majority of the land was used as a security buffer around an approximately 400-acre industrial area near the center of the site. After production operations were shut down, about 250 acres of the northwest buffer area was transferred to the DOE Golden Field Office for the National Wind Technology Center scientific wind turbine testing facility for development of alternative energies.



From 1952 to 1994, the plant's primary mission was the production of nuclear and nonnuclear weapons components for the nation's nuclear arsenal. The key component produced at Rocky Flats was the plutonium pit, commonly referred to as the “trigger” for nuclear weapons. The majority of the triggers in the nation's nuclear weapons stockpile were manufactured at Rocky Flats. Information on specific weapons containing Rocky Flats–built nuclear triggers remains classified. However, it is known that triggers built at Rocky Flats were used in multiple weapon types, and components were formed from plutonium, and other materials. The Rocky Flats Plant also processed plutonium for reuse and manufactured defense-related components from depleted uranium.

The site was divided into three geographic areas, each fenced and protected by security forces. The industrial area, consisting of 384 acres, was located in the center of the site. There were more than 800 structures in the industrial area that included approximately 150 permanent buildings and 90 trailers, plus temporary structures, sheds, tanks, and annexes to larger buildings. The protected area was located within the northern portion of the industrial area and contained a complex of plutonium production facilities. This area was heavily fenced and guarded. The buffer zone surrounded the industrial area and protected the site from potential encroachment.

In June 1989, Rocky Flats was raided by agents of the Federal Bureau of Investigation and the U.S. Environmental Protection Agency (EPA) because of alleged environmental crimes. In December of that year, nuclear production work was halted to address environmental and safety concerns. In 1990, the site began working toward resumption

of operations in the plutonium buildings. With the President's 1992 cancellation of the W-88 Trident Warhead Program, the Rocky Flats production mission was terminated. In 1993, the Secretary of Energy formally announced the end of nuclear production at Rocky Flats. And, in 1994, nonnuclear production also came to a close at Rocky Flats as the last defence-related shipment was sent out.

When production of nuclear weapons components ended at Rocky Flats, its mission changed to cleanup and closure, and the name was changed to the Rocky Flats Environmental Technology Site. As a result of operational problems during the plant's history, its abrupt shutdown in 1989 for environmental and safety concerns, and standard practices used at the time, facilities contained substantial plutonium, beryllium, and other hazardous substance contamination. Plutonium liquids were left in process piping and in tanks in unknown quantities and chemical configurations, and classified materials were left where they were being used or processed. DOE was faced with one of the most significant and challenging environmental cleanups, a distant dream in early 1995, when DOE estimated the cleanup of Rocky Flats would take approximately 65 years and cost over \$37 billion. In October 2005, DOE and its contractor completed an accelerated 10-year, \$7 billion cleanup of chemical and radiological contamination left from nearly 50 years of production. The cleanup required the decommissioning, decontamination, demolition, and removal of more than 800 structures, including six plutonium processing and fabrication building complexes; removal of more than 500,000 cubic meters of low-level radioactive waste; and remediation of more than 360 potentially contaminated environmental sites.

Because environmental investigations indicated that operations at Rocky Flats resulted in the release of materials defined as hazardous substances, contaminants, and pollutants by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as well as hazardous wastes and waste constituents as defined by the Resource Conservation and Recovery Act (RCRA) and the Colorado Hazardous Waste Act (CHWA), Rocky Flats was listed on EPA's National Priorities List (NPL) in 1989. Under CERCLA, responsibility for the response action for hazardous substance releases at Rocky Flats is delegated to DOE as the lead agency in accordance with Executive Order 12580. EPA and the Colorado Department of Public Health and Environment (CDPHE) are the support agencies. Under RCRA and CHWA, DOE is responsible for corrective action for releases of hazardous waste and hazardous waste constituents at Rocky Flats. In Colorado, RCRA/CHWA corrective action is regulated by CDPHE.

Investigation and cleanup activities were formally covered under three successive federal facility agreements and compliance orders, beginning in 1986 and culminating with the Rocky Flats Cleanup Agreement (RFCA), signed by DOE, EPA, and CDPHE in July 1996. Cleanup, closure, and selection of the final remedy were accomplished in accordance with RFCA. Following completion of the cleanup, Rocky Flats was designated as two operable units (OUs) within the boundaries of the property: the 1,308-acre Central OU and the 4,883-acre Peripheral OU. The Central OU consolidates all areas of Rocky Flats that required additional remedial/response actions, while also considering practicalities of future land management. The Peripheral OU includes the remaining, generally unaffected portions of Rocky Flats and surrounds the Central OU.

The final remedy was selected in the September 29, 2006, CAD/ROD after completion of cleanup and closure by DOE under RFCA. The CAD/ROD was based on the results of the July 2006 Remedial Investigation/Feasibility Study, Comprehensive (Human Health and Ecological) Risk Assessment (CRA), and Proposed Plan. The response action in the final CAD/ROD is no action for the Peripheral OU and institutional controls and physical controls with continued monitoring for the Central OU. The majority of the property at the site (the Peripheral OU), which served as a security buffer zone during production, was transferred to the U.S. Department of Interior for management by the U.S. Fish and Wildlife Service as the Rocky Flats National Wildlife Refuge in July 2007.

Before and After the Cleanup: Photos



Rocky Flats Site in June 1995 Prior to Final Cleanup



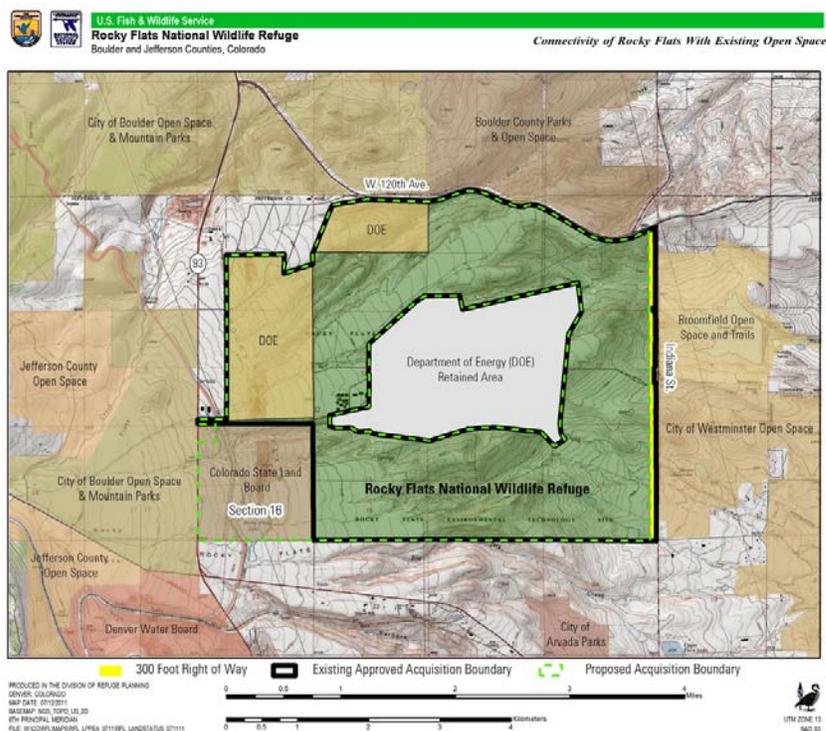
Rocky Flats Site in June 2011

The Rocky Flats National Wildlife Refuge (<http://www.fws.gov/rockyflats/>)



Rocky Flats National Wildlife Refuge comprises much of the former Rocky Flats Environmental Technology Site. The Rocky Flats Site played an important role in Cold War history as a Department of Energy-operated facility for the production of plutonium triggers for nuclear warheads. While Congress passed the Rocky Flats National Wildlife Refuge Act in 2001, the site's industrial legacy required that cleanup actions were undertaken prior to its transfer to the National Wildlife Refuge System. The refuge entered U.S. Fish and Wildlife Service stewardship in 2007 following the EPA's determination that corrective actions had been completed.

Since that time, the refuge has remained closed to the public due to a lack of appropriations for refuge management operations, but it continues to protect important wildlife resources, including critical habitat for the federally threatened Preble's meadow jumping mouse. It also contains hundreds of acres of rare xeric tallgrass prairie, it is home to populations of state game species such as mule deer and elk, and it provides an important link between existing open space in the Denver metropolitan area.



Interview with Riley S. Moore, M.S. Chemical Engineering

Contributed by Marta Moore

Riley Moore was born in Denver in 1963 at the height of the Cold War. He earned his Bachelor's degree in chemical engineering at the Colorado School of Mines, which is seven miles from Rocky Flats, and his Master's degree in chemical engineering at the University of California at Berkeley.

He lives in house that is about four miles from Rocky Flats with his wife and two children in the city of Westminster. An avid bike rider, he frequently rides past the entrance to the plant. He is employed working on alternative sources of energy for a local utility.

1. What are your earliest memories of Rocky Flats?

I remember driving by the plant in grade school. It's a rather windswept place & there seemed to be a lot of boulders due to the wind, or at least that's how I imagined.

2. How did you first become aware of it?

In high school, I remember a math teacher discussing a particular mind game that he was having trouble with but was solved by a friend of his at Rocky Flats. The implication was many smart people worked at RF.

3. What was your initial reaction to it?

The thought of building nuclear bomb triggers did not generate any particular reaction. Colorado is filled with Cold War sites of interest, from missile silos to the home of NORAD. It just seemed like one more part of the defence system.

4. How did your thoughts change about it over time?

My biggest impression is what a shame that the city has grown up around the site. It used to be miles from anywhere, but now the city is at the gates, or at least the former gates, of RF. It was pretty much wild prairie land from Golden to Boulder, with the blip of the plant.

5. How did you connect it with the Cold War?

RF played its part in producing nuclear weapons.

6. What did you think about the various political groups who argued about it?

At least from the late '70's is been a lightning rod for people against nuclear weapons. Protestors used to camp out on the railway tracks into the facility & once I remember protestors tried to encircle the plant. After the closure, the focus was on the safety of the facility & surrounding areas. Since the site has been cleanup & the long-term plan to keep the actual site undeveloped, beyond

trails, I can't imagine it being a safety concern for anyone. A few years back I went to a Westminster City meeting & a person tried to get people excited by mentioning the potential for increased health problems from Pt dust from the particular building project and all he got was a big yawn. I think many of these groups miss protesting even after getting essentially all of their demands fulfilled. The demands included shutting the plant & cleaning the site. About the only thing not granted is condemning all the land around the plant.

7. How safe do you think it is today?

I'm not worried about the site, so I'm thinking it's pretty safe. During the clean up, there were air monitors all around anywhere dust from the site work could have gone. As far as I know, most of the monitors have been removed which makes me think they were not seeing anything. There are long-term systems for collecting the water from the site. So, it seems like the government is trying to take care of us! If there was a significant problem, I think we would hear about it mainly because there are so many people (see #6) that just want to find something.

8. Do you think Rocky Flats was less safe in the past?

I think things were loose & wild during the '60's when Dow ran the facility. The stories of fires & massive releases of radioactive materials should not be ignored but it was in the 60's & what has done has been done. During the clean up I heard about radioactive dust being several inches thick through duct work. So, probably not the safest place to have worked, at least in certain areas. People I've talked to who have worked out gave me the impression that things improved during the 70's & into the 80 prior to decommissioning & clean up of the facility. Even during the 80's, though, I heard disturbing stories from people who worked there. For instance, a woman who worked in a hot area told me the people who monitored her exposure levels had once pulled the alarm just for the fun of having her go through the decontamination procedure. I worked for the EPA in Denver during the 80's and heard some of the stories about how they ended up fining the plant. The one point that stills stands out is that they flew a plane over the plant at night with an infrared camera to determine they were illegally burning wastes at night when they didn't think anyone could tell.

9. Do you think it ever posed a real threat to the people of the Denver area?

The government spent a lot of time and money removing the buildings & contaminates. I know several people who worked on the rehabilitation effort & it sounds like they spared no costs to make it safe again. There used to be open space surrounding the plant boundaries but that space is filling in with housing. I would hope that everything is ok with all the building going on. We used to have an air monitoring station in the park near our house but even that was taken away years ago. I do not have any of the results from the monitor but I don't think they were finding any nuclides in the air. See #8

10. **Do you and your family and neighbors think about Rocky Flats today? Do you ever discuss it?** I've never really heard anyone talk about RF in the last decade except in the context of a reference point, i.e. "I rode my bike up the road south of RF's.²

11. **Was Rocky Flats a topic of discussion when you were a student at the Colorado School of Mines (which is about 10 miles away, and is one of the world's premier technical universities)?** Several students had jobs out there. It really wasn't a hot topic of concern.

12. **Were the issues of Rocky Flats discussed when you were at Berkeley?** I do not remember Rocky Flats coming up. Cold war issues did not come up too often except in the context of the CW coming to an end.

13. **What thoughts if any do you have about Rocky Flats when you ride your bike by it?** There isn't anything left of the facility, even the entry roads have been ripped up. I don't think many people give it a second thought.

Study: Rocky Flats Area Still as Contaminated with Plutonium as 40 Years Ago

Contributed by Marta Moore

Boulder's Rocky Mountain Peace and Justice Center hires contractor to test soil for plutonium

By Laura Snider, Camera Staff Writer Boulder Daily Camera

Posted: DailyCamera.com 02/18/2012 12:15:51 PM MST

Driven by concerns that running the Jefferson Parkway across a strip of land along the eastern edge of the Rocky Flats Wildlife Refuge would stir up clouds of plutonium-laden dust, Boulder's Rocky Mountain Peace and Justice Center commissioned a study last fall to gauge contamination levels in the area.

The newly released results show the area is as contaminated by radioactive plutonium now as it was 40 years ago, before the Rocky Flats nuclear weapons plant, which operated on that site, was closed and cleaned up. "The material is still there; it's still on the surface," said Marco Kaltofen, president of Boston Chemical Data Corp., the contractor hired by the Rocky Mountain Peace and Justice Center.

Still, officials with the U.S. Environmental Protection Agency and the Colorado Department of Public Health and Environment insist the amount of plutonium contamination at the eastern edge of the site is well below levels that would be dangerous to human health. The U.S. Fish and Wildlife service, which manages the refuge, agreed in December to a land swap that would add 617 acres to the refuge's southwest border in exchange for giving up a 300-foot-wide right of way along the refuge's eastern edge, adjacent to Indiana Street. The right of way would be used to build the proposed Jefferson Parkway, which would nearly complete a beltway around the Denver metro area.

Though the land swap is now being held up by several lawsuits -- including one filed by the cities of Golden and Superior, and another, filed last week, by two environmental groups -- Rocky Mountain Peace and Justice Center officials fear that any construction in the area could be dangerous. The center joined other concerned citizens in asking the U.S. Fish and Wildlife Service to test the soils on the strip of land that would be used for the parkway. When federal officials said they planned to rely on testing of the area that was done in the past, Rocky Mountain Peace and Justice Center hired its own contractor to test the soils. But after being denied access to the refuge for testing, that contractor was forced to take samples from just outside the fence along Indiana Street.

The results show that the plutonium contamination in the area is roughly the same now as it was four decades ago, according to Kaltofen. "Essentially, what people found back in the '70s is still true," Kaltofen said. "There is a locus of plutonium contamination on the eastern side of the Rocky Flats site -- this is material beyond the fence line that

pretty much follows Indiana north and south -- that hasn't changed." Kaltofen said the finding is surprising because he would have predicted that weathering over the decades, especially from the area's stiff winds, would have dispersed the particles over time. One explanation is that there's as much material coming from the central part of the site that's replacing any material that's eroding or blowing away," he said.

Background levels

Kaltofen's results showed levels of plutonium isotopes in the area ranged from 0.019 picoCuries per gram of soil to 1.579 picoCuries per gram. By contrast, Kaltofen said the background plutonium contamination in the West tends to be no more than 0.01 picoCuries per gram. But the question of how much background radiation is "normal" is contested, according to LeRoy Moore, a longtime nuclear watchdog with Rocky Mountain Peace and Justice Center. He says the baseline background radiation level that set the standard for the Rocky Flats cleanup was 0.04 picoCuries per gram of soil, four times the amount that Kaltofen believes is the average for the West. "If the average background really should be lower, then maybe the cleanup is not as protective (as it should be)," said Moore.

But the U.S. Fish and Wildlife Service says the amount of plutonium contamination found in the soil in the right of way is not at unsafe levels. The agency based its statement on older measurements -- which Kaltofen and Moore agree are similar to recent observations -- and sought expertise from both the U.S. Environmental Protection Agency and the Colorado Department of Public Health and Environment. In a joint letter written last September, officials with the EPA and Colorado's health department say that the risk of excessive cancer incidence for people who work at the refuge is below standards set by the state and the federal Comprehensive Environmental Response, Compensation and Liability Act. The two agencies point out that a construction worker might have a greater exposure to the plutonium through inhaling dust than an average refuge worker, but they also note that construction workers will be exposed to the contamination for much shorter periods of time. "Due to the very short exposure duration, the very low levels of residual plutonium on the strip of land proposed for transfer and the calculated low radiation dose, the risk to a construction worker would be at or below (that of a regular refuge worker)," the letter reads.

Risks of exposure

David Lucas, chief of refuge planning for Rocky Flats, said the agency took the possible risks of plutonium contamination very seriously and that the Fish and Wildlife Service's efforts to reach out to the EPA and the Colorado health department reflect that. "At the end of the day, the Fish and Wildlife Service gave this a hard look," he said. "We didn't rubber stamp anything. I think our comfort level is where it needs to be."

Moore said he disagreed with the Fish and Wildlife Service's standards for how much plutonium exposure is safe. "I don't think the standards that exist protect the public or protect the workers," he said. Moore said he has shared his recent testing results with the Fish and Wildlife Service, and he's calling for the government to take a closer look at what background radiation levels should really be set at. In the meantime, he's also considering what the Rocky Mountain Peace and Justice Center's next move should be if the pending lawsuits fail to stop the project from going forward.

Memoir as Literary Genre

Contributed by Dana Jensen

Dictionary.com, to use as banal a source as possible, defines memoir this way:

- 1) A record of events written by a person having intimate knowledge of them and based on personal observation. Usually, *memoirs*.
- 2) An account of one's personal life and experiences; autobiography.
- 3) The published record of the proceedings of a group or organization, as of a learned society.
- 4) A biography or biographical sketch

Yet, none of these entries – despite the multiple stabs – seem to hit memoir in the heart. Certainly yes, the genre is a record of events written by a privileged observer who no doubt is intimate with his or her own life, and insofar as the text conveys that life's events, it is biographical. Still, the core of the genre seems untouched by this explanation because this account, I suggest, does not mention the invention of truth that memoir so often engages. Editor William Zinsser in the introduction to *Inventing the Truth* claims that any good memoir contains two elements:

- a) Integrity of intention (what Zinsser says is an Art) – “the memoir is the best search mechanism that writers are given. Memoir is how we try to make sense of who we are, who we were, and what values and heritage shaped us. If a writer seriously embarks on that quest, then the reader will be nourished by the journey, bringing along many journeys with quests of their own” (6).
- b) Carpentry (what Zinsser says is a Craft) – “Good memoirs are a careful act of construction...and good writers must manufacture a text, imposing narrative order on a jumble of half-remembered events. With that feat of manipulation, they arrive at a truth that is theirs alone, not quite like that of anybody else that was present at the same events: (6).

In this way, memoir does not simply recount eyewitness observations of events that seem interesting enough to be replayed by the tongue or pen. Events, occasions, and incidents of the past seem rather the departure point for the real work of memoir that bends its back to recall and flexes its memory to determine and comprehend what was their significance. Works such as *My Dyslexia*, when doing the “true work” of memoir, endeavor to make discernable connections between past experience and present perspectives such that one's overall wisdom is increased. Making these connections, some will say, is inventing the truth. For this reason, memoir is a controversial genre that some view as a liar's game, altering the “facts” of the past or omitting undeniable elements so as to present the whole of it falsely. But one should consider whether the exclusively factual recounting of any event is worth recounting at all. Alone, facts are boring, for alone, facts have no meaning. Arguably, it is this imposed narrative order that Zinsser observes – these fictive connections which are not necessarily fictitious – that make any story desirable for the hearing. These very inventions then seem to be the heart as well as the worth of memoir as literary genre.

Art of Memoir

Contributed by Dana Jensen, with the intention of providing an author's sketch of the memoir genre

Stella Suberman

South Atlantic Review. 70.2 (Spring 2005): 11-19.

Whenever I speak to groups – in bookstores, at book festivals, at academic conferences such as this one – I discover that whatever the audience, most everyone feels that in him or her is a memoir longing to get out. Furthermore, no surprise here, though there may be a burning itch to write it, there are also inhibitions that set in. So I thought that this afternoon I would try to help scratch that itch. Since I'm not a professor of creative writing, I can only offer advice on how I personally go about memoir-writing.

I had gone into my first memoir - *The Jew Store* - with the notion that all I had to do was to have this great true story, plant it in its authentic setting, nourish it with real people, and voila! a page turner. Well, I had a lot of things to learn.

What I had in mind for that book was basically the tale of the period in American Jewish immigration when what the locals called “Jew stores” dotted the Southern landscape. I felt it was a story with good bones, and to add to the allure, since my research had turned up little in the way of anything similar, it seemed I was on to something. So I set about to write it, planning simply to recount the coming-to-terms struggle of two very disparate groups - on the one hand, rural Bible belt Southerners, many of whom had never before seen a Jew, and on the other hand, my immigrant Jewish parents fresh from the shtetes of eastern Europe. No need, I thought, to have tension or suspense or fully developed characters. Weren't those qualities unique to the novel? As I discovered very quickly, writing a memoir was so much like writing a novel, it was hard to tell the difference.

I did have a good story, but how I was progressing with it was another matter. What I seemed to be turning out was flat, colorless stuff that in no way resembled the page-turner I had had in mind. Where had I gone wrong? In the fullness of time the epiphany came. And what it revealed to me was that all those elements I had thought the sole obligations of the novel also were de-rigueur for the memoir. Without them, I began to see, I might as well be writing a newspaper feature story or a journal meant for family reading, with a genealogy accompanied by a bit of extended exposition. And in my experience there is nothing more wearying than...well, somebody else's family journal with a genealogy accompanied by a bit of extended exposition. It was then that I knew that to get my reader to appreciate the deeper truth I was going for, I was first of all going to have to make sure he or she stayed with me.

To this end I cast about for a “voice,” which as we all know is the sine qua non of any commercially viable book. Without a sustaining voice, the narrator is a blank, his or her persona unrevealed, his or her “take” on things unreliable. As a long-time book reviewer, I certainly knew about “voices,” and I was accustomed to novelists using one voice in one book and another in their next one. But in a memoir? Yes, in a memoir. Just as in

the novel, the reader wants to get comfortable with the narrator and to trust that narrator's persona to remain true. And let me say that when I talk about the narrator's persona, I am talking about who the writer is projecting himself or herself to be: the actual persona of the writer scarcely enters into it at all.

Before I found my voice in *The Jew Store*, I tried several out of the limitless number of choices open to me. I had only one imperative: the voice had to be that of an elderly person, for the book was a memoir and my name was on it. But what kind of elderly person? If I had used my real life voice, the narrator would have been impatient, opinionated, sometimes raunchy, and these did not accord with the sensibility of the book I had in mind. I set about trying out a caustic voice, an intensely serious one, a farcical one until I decided that what I wanted to be was a genteel Southern lady who looked with affection and humor upon all the goings-on. And that kind of voice determined that the book would of necessity have a light handling.

The goings-on in *The Jew Store* lent themselves to a light handling because of the basic incongruities. What I had to build on were three things: my immigrant Jewish parents trying to make a living for us in a small 1920s Tennessee town; equally unworldly rural Southerners; and the ever-present Ku Klux Klan. It all might have ended disastrously, but as I knew my book would not be leading toward doom, I gave myself permission to look with humor on even the most threatening situations. In *The Jew Store* I think the reader knows from the first page that though there are going to be tensions and confrontations, in the end things are going to be okay.

In my current memoir, *When It Was Our War*, I changed my voice somewhat. Dealing as the book does with a war - in this case, my generation's war, World War II - the narrative did not lend itself quite so easily to a light handling. There was another factor as well, for in mid-writing, the sensibility of the book unexpectedly underwent a shift.

I had begun *When It Was Our War* with the notion that I would write a completely celebratory book, which meant that my voice would be totally positive, even adulatory, similar to the voice Tom Brokaw used in *The Greatest Generation*. As I began to write, it seemed I was set on a book that would pay homage to the shared sacrifices of the times, for I remembered having often said in those days that if it weren't for the war, the war would suit me down to the ground. But as I went on with it, I seemed also to be recalling that what I had observed during those war years was not all nobility and selflessness - that such things as prejudice and bigotry and discrimination were alive and well across the land - and I knew that my book had to include the dark moments as well.

It was then that the book's voice changed. *When It Was Our War* is something of a sequel to *The Jew Store* in that my family is still very much in evidence, and the voice is still the same elderly lady as in *The Jew Store*. But now the elderly lady is more reflective, more skeptical, and the signature emotion is a serious one. And since she is a member of a so-called ethnic minority (again, let us remember that my name is on the book), I felt that it would be disingenuous of me to pretend that we all - mainstream groups and minority ones - experienced the war in just the same way. So I went about including those unsettling situations that were also hallmarks of that war.

I should point out that, war story or not, when it seemed appropriate, I did not hesitate to attempt to give humor to any situation that lent itself to it.

Once I had my voice in hand, so to speak, the writing went smoothly, although I had to keep myself alert to problems of writing style. I had first of all to guard against using phrases like “I remember.” I took this on as a thing to avoid when I was reading a memoir from a well-known writer and had begun to be aware that it was cluttered with “I remembers.” After all, he was the narrator; who else was doing the remembering? Why should I write “I remember that the U-Tote-‘Em grocery store was just across the street from our store”? Of course I remember – I’m writing about it.

In both memoirs, since they are set in past decades, I had to guard against using contemporary language. I know from my own reading that I am instantly taken away from the story when I come across contemporary expressions in a period book - as I did recently when I came across a 1930s New York girl using the word “tacky.” As a Southerner who has kept herself aware of Southern expressions, I know that the word “tacky” is a Southernism that was not picked up by Northerners until about the 1950s. Surely a bit of research on the part of the writer would have turned this up.

I also wanted to avoid contemporary references, so I stayed away from things like “Since television hadn't been invented yet, we were listening to the radio.” I was afraid that once I went down the road of using parallels, I would have given myself a never-ending task.

As to achieving tension and suspense, I first of all worked to fully round my characters. I thought it was important for the reader to know them so that his or her feelings would be engaged. I surely do not have to tell you in this audience that getting to know a personality does not mean surrounding him or her with adjectives and adverbs. It means letting the reader “see” them in action, “hear” them speak, and be privy to their reactions. And like the narrator, they must stay in character. I guarantee you that, if your characters stray from the traits you have provided for them and you have not supplied ample and reasonable justification, the reader will turn away.

Of course not all memoirs include other people. Although characters certainly help with movement, there are skilled memoirs aplenty, usually brief ones, which are peopled by no one but the narrator: landscapes once traveled through by oneself, skiing accidents on mountainsides with no others to help, solitary walks in the early hours through a city street. But lest we forget, the narrator is always present, along with his or her feelings. So the narrator’s voice and reactions become even more important, for the reader is dependent on those alone for tension and suspense. In these cases the narrator’s feelings must move in some way. But if, for example, you write about a landscape that you were impressed with and you simply describe its beauties, no matter how glorious your writing, you are turning out passages of description for perhaps a travelogue or to use as special effects in a longer writing effort.

Of course in my books I had an abundance of people and events and settings to work with. Still, I included only those that I thought would be useful to the climax. Once I had decided what the climax would be, I used only those items that wouldn't divert or lead to digressions. To do this I avoided bringing in “real” events just because they actually happened. So I had many sins of omission and a few - very few and very trivial - sins of commission. What I was learning was that you cannot make your story conform to the specifics of real life if those real life events do not fit the narrative of a well crafted tale, and isn't a well-crafted tale always what we're going for? If you keep in mind that

you are writing a trade book meant for the commercial market, you will not be tempted to consider a memoir an autobiography, unless of course you are Bill Clinton. In the end your real loyalty is to your targeted truth, not to strict facts.

As an example, in *The Jew Store* I made a profound sacrifice: I dropped one of my sisters from the book. As a character in the book I am shown from birth to age 12, and in real life I had a sister just fifteen months older than me. In the early manuscript I had dutifully included her, but, as there was little to distinguish her from me, she did not fit in easily, and I knew it was not working. So since the book was predominantly about my parents, I felt it did no harm to the book to just drop my sister out. Still, I felt enough loyalty to verisimilitude to call my character 'Stella Ruth' – 'Stella' for me, 'Ruth' for her.

Now to the conventional wisdom of what memoirs are and what they aren't. If, as some say, a memoir is obligated to use real names, in *The Jew Store* I violated the code. I went with protecting privacy, and so I changed all names. Though it's true that most of the people I would be writing about were dead, their progeny were not, and I suspected that they might not want it known that they shared a family tree with some of the unsavory characters that I was planning to include in the book - like the incestuous family that had lived across the street and who incidentally still live there. I even changed my family's names and altered the family's chosen town from "Union City" to "Concordia."

Still, I did include many realities such as the physical characteristics of the towns I was writing about. It seems to me that nothing better serves setting-needs than a place you are intimately acquainted with. In addition to the physical layout of my towns, I also wanted the Southern small town 1920s flavor in *The Jew Store* and the Art Deco glitz of 1930s Miami Beach in *When It Was Our War*. Incidentally, I did not check out Union City until after the book was completed. I did not want contemporary Union City to blur my remembrances of 1920s Concordia.

There are certainly perils that go with the memoir territory. I was not entirely unprepared for quibbles, especially from my siblings. I knew that what to me, for example, was an incontrovertible recollection, my siblings might very well maintain happened in quite another way, at some other time, to somebody else, didn't happen at all. So what I did not do was consult with them or, for that matter, with any others. I told myself that my own perception was perfectly valid. The result was that in anticipation of this kind of family carping, I did not let my siblings read the book until it was in print.

When you have a memoir out, you have to expect questions about your memory. Readers want to know – perhaps motivated by skepticism –how you can remember everything, especially conversations. Was I standing by with an early tape recorder? Do I have a phenomenal memory? No, to both these questions. The answer is that I knew my people so well that I was certain how they would react to any given situation and how they would verbally express this reaction. But in my case there were other, and truly serious, challenges that I never would have anticipated. The one over my use of certain words really took me aback. In *The Jew Store*, I used the words "nigger" and "Niggertown." I used them because they were the common currency of the time and place I was writing about. Furthermore, when I made use of them in dialogue, I portrayed the speakers at best as buffoons, at worst as ugly, bred-in-the-bone racists. I hope it goes without saying that I wrote the words with conscious distaste and with full aware-

ness of their political incorrectness. My assumption was that I could rely on my readers to understand that by representing past realities as crude, even cruel, I was taking an opposing position. I therefore expected at most a minor (even interesting) discussion of the terms.

So I was startled at a conference at a community college in Tennessee, where *The Jew Store* had been adopted as required reading. I was a guest speaker at the conference, and after I had finished my talk, an African-American student in the audience spoke up and told that she and her fellow African-American students would not read my book. And why? Well, because it was racist. She had flipped the pages, had spotted “those words,” and I can only imagine that out of context as they were when she glimpsed them, they were a scary sight. I then wondered if I had been wrong to use racial slurs even if I had used them as weapons in the war against the use of racial slurs. When I asked this question of the young woman, she said she thought yes, I had been wrong. Was she then asking for me to meet the contemporary demand for inflexible political correctness at any cost? If so, wouldn't I have been creating a foolish incongruity? Should I have manipulated the words into correctness by using today's “African American” or, worse, the coy “n-word”? Should I have said “Nword town” for “Niggertown”? I didn't think so. If I had done that, we would have lost one more chance to acquaint ourselves with the truths of the brutal past so as to be on guard against those things ever happening again. My questioner and I did a bit of back-and-forthing, and in the end we agreed to some things: she agreed that she had an obligation to read a book's language with discernment if not endorsement, and I agreed to try to comprehend at some deeper level how hate words function in our current society. It was not exactly a total understanding, but we came to a conclusion of sorts.

Another challenge came even before *When It Was Our War* came out. In the book I tell of how in 1939 I sighted a ship off the coast of Miami Beach, a ship that turned out to be the S.S. St. Louis. If you don't know the incident, the S.S. St. Louis was carrying Jewish refugees from Europe. As we were to later learn, the ship had been denied entry into both Cuba and the U. S. and, despite agonizing efforts to achieve a landing, was in the end returned to Europe and in time became a totemic of the Holocaust. When I was researching the incident, I contacted a German-Jewish survivor of that ship to corroborate its presence off our waters, and I got a very unexpected response. The survivor - now a man of 75 or so - confirmed my memories but then proceeded to castigate me in no uncertain terms. The conversation started out with general questions: Why had American Jews not helped more? Where were they when the European Jews were at such risk? Then he said loudly into my ear that I was just another American Jew of the time who had done nothing to help fellow Jews. I wanted to defend American Jews, to say that we knew little of what was happening, that our newspapers had been all but mum on the subject, but of course he had listened to all this before and would not hear me out. The exchange between us effected no changes in my manuscript, but I must say it gave me some very bad moments.

At a book signing in St. Louis, there was another challenge that was definitely of a lighter variety but one that again left me completely at a loss. This time it turned out that a woman was suddenly stepping out of the book and into my face. The woman had already read the book and was shaking it angrily at me as she came up to the table. What she had apparently divined - correctly, I might add, despite the changed names - was that her family was portrayed in the book. As she stood before me,

she said who she was, and all I could do was say a silent 'uh oh.' The crux of the matter, of course, was that in the book I had cast her mother in an exceedingly unflattering light, and the problem now was how to calm this woman who was attacking me so furiously on her mother's behalf. Never, she kept informing me, never had there been such sinning against such a saint. Could I say, "That's not the way I heard it?" No, I could not. It was a very bad moment indeed, one that I did not forget for a long time.

I have to say that I have finally learned the trick of dealing with the challenges that occasionally unsettle me: I just do what my grandson tells me to do. What he says is, "Oh, Grandma, just suck it up." But lest I leave the impression that the perils outweigh the pleasures of writing a memoir, let me say that despite the occasional protests and reproaches, there is a great deal of satisfaction in writing in such a genre. As evidence of this I am now at work on yet another. This one will roam about the world of the G.I. Bill and peer into the lives of the returning veterans who took advantage of the education miracle that not only gave the returnees undreamt-of educational opportunities but also dramatically contributed to the flourishing of public universities and their graduate schools across the country, especially in the South. I might say at this point that it was then that we came to know Meg's parents, George and Bobby Harper, and it makes me very happy to say that they are still very much a part of our lives. Bobby and George shared that remarkable experience with us, and they will take their places in the book. Right now I can't think of any tantalizing tidbits I could offer about the rock solid, sublime people we all know Bobby and George to be, but then again, I might think of something.

Autobiography as Literary Genre

Contributed by Delores Zumwalt

“Language creates illusions that tell the truth. . .All autobiographies create the illusion of the past coming to life . . .When formulated in words, autobiographical creation is literary art” (Mandel 63).

Fundamentally, autobiography is defined by literary critics as an organized narrative of the author’s life prepared for an audience with an emphasis on introspection. As the narrator becomes his / her own subject, this genre takes multiple forms ranging from intimate diaries, journals, and letters (usually not intended for public scrutiny) to formal autobiography, memoirs, and reminiscences intended for publication.

The highly subjective nature of the genre leaves it open to broad critical analyses. Most cite its genesis with Augustine’s *Confessions* (430 AD), while others consider some classical works by Hesiod, Plato, Ovid and Cicero as autobiographical. A few autobiographical works appeared in the Renaissance; a notable example is Margery Kempe’s *Book of Margery Kempe* (1432-1436).

The earliest instances of the use of the English term, “autobiography” occurred first in a review published in the *British Monthly Review* (1797) and in an article authored by Robert Southey in the *Quarterly Review* (1809). The use of the term coincides with a flourishing of the genre in the late eighteenth century, probably due to the Romantic emphasis on the individual and the individual’s role in society. Rousseau’s *Confessions* (1764-70), Benjamin Franklin’s *Autobiography* (1793), and Gibbon’s *Memoirs* (1796) exemplify this movement. The term “autobiography” first appeared in a title with the 1832 edition of *The Autobiography of Thomas Shepard*, a Puritan cleric who penned his life story two hundred years earlier under the title, *My Birth and Life*. In like manner, Franklin’s life story appeared first under the title, *The Private Life of the Late Benjamin Franklin*. Consequently, Charles Berryman asserts, “The invention of ‘autobiography’ as a critical term marks the birth of a genre—not in practice, of course, which goes back at least as far as Augustine, but in theory which has been called forth by the act of definition” (72).

Twentieth century autobiographical works expanded the distinctions and limitations of the genre as authors began borrowing modes of fiction to write their stories of life experience. The melding of fiction and personal experience—often written in the guise of fiction—is the hallmark of such works, as in Maxine Hong Kingston’s *Woman Warrior* (1975). Writers of meta-fiction, like Kurt Vonnegut, further blurred the boundaries of fiction and autobiography with works like *Slaughterhouse-Five* (1969). The critic William Spengemann views such works as mirroring “changing ideas about the nature of self” (xii). He chronicles the evolution of the genre of autobiography in three broad stages he calls: history, philosophy, and poetry—the latter reflects the evolving nature of autobiography in the twentieth century as it assumes the symbolic characteristics of the novel. Autobiographical works are often categorized as follows:

Thematic: *The Americanization of Edward Bok*, 1920 & *Mein Kampf*, 1925-1927

Religious: *Augustine's Confessions*, 430 AD & John Cardinal Newman's *Apologia*, 1864

Intellectual: *John Stuart Mill's Autobiography*, 1873 & *The Education of Henry Adams*, 1907

Fictionalized: James Joyce's *A Portrait of the Artist as a Young Man*, 1916 & George Santayana's *The Last Puritan*, 1935

References: *A Handbook to Literature*, Holman & Harmon; *A Glossary of Literary Terms*, Abrams; and Merriam-Webster's *Encyclopedia of Literature*

"Writing autobiography is one of the strategies human beings have developed to make life matter. The way in which the illusion of the past is presented is, finally, the meaning of the author's life"
(Mandel 64).

Additional Websites

Contributed by Delores Zumwalt

“The September 11 Catastrophe You’ve Never Heard About”

<http://www.theatlantic.com/national/archive/2012/09/a-september-11th-catastrophe-youve-probably-never-heard-about/261959/>

“The Day Denver Was Nearly Lost”

<http://www.laurasnider.com/clips/the-day-denver-was-nearly-lost>

“Rocky Flats Virtual Museum”

<http://www.colorado.edu/journalism/cej/exhibit/>

“Rocky Flats Pictorial History”

http://www.rockyflatssc.org/pictorial_history.html

“How Clean is Clean?”

www.rockyflatssc.org/RFSC_fact_sheets/How_clean_is_clean_final_5-08.pdf

“Still Contaminated...”

http://www.dailycamera.com/ci_19995436

“Rocky Flats National Wildlife Refuge Briefing Paper”

www.rockyflatssc.org/RFSC_fact_sheets/Refuge_briefing_paper_final_5-08.pdf

Discussion Ideas and Study Guides

Social Science Discussion Questions for Full Body Burden: Growing up in the Nuclear Shadow of Rocky Flats

Contributed by Jeanell Buck

Alcoholism Questions:

1. Alcohol is classified as a depressant. As a depressant, how does alcohol affect the central nervous system? Given what is happening to the central nervous system, what impact does alcohol have on behavior? Please use descriptions of Mr. Iverson's behavior to help illustrate how alcohol influences behavior.
2. Kris, Karen, Karma, and Kurt all cope differently with their father's alcoholism. Sometimes the family displays positive coping mechanisms (stress and health chapter), but more often Kris describes the use of negative coping or defense mechanisms (personality chapter). Please describe the different coping and defense mechanisms used by the siblings.

Cognition Question

1. Despite continued concerns about Rocky Flats, the residents of Arvada remain resistant to the idea that Rocky Flats could pose a health risk. Please read the section of your book that reviews confirmation bias and watch the following link - <http://gu.com/p/33czv>. What role do you think these cognitive shortcuts/biases played in Arvada's resistance?

Extra Resource -

<http://www.newyorker.com/online/blogs/frontal-cortex/2012/06/daniel-kahneman-bias-studies.html>

Therapy Questions

1. In Chapter 3, Iverson describes in detail a family visit to a psychiatrist. Based on what you have learned about therapy, which type of psychotherapy do you think the doctor was practicing? Do you think that this was the best approach to the situation? If so, please explain why. If not, which approach do you think would have been more effective?

Conversation Starters

Contributed by Marta Moore

The Genre of *Full Body Burden*

1. *Full Body Burden* is a memoir. Discuss the characteristics of the genre.
2. While telling an autobiographical story, good memoirs explore and reflect on a central theme. What questions does Iversen's memoir invite you to explore and reflect on?
3. How does Iversen's theme influence which details she includes in the memoir. How do details, characterization, and narrative structure reflect the overarching theme of *Full Body Burden*?
4. What makes Iversen's memoir unique? What new perspectives and insights does it offer? Does it present a new understanding or revelation that leads to a moment of growth in the writer and you?
5. Memoirs use personal stories to comment on larger social issues. How does Iversen's creative nonfiction set in Colorado help you understand the culture and history of the region in different ways than an encyclopedia entry?
6. Tone refers to the attitude the author takes to the subject matter and the reader. Describe the "tone of voice" of Iversen's memoir.
7. *Full Body Burden* is described as a brilliant work of "narrative nonfiction" and "investigative journalism"-- a shocking revelation of the government's efforts to hide the effects of radioactive waste on the human body. Research the genre of narrative nonfiction. How does Iversen combine journalism with personal experience?

The Rhetorical Situation of *Full Body Burden*

1. Iversen's book explores the "destructive power of secrets – both family and government." What is the rhetorical situation of her memoir – that is, the topic, angle, purpose, reader, and context?
2. The Greek word ethos means "character" or "credibility" in English. Ethos could also mean the writer's authority or credibility to support an argument. Highlight places in *Full Body Burden* where the author is using her credibility to prove a point.
3. Logos involves appealing to someone else's common sense while pathos involves emotions to influence readers. Highlight uses of logos and pathos in the text.
4. What is the organization of the text? Apply the rhetorical concepts of logos, ethos and pathos to each major section you are analyzing.
5. Who is Iversen's audience? Is it only people living in the Denver area? Create an extended reader profile of the memoir that will give you a more in-depth view of

- the reader's expectation, values and attitudes. How does Iversen use authority, reasoning, and emotion to persuade her audiences?
6. How does Iversen combine investigative reporting with her personal experience of growing up near Rocky Flats?

Questions for Reflection

1. Did it help or hurt environmental groups to combine their protests with antiwar groups?
2. How does the EPA vs. business conflict come up in the book? Where is it present today?
3. Can you think of other books or movies that have the same story –i.e. the personal level events of a family juxtaposed with historical events?
4. What is a “half life”?
5. What is the “half life” of plutonium? Why is that an issue?
6. The Coors brewery is about 10 miles from Rocky Flats. Do you think that this fact should make people think twice before drinking a Coors beer? Why or why not?
7. What aspects of the site of Rocky Flats made it a good location for a trigger factory? What aspects made it a poor location? Consider economic, social, and environmental factors.
8. Did the inclusion of anti-war or anti-nuclear weapons protests aid or hinder those who were protesting on the basis of environmental impacts to the region.
9. How does the amount of radiation release associated with creating electricity using nuclear energy compare with that caused by burning coal?
10. How adequate was the training and equipment of the firefighter that responded to fires on the site? How could they be improved?
11. The setting for this story is Rocky Flats, Colorado. Do some research on Rocky Flats. What was it like in the sixties? What is it like now? What role does the setting itself play in the book? Our environment affects us in ways that are profound and subtle. How does this setting affect the reader's view of the book and its characters?
12. If you were going to produce a movie based on this book, how would you do it? How would you try to capture the mood of the book with visual effects: lighting, camera angles etc.? Which actors would you choose to play the main characters

Study Guide to Accompany Full Body Burden

Contributed by Linda Kapocsi

Words to watch:

commotion	p. 2	par. 3
fissionable	p. 3	par. 4
plutonium	p. 4	par. 1
indemnified	p. 5	par. 3
effluence	p. 8	par. 1
dubious	p. 11	par. 6
equestrian	p. 12	par. 2
joie de vivre	p. 12	par. 2
portentious	p. 12	par. 6
cumbersome	p. 17	par. 3
combustible	p. 17	par. 5
precedence	p. 17	par. 5
euphemistic	p. 18	par. 2

Literary device and inference - write about or discuss the author's underlying meanings in the following excerpts:

1. (metaphor) "Few people know the deal is in the works. Not even the governor has an inkling. Colorado's top elected officials are not informed that the plant will be built until after the decision is made and there's no going back. But Denver welcomes the windfall. No one knows what the factory will produce. No one cares. It means jobs. It means housing. Contractors, the local power plant, and local businesses all look forward to this juicy plum to be known from now on as Rocky Flats." p. 5 par. 6

2. (personification) "The best way to watch the stars is lying flat on my back, in the backyard on our big trampoline cool with dew. Our house is far enough out from the city that the night sky is as black as soot and the stars shimmer in tiny pinpricks, with the veil of the Milky Way spiderwebbing across the sky. Sometimes the moon is nothing more than a thin curl of ribbon and other nights it's round and full and portentous, a pregnant beacon. And yet I know all its brilliance is borrowed. The moon has no light of its own; it pirates its light from an invisible sun.

The other beacon that night is Rocky Flats. The lights from Rocky Flats shine and twinkle on the dark silhouette of land almost as beautifully as the stars above, but it's a strange and peculiar light, a discomfiting light, the lights of a city where no true city exists. It, too, is portentous, even sinister-- if only one could have the ability to see beyond the white glimmer, to see what is really there." p. 12 par. 6-7

3. (metaphor/personification) "Silence is an easy habit. But it doesn't come naturally. Silence has to be cultivated, enforced by implication and innuendo, looks and glances, hints of dark consequence. Silence is greedy. It insists upon its own necessity. It transcends generations." p. 300 par. 1

Study Guide: Full Body Burden: Growing Up in the Shadow of Rocky Flats by Kristen Iversen

Contributed by Joan Kennedy

1. Discuss the structure of Iversen's memoir as she interweaves scientific details on nuclear power and investigative reporting on Rocky Flats within her personal experience narrative. What effect does this structure have on the reader?
2. Why does Iversen begin her memoir with the early stages of her life? What types of details does she include? How are they connected to Rocky Flats?
3. What two events occurred in 1957 and 1969 at Rocky Flats that threatened the area? How were they handled? What role does luck play in the 1969 Mother's Day event? (24-40.) What was the media coverage? What are the implications of these events? (ch. 1)
4. What is the Martell Study? What did it reveal? (75).
5. Describe the effects of alpha radiation on the body (76). What is the minimum amount of plutonium that can cause cancer? (209).
6. What was the Manhattan Project? (175).
7. Discuss the regulation procedures at Rocky Flats. What effect did these have? (96).
8. Describe the Rulison Project. What were the findings? (96).
9. Iversen states: "Hazardous or not, Rocky Flats is a boon to the Denver economy" (102). Discuss the economic issues that helped to sustain support for the facility. What are the implications of these issues?
10. Discuss the reasons that you think the danger from nuclear materials was ignored at Rocky Flats? (122).
11. What were influences that encouraged Iversen to become a writer? (116).
12. Discuss the effects of the Price-Anderson Act passed in 1957 (123).
13. Explain why the Lamm-Wirth Report was "a masterpiece of compromise" (124).
14. "Plutonium is the darling and the demon of the Nuclear Age" (173). Discuss the history of the discovery of plutonium.
15. What is the meaning of the term "body burden"? (177).
16. What lie did the Rocky Flats plant perpetuate? What are the implications? (184).

17. Who were the Citizens for Energy and Freedom group? What did the nuclear industry mean to this group? (185-186).
18. Why was the film *Dark Circle*, which won awards, not widely distributed? (187, 223).
19. What is the Resource Conservation and Recovery Act of 1976 (RCRA)? (206).
20. What other contaminated sites in the U.S. does Iversen list? (210). What is the current status of these sites? (210).
21. Iversen refers to *An Enemy of the People* by Norwegian playwright Henrik Ibsen. She paraphrases Ibsen's statement: "The strongest man in the world, Ibsen wrote, is the man who stands most alone" (216). How does she connect this to the story of the whistle-blower Carl Johnson? (215).
22. Explain the events of "Operation Desert Glow" led by Lipsky and Smith (214). What were the results?
23. What is a Grand Jury? What is its function? Who are the members? (228). What was the result of its findings on Rocky Flats?
24. Describe the firefighter camaraderie at Rocky Flats (274). What are reasons for this?
25. What was the driving force that generated the building of Rocky Flats and the efforts to keep it operational for so many years? Why do workers who face danger of plutonium contamination defend the operation of Rocky Flats?
26. Iversen states: " We don't talk about plutonium. It's bad for business. It reminds us of what we don't want to acknowledge about ourselves. We built nuclear bombs, and we poisoned ourselves in the process. Where does the fault lie? Atomic secrecy, the Cold War Culture, bureaucratic indifference, corporate greed, a complacent citizenry, a failed democracy? What is a culture but a group of individuals acting on the basis of shared values?" (339). Discuss the implications of all of these factors that she lists. Do some play a larger role than others in influencing the need to build and to sustain nuclear weapons facilities?

Study Questions for Kristen Iversen's *Full Body Burden*

Contributed by Jean-Marie Dauplaise

1. Why does Kristen Iversen decide to write and publish *Full Body Burden*?
2. To what genre (or genres) does Iversen's work belong? Explain.
3. Describe what you know about the Cold War. Was this something you learned about in school, or were you prompted to research the topic upon being assigned to read Iversen's book?
4. How and why does the truth about Rocky Flats remain concealed for so long?
5. Why do you suppose Iversen begins her narrative with the incident about the 1963 house fire that nearly destroyed the Iversen family home in Arvada, Colorado?
6. Although Iversen changes the names of some characters, the material about her own family seems pretty straightforward and ranges from heartwarming and sweet, to overtly painful. How do you feel about this?
7. What role do secrets play in the Iversen family household?
8. Have you known people like the folks in this book? Do you see similarities between Iversen's Arvada, CO and your home town?
9. Choose a passage from Iversen's book that you feel captures her love for the natural beauty that surrounded her childhood home. Share and discuss with your discussion group.
10. Describe the role that euphemisms, such as "buttons," "pits," and "incidents" play at Rocky Flats, for the people who work at the facility and with regard to the community at large.
11. What is the significance of the 1963 Mother's Day fire at Rocky Flats?
12. Why does Iversen decide to work at Rocky Flats?
13. How does Iversen's sense of community membership change throughout the book? What is your personal sense of community membership and responsibility?
14. Kristen Haag, a neighbor girl who grows up near the Iversen's, has her leg amputated after a bump on her knee proves to be malignant. Despite the amputation, young Kristen Haag, who is only eleven years old, dies less than a year after her leg amputation. Kristen Haag's parents initially plan to sue Rocky

- Flats for their daughter's death. Why does the family ultimately decide not to pursue a lawsuit?
15. When do demonstrators initially begin to show up at Rocky Flats? What leads to the growing numbers of protesters at the site?
 16. Animals, both tame and domestic, cats, dogs, horses, pigs, chicken, cows, guinea pigs and Siamese Satin rabbits, as well as wild and endemic, rabbits, deer, hawks, mountain lions ground hogs, bald eagles and Preble's meadow jumping mice, abound in Iversen's narrative. What role do animal play in both Iversen's personal, family saga and the concomitant Rocky Flats investigative narrative?
 17. Identify and describe individuals in the book who suffer from what is in all likelihood, radiation-related illness? What patterns emerge? What themes do you notice? Why, despite shocking evidence to the contrary, do Rocky Flats and the governmental agencies that support, regulate and monitor the facility refuse to go on record and admit the veracity of the connection between toxic waste and human (and animal) disease, deformity and premature death?
 18. Discuss the irony of converting Rocky Flats into a wildlife refuge and public recreation area.
 19. Carefully read the poem at the end of the book, "Plutonian Ode" by Allen Ginsberg, which was written on the occasion of the 1978 Rocky Flats protest, specifically refers to Rocky Flats, and other nuclear weapons facilities. What sorts of metaphors and images appear in Ginsberg's poem? The Merriam-Webster dictionary defines an "ode" as a: " lyric poem usually marked by exaltation of feeling and style, varying length of line, and complexity of stanza forms." The definition is followed by an entry from *The Concise Encyclopedia*, which further elaborates that an ode is a "[c]eremonious lyric poem [written for] on an occasion of dignity in which personal emotion and universal themes are united. The form is usually marked by exalted feeling and style, varying line length, and complex stanza forms. The term *ode* derives from a Greek word alluding to a choric song, usually accompanied by a dance. Forms of odes include the [Pindaric ode](#), written to celebrate public events such as the Olympic games ..." Why then, would Ginsberg pointedly refer to his poem as an "ode?"
 20. Look closely and examine the book's cover design. How do the visual images, their subject matter and the disparity between full-color and black and white photographs, relate to themes in Kristen Iversen's *Full Body Burden*?

Study Guide Questions

Contributed by Marta Moore

1. What was the purpose of Project Apple in 1951? How is it a continuation of the Manhattan Project? (4)
2. Iversen states, "It's the Cold War. The bombs dropped on Hiroshima and Nagasaki in 1945 may have ended one war, but they started another. The perceived Soviet threat is an ever-present shadow in American life.(5) Do you agree with the authors' statement? Was the Soviet threat real or imaginary?
3. What was the "Cold War" How did it end?
4. How did the Manhattan Project bring together some of the greatest physicists in the world? What was the purpose of the Manhattan Project?
5. Who was Robert Oppenheimer?
6. Why was the construction at Rocky Flats rushed? How did it create jobs?
7. The site criteria for the plant states that "the wind passing over the plant should not blow toward a major population center." (6) Why was the choice of Rocky Flats a devastating error?
8. What happened at Rocky Flats on Mother's Day in 1969?
9. What is the definition of "Plutonium Trigger"? How is it manufactured? (18)
10. How did Iversen's family get their new house at Bridledale? How does it embody the "American Dream"? What did the family have to sign to get the house? (410)
11. Iversen's parents had a 'mixed marriage.' Her mother was Norwegian and her father was Danish. Her grandfather thought it shameful that Iversen's mother could not find a "good Norwegian man" (52). How did moving to Colorado mean a fresh start for Iversen's parents?
12. Iversen's mother loved Scandinavian cooking and all things Nordic. She worried that her children might lose their sense of heritage in the "homogeneity of American life"(53). Do your parents worry that you might lose your sense of heritage? Do you?
13. How does the life and activities of Sister Pat McCormick exemplify the changes in the structure of the Catholic Church in the wake of Vatican II? How did Pat associate herself with groups committed to improving conditions for people who experienced injustice? How did she get involved with the peace movement? Why did she decide to move to Denver? (54)
14. Why did Iversen's father think that the protesters were all hippies, nuns, and housewives?
15. Who is Allen Ginsberg? Why did he join the protest at Rocky Flats on August 9, 1987?
16. Why does Iversen close her memoir with Allen Ginsberg's "Plutonian Ode"?
17. In Iversen's neighborhood everyone was keenly conscious of status. How did her parents and their neighbors show that they have "arrived"?
18. At thirteen, Iversen loved Joni Mitchell and Carole King and she knew the lyrics to "A Natural Woman" (84). Would you call her a "hippy"? How do her tastes and ideas reflect the ideology of the sixties?
19. How did Iversen decide to become a writer? How did the writing of John Barth, Virginia Woolf and Sylvia Plath shape her writing style?
20. Name the writers who influenced your writing.

21. Why did Iversen keep secret notepads? Why did she feel compelled to write everything around her? How did “Harriet the Spy” influence her writing?
22. Iversen had prepared for her father’s death for years because of the “DUIs, the fender benders, the nights of waking up late to hear him stumbling in the foyer” (163). Her mother found solace in white pills and red wine. What is the effect of alcoholism on families? How did the separation of her parents affect the author? How did personal tragedies lead Iversen to become a writer?
23. Iversen states that she wants to write about two things that have frightened her most in life.—“Rocky Flats, and Dad’s alcoholism.” Do you find it ironic that she chose to write about Arvada, Colorado where “nothing had ever happened to her”? (283).
24. Iversen spent years in Europe looking for things to write about? Do you find it intriguing that she chose to write a story that happened in her own backyard?
25. Who was Edward Teller? What was his role in the first test of a nuclear bomb in New Mexico in 1945?
26. Why did Oppenheimer name the test Bomb “Trinity”? (176).
27. From 1945 to 1989 the U.S. produced thousands of warheads in its arms race with the Soviet Union. How did MAD become the governing philosophy? What was MAD intended to do?
28. What was the term “body burden” used to describe?
29. How can you explain that some workers whose body burden was near the limit did not experience any adverse health effects while others, exposed at levels far less than the permitted full body burden, and developed various types of cancers? (177)
30. Who made the first estimate of a permissible plutonium body burden?

Study Guide for Full Body Burden

Contributed by G. Brett Burkett

1. Considering what was presented in the text, why is nuclear waste so difficult and expensive to clean up?
2. When a natural disaster (such as Hurricane Katrina) affects an area, the media is immediately on the scene questioning as many people involved as to weave together an emotional story of human suffering. The wheels of the government begin turning (no matter how slowly) and aid is typically dispersed to the affected persons. Focus and special-interest groups, charities, and church organizations start aid drives and bring need materials to the affected regions. However, areas like Rocky Flats and Hanford receive comparatively little attention though as many or more people and property dollars are affected. Why do "natural" disasters get such a seemingly biased response from the media, the public, and the government while areas like Rocky Flats do not?
3. Throughout the story, the author switches perspective between personal and neighborhood emotional stories to political discourse to scientific discussion. How did these changes of perspective aid or hurt the overall narrative?
4. Consider the story as a whole. Was the government always against the individual, environmentalist, and transparency? Were they always consistent in their actions?
5. The author goes to great lengths to explain the public reaction to the environmentalists' and government claims about the goings-on at Rocky Flats. How does the public respond to the claims? Indifference? Only if personally affected?
6. Was the fight against the Rocky Flats plant only local? Who all was involved and why? Can you draw any broad themes about the nature/character/personality of those who participated in protests?
7. The author makes many claims that need citation, but, instead of footnotes or endnotes, she places all supporting evidence in a "Notes" section in the back of the book. Does this detract or add to the overall narrative? Why?
8. How are the courts represented in the story? Do they only support one side of the arguments? What might this say about the American judicial system?
9. Much science and evidence is presented by affected persons, environmentalist groups, concerned individuals, and external watchdog groups.
 - a. How do Rocky Flats, the DOE, AEC, and FWS respond to this evidence?
 - b. What evidence is presented to support the claims of hurt by individuals and environmental groups and how do the courts downplay/refute/discount it?
10. Examine the role of women at the plant and in life in general from the 1960s to the 1980s. Does the author's presentation reflect reality or bias?

11. The author includes a brief history of radiation – its discovery and first uses – late in the story. Does this seem out of place? What is the purpose of this story? How does it advance or detract from the overall narrative?
12. The author discusses a host of family problems set against the backdrop of the sage of Rocky Flats. Is Rocky Flats the cause of the family problems? What does the influence of these stories on the overall narrative?
13. The author makes the claim that we live in the legacy of the nuclear age. Considering the story as a whole, does this imply that nuclear energy can never be utilized safely? What are the overall limitations/problems of nuclear energy?
14. How are land developers portrayed in the story? Does this portrayal reflect reality or bias?
15. Why did the plant appoint the Rocky Flats Monitoring Committee and have community open-houses?
16. Discuss the changes in tense (i.e., past, present, future) throughout the story. Do these support or detract from the overall narrative.

Research and Assignment Ideas

The Ghost and the Machine: A Strange Encounter between Artists and the Atomic Bomb in Northern New Mexico

Essay and Study Guide Contributed by Linda Sears

Kristen Iversen's *Full Body Burden: Growing up in the Nuclear Shadow of Rocky Flats* is a journalistic memoir that deals with secrecy, environmental and human health issues, and the corners cut by the U.S. government in order to compete in its arms race with the Soviet Union. A humanities or arts instructor can find many useful ways to relate the book to course material. One approach would be to focus on the ethical issues that *Full Body Burden* brings up. Another is to think about the diverse ways that the arts and war have intersected throughout history. Most obviously, some of the first artistic works depict war: from Homer's *Iliad* to the many examples of war illustrated in ancient Mesopotamian, Chinese, and Egyptian art. Perhaps more interesting to contemplate is what happens when these two uniquely human pursuits, art and war, unknowingly rub shoulders because they share geographical considerations. This type of encounter occurred in Northern New Mexico, the location of the development of the first atomic bomb in Los Alamos, New Mexico, close to one of the most famous artist colonies of the twentieth century, Ghost Ranch, New Mexico. Two totally differing motivations led the actors to choose this landscape for their respective scenes: one a stage for creation, the other a setting for destruction.

Ghost Ranch was already a thriving space for artists and those seeking the kind of spiritual refreshment that only a place in the hinterlands could provide when the United States government chose nearby Los Alamos as the site for the atomic bomb's birthplace. Some of the well-known residents and visitors to Ghost Ranch were painter Georgia O'Keeffe and photographer Ansel Adams. Others, poets and even movie stars like Cary Grant, came to spend a few weeks in a place where sky and land were the real attraction. Those who visited the ranch marveled at its unique beauty. Some of them never left (Poling-Kempes, *Ghost Ranch* 136, 195).

Of all the people who stayed at Ghost Ranch, O'Keeffe is the one who made it most famous because her artistic vision matched the landscape. Northern New Mexico's spare geographic features encouraged abstraction in a way that more naturally abundant places could not. And O'Keeffe's artistic inclination, as O'Keeffe scholar Barbara Buhler Lynes argues, was to abstraction: "the principles of abstraction were fundamental to her thinking and remained a consistent component of her work from beginning to end, even at its most representational" (*Georgia O'Keeffe* 168). In this particular environment her inner artistic impulse met its external mirror: "O'Keeffe was fascinated by the fact that the colors she loved and had long used in her work occurred naturally in the landscape configurations that surrounded her at Ghost Ranch" (Lynes, "A Sense of Place" 31). This landscape not only supplied her with a profusion of rich colors, but it also stimulated her love for dramatic lines and monumental shapes; Northern New Mexico's geological past is laid bare to the viewer, making it a truly "primal landscape" (Poling-Kempes, "A Call to Place" 78).

That O’Keeffe’s color palette, composition, and use of line transformed in New Mexico’s intense high desert light exemplifies how wild nature can be the ultimate artistic muse. In a letter to a friend she rhapsodizes about the scene at her beloved House of the Burros at Ghost Ranch:

“I wish you see what I see out the window—the earth pink and yellow cliffs to the north—the full pale moon about to go down in an early morning lavender sky behind a very long beautiful tree covered mesa to the west—pink and purple hills in front and the scrubby fine dull green cedars—and a feeling of much space—it is a very beautiful world.” (qtd. in Messinger 141)

O’Keeffe had found her Eden, one in which she could be a co-creator of beauty.

As the U.S. government’s decision to use Northern New Mexico for the development of the atomic bomb shows, one person’s Eden can be another person’s hell. The government decided that The Manhattan Project’s new home would be Los Alamos because the desolate area was far away from population centers where prying eyes could ruin its secret mission. Iversen puts it best: “A hidden city with a deadly secret blossomed in the high desert” (175). Isolation was a key component to the project’s success. Even so, residents of the surrounding areas could not help but notice something strange going on: “Hundreds of local New Mexicans were employed at Los Alamos, and, although talk about the place and the project was forbidden, everyone from Santa Fe to Tierra Amarilla speculated about the secret city” (Poling-Kempes, *Ghost Ranch* 153). Not surprisingly, these speculations, including that it was the site of a nudist colony, could take on absurd proportions. Bereft of any real information, people used their imaginations to concoct a reason for the influx of people and activity at Los Alamos. Federal agents created even more suspicion for the inhabitants and visitors of nearby Ghost Ranch when they came to grill its owners, residents, and visitors to insure that security would not be breached. Being asked questions about their origins and loyalty must have clued in the people at Ghost Ranch that a secretive undertaking was at hand. As it turned out, the reason for the interviews was so that some of the top scientists could escape from their high pressure work at Los Alamos by recuperating at Ghost Ranch (Poling-Kempes, *Ghost Ranch* 153-56).

Oppenheimer, the “father of the atomic bomb” who famously regretted his part in the bomb’s creation, spent several days basking in the natural beauty of Ghost Ranch. His face was recognized by the owners of Ghost Ranch, and many knew something odd was up when they learned that these men with obvious foreign accents had common American names. Conversations among the scientists were coded, however, and secrecy was ultimately maintained. Only after the bombing of Hiroshima and Nagasaki did those at Ghost Ranch know the truth of Los Alamos (Poling-Kempes, *Ghost Ranch* 157, 160).

Iversen’s account of her childhood growing up near Rocky Flats includes many descriptions of the natural beauty that surrounded her. In fact, the pristine air and sparkling waters of her beloved local lake made it near impossible for her and many of her neighbors to admit that something deadly was in their midst. The foundations of their part of the American dream, however, were literally built on shifting sand, sand that poisoned their animals, food, and themselves. That a space could inhabit two very

different visions, one of creation and the other of destruction finds its precursor in the meeting of artists and scientists at Ghost Ranch.

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Questions to consider:

1. Does it seem odd that government scientists and artists would choose the same location for their work? What about the choice to create housing developments downwind of the Rocky Flats plutonium production facility and the later decision to make the site of the facility into a national wildlife refuge?
2. How does a land's natural beauty contribute to the people's collective denial? If the land around Rocky Flats had been ugly, how might have things been different? Why are most of the nuclear testing, waste and production facilities located in the western part of the U.S. (Idaho, New Mexico, Colorado, Nevada?)
3. O'Keeffe never made works of art that suggested her feelings, positive or negative, about her beloved land being used for nuclear weapons creation. Why do you think she ignored what happened at Los Alamos as a subject for her art? Do artists have an ethical responsibility to create works that address such issues as environmental destruction and the loss of life it causes? Why or why not?

Assignments for GOVT 2305 and GOVT 2306

Contributed by Tiffany Harper

The following are assignments that can pair with the sections normally covered in GOVT 2305 and 2306. They correspond to the themes and concepts that the book, Full Body Burden, touches on. Since you're the expert for your course, these assignments are made to be flexible with no particular chapters assigned – that's up to you. They can be done in class or as homework assignments, or you can just post them on Blackboard for students to complete for extra credit over the semester.

Interest Groups

Questions for discussion:

What were some of the interest groups involved in the book? What issues did they support? What did each group do to try to achieve their goals? Were they successful? Why or why not? Do you think any of the interest groups could have tried anything else to be more successful?

Assignment:

This is a history of events at Rocky Flats that was put together by the Department of Energy:

<http://rockyflats.apps.em.doe.gov/references/199Rocky%20Flats%20History%20Thru%201-2002.pdf>

To see the involvement of one interest group, the Sierra Club, in this history, scroll down to the year 1991 and to November 1995. The Sierra Club is a well-known environmental group that got involved in Rocky Flats when it was suspected that contamination might have hurt the community and environment around the nuclear facility. As the book mentions (page 231), they were successful in getting the facility shut down temporarily in 1989 but then later denied another request that would have kept them shut down in 1991. They accomplished the temporary shutdown by filing for an injunction in court. An injunction is a court order to stop doing something that may cause irreparable injury. Go to the Sierra Club website and take a look at their recent press releases:

<http://content.sierraclub.org/press-releases/>

Pick one of the links and click on it. Which one did you pick (please provide the link)?

According to this press release that you've chosen, what does the Sierra Club want? Does this align with their environmental protection mission today? Why or why not?

Choose another press release. Which one did you pick (please provide the link)?

In this press release that you've chosen, what does the Sierra Club want? Does this align with their environmental protection mission today? Why or why not?

Bureaucracy

Questions for discussion:

What are some of the government bureaucracies (departments, agencies, etc.) involved in the book?

What is the main purpose of each of those bureaucracies? When and how were they created?

Do those bureaucracies still exist today? If so, what do they do today?

Do you think those bureaucracies are still necessary today? Why or why not?

Assignment:

The Environmental Protection Agency (EPA) was critical in the Rocky Flats investigation, working with the Federal Bureau of Investigation (FBI) to sort out the concerns about nuclear contamination. The EPA was actually created in 1970 under President Richard Nixon. Take a look at this letter from President Nixon urging Congress to write a law that would create this new agency to protect the environment:

<http://www2.epa.gov/aboutepa/reorganization-plan-no-3-1970>

Here's a short video created in 2013 by the EPA explaining what their role is today:

<https://www.youtube.com/watch?v=fAJIHxyapa0>

After reading about the creation of the EPA and watching the video about what they do today, answer the following questions:

What is the mission of the Environmental Protection Agency?

Why did President Nixon want to create the EPA?

What does the EPA do today on a daily basis to accomplish its mission?

Congress and the Presidency

Questions for discussion:

These are five laws discussed in the book: the Clean Water Act, the Atomic Energy Act, the Price-Anderson Nuclear Industries Indemnity Act, the Resource Conservation and Recovery Act, and the Energy Employees Occupational Illness Compensation Act.

When was each law passed? Which president signed each one into law?

What was each law intended to do? Do you think each law accomplished what those who wrote it wanted it to do?

Are there any other laws you would like passed today after reading this book? Explain.

Assignment:

The book, on page 233, mentions that Rockwell International Corporation officials plead guilty to several violations of the Clean Water Act. The Clean Water Act actually had its beginnings in an older law created in the 1940s, but it didn't take the modern form that we know today until 1972 when major amendments were passed to the original law.

Take a look at this summary of the law from the Environmental Protection Agency, the arm of the government in charge of overseeing its implementation:

<http://www2.epa.gov/laws-regulations/history-clean-water-act>

In the following clip, former Congressman Jim Oberstar looks back at the passage of the Clean Water Act in 1972.

<https://www.youtube.com/watch?v=ZEqcUngxbLI>

After viewing the interview with Congressman Oberstar and reading about the history of the Clean Water Act, answer the following questions:

Why was the Clean Water Act originally written? What had happened to create a call for action?

Was there any opposition to the law back in the 1970s? What happened to the opposition?

Since President Nixon vetoed the Clean Water Act, how did it become law?

What was the Clean Water Act, as passed in 1972, supposed to do?

Courts

Questions for discussion:

What is a class-action lawsuit? Who can file one?

What happened in *Cook v. Rockwell International Corporation*?

Assignment:

The case of *Cook v. Rockwell International Corporation* began in 1990 in a federal district court, where almost all federal court cases will begin. After many delays, the case went to trial in 2006. At the conclusion of the trial, the jury found that the former Rockwell International Corporation, the Dow Chemicals company, and the Department of Energy were negligent and had caused significant damages to the properties surrounding the Rocky Flats nuclear facility. The jury awarded the plaintiffs a total judgment of over half a billion dollars, which increased to over nine hundred million dollars after years of interest accumulation.

From there, the case was appeals to the U.S. Circuit Court of Appeals (the next level up the federal court system), where the verdict was overturned in 2010 because the court ruled that the jury had been given incorrect instructions about what the law (the Price-Anderson Act) stated and that a detectable level of actual damage had not been proven. To read the entire opinion of the U.S. Court of Appeals, Tenth Circuit, click here:

<http://caselaw.findlaw.com/us-10th-circuit/1537284.html>

The case was then appealed further to the U.S. Supreme Court, the highest court in the U.S., where the case was denied certiorari in 2012, which essentially means that the decision on the U.S. Circuit Court of Appeals will stand. Because the original verdict was overturned, the case can be tried over again in the federal district court, where the plaintiffs can try to prove that there was a detectable level of actual damage by plutonium particles on their property and hope that the jury is given proper instructions on how to interpret the laws that Rockwell International Corporation, Dow Chemicals, and the Department of Energy are alleged to have broken.

The legal system can take years before a resolution is ever reached. In this case, if it were up to you, would you choose to push for a new trial in the district court and to continue to pursue the case against Rockwell International Corporation, Dow Chemicals, and the Department of Energy? Why or why not? Consider the companies involved, as well as the community and property owners involved.

International Relations and Foreign Policy

Questions for discussion:

What was the Cold War? Who was involved and what were they fighting over?

What was the role of nuclear weapons in the Cold War?

Do you think nuclear weapons are still a major concern in foreign policy today? Why or why not?

How has foreign policy changed since the end of the Cold War? Is there still a need for nuclear weapons today?

Assignment:

In the book, you may have noticed that some of the characters feel that helping to make nuclear materials was a part of their patriotic duty to help to United States fend off the Soviet Union in the Cold War.

After the end of the Cold War, many people thought that the use and possession of nuclear weapons would become an irrelevant part of foreign policy. Why? There are only a handful of countries today with nuclear capabilities, and those countries generally know that if they were to fire a nuclear weapon at any other country, that country would respond directly by firing a nuclear weapon back at them. This idea is known as Mutually Assured Destruction, or MAD. Logically then, it would seem no country would want to fire a nuclear weapon at another country. Recently, however, the use of nuclear weapons came back into the spotlight with threats made by North Korea, a country whose leadership does not believe that the Korean War was ever resolved with the U.S. There actually wasn't ever a peace treaty signed at the end of that war, only a cease fire agreement, which is usually considered more of a pause than a full stop to a war.

"Susan Rice Extended Interview Pt. 3," originally aired on February 14, 2013 – *The Daily Show with Jon Stewart*

The Daily Show is a comedy news show. In the following clip, host Jon Stewart interviews Susan Rice, former U.S. ambassador to the United Nations, about the nuclear tests and threats made by North Korea in the spring of 2013:

<http://www.thedailyshow.com/watch/thu-february-14-2013/exclusive---susan-rice-extended-interview-pt--3>

After viewing the clip, answer the following questions below:

What does Susan Rice say is the purpose of the sanctions placed on North Korea by the United Nations?

Do you feel the sanctions are the proper response by the U.S. or would you prefer the U.S. try something else to handle the situation?

Would you be personally afraid that North Korea would fire nuclear weapons at the U.S.? Explain.

In your opinion, should the U.S. fire a nuclear weapon at North Korea? Why or why not?

Could you imagine a situation where the U.S. would fire a nuclear weapon at any country? If not, do you think the U.S. should continue to keep nuclear weapons as a part of our arsenal?

Spotlight on Texas (GOVT 2306)

In the book and in real life, the plant at Rocky Flats was in charge of making triggers for nuclear weapons. What happened to those triggers? They actually ended up in Texas at the Pantex plant just north of Amarillo. Go to this website to learn a little more about what Pantex does: <http://www.pantex.com/mission/Pages/default.aspx>

The Texas Commission on Environmental Quality (TCEQ) is in charge of protecting our state's natural resources and public health, and they work with the federal Department of Energy and the Environmental Protection Agency to regulate the Pantex plant: <http://www.pantex.com/mission/Pages/environmental-projects-operations.aspx>

Assignment:

After reviewing the mission and environmental practices of Pantex, answer the following questions:

What is the main mission of Pantex?

In order to achieve that mission, what do they do at Pantex?

In order to be in compliance with the State of Texas, what sort of reporting does Pantex have to do?

Take a look at the history of Pantex:

http://www.pantex.com/about/Documents/ex_doc_history.pdf

What was the original use of the Pantex Plant during WWII?

What is the latest major event to have occurred at Pantex?

The Pantex Plant is less than 500 miles from Collin County. Before this assignment, did you know there was a nuclear weapons facility this close to your home? As a point for debate, would you feel more comfortable keeping the Pantex Plant open or shutting it down? Explain.

Political Questions for Full Body Burden: Growing up in the Nuclear Shadow of Rocky Flats

Contributed by Debra St. John

Following the Japanese attack on Pearl Harbor, what did the U.S. government initiated? What were the project's goals? Who was president when the bomb called "_____" was dropped on Hiroshima? What was the term used rather than bomb?

When was the Cold War Era and why was it called such? What were some of the industrial, economic, environmental and public health consequences of this era?

What is plutonium? What are its uses? What are the pros and cons of the use of plutonium?

What are the responsibilities of the American Energy Commission (AEC)? What was called "Fat Man"? What government products were built at the laboratories at Los Alamos, New Mexico, Hartford in eastern Washington State and the facility at Oak Ridge, Tennessee? Why does the government select such sites to build their facilities?

What was being produced at Rocky Flats outside of Denver? What are plutonium triggers and how are they used?

Why does the government classify certain information? What is regarded as a secret operation by the government? What is the AEC and when and under what presidency and circumstance was it created? Why do citizens living near the site in Tennessee, Hartford, Los Alamos and Rocky Flats fail to voice concern?

What does the government tell the citizens and the press regarding the risk from the production of the products created at plants such as Rocky Flats? What types of groups have pressured the AEC to admit "incidents"? What are the incentives for the government to minimize any concerns voices regarding risk?

Why were tensions escalating between the Communist World and the West in the 1950s? How did citizens react to governments' up-tick in activity?

What can the ingesting or inhaling plutonium particles cause? What propaganda film did teachers show their students during the nuclear era scare? What was the purpose and logic for duck-and-cover drills?

What national and international wars, assassinations, organization formed in the 1960's? What did this produce among concerned citizens? Who lead some of the protest groups? Why were protesters gathering at Rocky Flats? What happened on Mother's Day 1969 at Rocky Flats? What groups formed due to interest regarding Rocky Flats activities?

What did the Rocky Flats officials contend that the plant manufacturing does for the country and the community? What corporation took over the contract from Dow Chemical for Rocky Flats in 1974? Why did corporations want this private contract?

What is the EPA? Who was president when it was created? What are its responsibilities? What did its study conclude about Rock Flats in 1974? What was the "Holmes Report"? What did it conclude? What Task Force was formed by Governor Lamm and Representative Wirth of Colorado? What was its purpose? What were the Task Force's conclusions and recommendations? In regard to government actions and responses, what did the Price-Anderson Act of 1957, 1968 and 1977 do? What was the purpose of the 2003 Price-Anderson Nuclear Industries Indemnity Act?

Who was Dr. Carl Johnson? What did he receive from the National Institutes of Health in the 1970s? What did his report indicate and what was the (DOE) Department of Energy's response? A group called the Truth Force had what goals? Who were some of the well-known protesters working with the Truth Force? What did the FHA ask potential homeowners to sign in the areas near Rocky Flats? What was the response of the Rocky Flats facility and the Department of Energy (DOE)?

What did Dr. Johnsons' 1981 published study on cancer rates show? What did the AEC and the government say regarding tritium leaks in to the water table? How did some individuals respond to the concerns of water contamination? What did the publicity force the plant to do? Despite concerns, how was the Colorado economy doing during this time period? Why?

Define "pondcrete" and why was it a concern? What was the purpose of the Resource Conservation and Recovery Act (RCRA)? Why do plants such as Rocky Flats continue to break the law? Under political pressure the DOE did a study on the future of Rocky Flats, what should have been the focus and what was the actual focus of the study? What was the significance of Building 371 and 771? What was the recommendations of the Department of Housing and Urban Development (HUD) and the Colorado Springs developer administrators? Why?

In what ways did the concern over missing plutonium led to involvement of the Department of Justice, EPA and FBI? What was "Operation Desert Glow"? What was uncovered? Why was a grand jury appointed? What was the jury's assigned duties?

Many studies were conducted regarding Rocky Flats over the years, what was continually reported out of the studies? What did the government consider to be conjecture, speculation, exaggeration and media hype? Was there a trial? If so what did it conclude? What happened to Rocky Flats facility?

After reading the book what was the repeated statements regarding the safety and benefits of Rocky Flats offered by Dow Chemical and Rockwell, local government, home builders, federal agencies of the AES, DOE, HUD and, EPA? What were the consequences on the lives and health of the citizens of the Rocky Flats plant and region? What conclusions can be drawn?

Provide recent examples of corporate and government denials, cover-ups and studies regarding the impact of chemicals and other pollutants on humans, livestock, crops, the air and water.

Assignment: T-Shirt Analysis

Contributed by Marta Moore

The purpose of a rhetorical analysis is to determine how and why texts or images are or are not influential. Provide a rhetorical analysis of this t-shirt hanging in the Rocky Flats Lounge, a bar across the highway from the entrance to the former plant. What does it suggest about the attitudes of patrons of the lounge? How does it connect with the views of some of the people described in the book? Is it effective?



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