FALLOUT:

GALVANIZING ATTENTION TOWARD SLOW VIOLENCE AND ENVIRONMENTAL INJUSTICE

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ABSTRACT

In this thesis, I examine how documentary film may serve as an effective tool for galvanizing attention to environmental harm. Here, I focus on the documentary *Fallout* (2023), produced by Alyssa Carpenter, which highlights three individuals experiencing illnesses potentially linked to toxic exposures from open burning at the Radford Army Ammunition Plant in Southwest Virginia. Using slow violence as my primary theoretical framework, and literature on the use of social cinema and eco-documentaries, I explore how environmental documentaries can make visible the often-invisible impacts of environmental contamination and galvanize attention toward slow violence.

For this study, I employed mixed qualitative methods, including a content analysis of *Fallout* and focus group discussions with nine participants who viewed the film. Coding and analysis of the focus group responses unveiled two complementary dimensions through which the documentary effectively communicates environmental harm. First, the film depicts how toxic exposure disrupts deep connections to place and creates profound experiences of loss, providing emotional entry points for viewers. Second, the documentary employs specific sensory techniques —including strategic sound design, visual imagery, and temporal manipulation— that make slow violence tangible and immediate.

Responses from focus group participants suggest these documentary approaches can help translate slow violence into visceral, relatable experiences. Participants consistently connected the film's content to environmental threats in their communities and expressed both emotional engagement and increased concern about environmental issues. By examining both the documentary's content and techniques alongside audience

responses, this study revealed how documentary films such as *Fallout* can help make slow violence visible and meaningful to audiences who might otherwise remain disconnected and unaware of lesser-known environmental harms.

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Chapter 1

Introduction and Background

1.1 Introduction

Growing up, my family and I would often swim and go tubing in the nearby New River in Radford, Virginia. I was often told over the years that the water was "dirty" and "not safe," but we took our chances and swam anyway. As a child, I didn't consider why people had warned me about going into the water. My interest in environmental sociology grew in my early 20s while living in the neighboring town of Blacksburg, home to Virginia Tech University. While I did not attend Virginia Tech, the people and town greatly influenced my life. When attending events hosted by Virginia Tech students, I learned about local activism against the Mountain Valley Pipeline and the open burning of toxins at the Radford Army Ammunition Plant (RAAP), referred to locally and colloquially as "the Arsenal."

In 2016, I met Alyssa Carpenter, who, as it turned out, worked at the same library system where I was employed at the time. Alyssa has three related roles in this research: She cofounded and continues to run the Citizens for Arsenal Accountability (CAA) —a community organization in Southwest Virginia that advocates for the end of open burning at the Radford Arsenal and transparency regarding toxins released by the Arsenal; served as a producer of a documentary called *Fallout* through her role in CAA; and is one of the three individuals living with chronic health issues featured in the film. After co-founding CAA and living near the New River, Alyssa was diagnosed with a pre-cancerous thyroid condition that required her to have surgery to remove her thyroid (Hemphill 2023). Now, Alyssa must take daily medication and lives with chronic illnesses.

When I decided to pursue my graduate studies in environmental sociology, I did not initially consider studying anything related to my hometown. Still, the tensions between activists and the Arsenal stayed at the forefront of my mind, and my experience growing up in the New River Valley area made me deeply interested in learning more about the relationship between the community and the impacts of the Arsenal.

In 2023, the documentary film *Fallout* was released, sharing the narratives of three individuals experiencing illnesses potentially linked to toxic exposures from the Radford Army Ammunition Plant's practice of open burning. Broadly speaking, in this thesis, I examine if and how *Fallout* functions as an effective tool for galvanizing attention to environmental harm, particularly addressing the challenges of making "slow violence"—environmental harm that occurs gradually and often invisibly over time— visible to audiences. Specifically, this research question is examined through three subsidiary questions:

1. How does documentary film make visible the "slow violence"of environmental contamination that often remains imperceptible to wider audiences?
2. What narrative and sensory techniques do environmental documentaries employ to communicate environmental harm effectively?
3. How did viewers interpret and respond to these documentaries, and what implications does this have for environmental justice strategies?

Investigating these questions contributes to our understanding of effective environmental justice strategies and how grassroots environmental justice advocates can create media that can draw attention to slow violence. While some existing scholarship has examined the content of documentary films about the environment, less attention has been paid to *how* audiences interpret and respond to these films. Analyzing how viewers respond to and interpret documentaries can

provide insights into what messaging and approaches are most effective in catalyzing social movements and raising awareness about environmental issues.

Drawing on interdisciplinary frameworks from environmental justice, Nixon's concept of slow violence, and documentary analysis, I examine how documentary films such as *Fallout* can effectively communicate environmental harms that might otherwise remain abstract or invisible. In the following section of this thesis, I provide the context behind the Radford Army Ammunition Plant, its environmental impacts, and community tensions. Then, in Chapter 2, I offer an overview of three key topics that provided a foundation for conceptualizing the research question and informed my analysis: environmental justice, which highlights the origins of grassroot organizing toward addressing environmental problems that disproportionately impacts vulnerable communities; slow violence, which provides the primary theoretical framework for understanding gradual environmental harm often imperceptible to those not impacted by it; I then examine the literature written on documentaries that have been created for activist purposes (with an emphasis on eco-documentaries) and can use film techniques (sound design, visual composition, pacing, editing choices, etc.) to help bring attention toward injustices. Following this overview, I elaborate on the methodological underpinnings of this research in Chapter 3. Specifically, I opted to conduct focus group discussions with nine participants who viewed the film. I supplement this research with a qualitative content analysis of the documentary *Fallout* to better understand how and if *Fallout* can galvanize attention toward slow violence.

In my analysis (chapters 4 and 5), I explore how *Fallout* depicts environmental harm through two complementary lenses. In Chapter 4, I examine how the documentary uses a sense of loss and connection to home as affective devices that communicate environmental harm to audiences. In Chapter 5, I analyze how the film's sensory elements and documentary techniques

effectively make slow violence visible. Together, these approaches reveal how environmental documentaries can galvanize attention to otherwise invisible environmental harm. By exploring both the content and form of *Fallout*, as well as audience responses to it, in this thesis, I aim to contribute to our understanding of how documentary film can serve as a vital tool in drawing attention to slow violence.

1.2 Background

The Radford Army Ammunition Plant [also referred to as the "Radford Arsenal"] is a government-owned, contractor-operated facility in Radford, Virginia. Adjacent to the New River, the facility is part of the New River Valley in Southwest Virginia. The New River Valley consists of four counties: Floyd, Giles, Montgomery, and Pulaski, as well as the city of Radford. The New River Valley (NRV) is also home to Virginia Tech and Radford University (newrivervalley.org). The NRV (and therefore the Radford Arsenal) is located in the Blue Ridge Mountains of central Appalachia, a cultural and geographic region in the United States with a history of marginalization (Eller 2008; Greenburg 2016:187; Roach 2022:23).

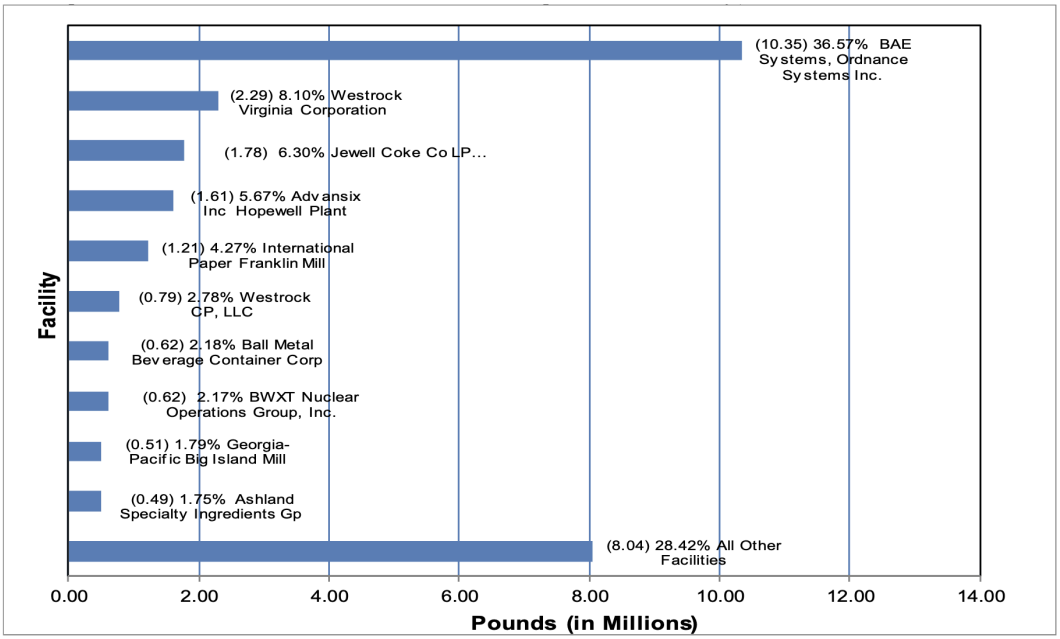
The Radford Arsenal was initially established as Radford Ordnance Works and the New River Unit in 1941. During World War II, Radford Ordnance Works served in the production of nitrocellulose (a smokeless propellant also known as nitrated cotton) during World War II (Kimbrell and Hiatt 1995:5). Today, the Radford Arsenal continues its tradition of producing nitrocellulose and other ammunition components. According to the Collegiate Times, "the Radford Arsenal is the nation's only producer of nitrocellulose, a compound vital to the production of all bullets, missiles, and explosives used in combat. Since there are no other domestic producers of nitrocellulose, nearly every bullet, missile, or explosive used by the U.S. military can trace basic constituents back to the Radford Arsenal" (Mohamed 2017).

In addition to having national and international impacts through its production of military components, the Radford Arsenal is an organization that significantly impacts the local community. The Radford Arsenal is the ninth largest employer in the New River Valley (as of 2016, it is also the second largest employer in Montgomery County) and has long been considered part of the New River Valley's culture (Lukas 2016). However, community concerns about the environmental and health impact the Arsenal had on the New River Valley and its residents first surfaced in 2008 when a nearby elementary school was found to have "some of the worst air quality in the country" (WVTF 2014). A *Roanoke Times* article published in 2017 noted that "The open burning ground has become a particular worry for residents who say airborne pollutants could threaten the health of the plant's neighbors" (Grangoff).

According to the Virginia Department of Environmental Quality (DEQ), open burning is a method of processing hazardous waste that is too contaminated and hazardous to be incinerated or transported. Environmental permits are required for open burning and are issued by the EPA and DEQ. In 2017, drone tests above the plant's open burning ground revealed that toxin levels exceeded the expected levels (Gangloff 2017). As of 2019, the Radford Arsenal was the leading source of toxic pollution in Virginia due to the burning of munitions and through the release of other waste (Virginia Department of Environmental Quality 2021:25). In addition to the air pollution caused by the burning of munitions, the Arsenal is also a source of significant water and land pollution in the New River Valley. The scope of the Arsenal's environmental impact can be seen in **Table 1.1**, which shows the top ten Virginia facilities reporting releases of Toxic Release Inventory (TRI) chemicals on-site.

The 2019 VDEQ report indicated, for example, that 19,294 pounds of ammonia, 2,320 pounds of copper compounds, 1,392 pounds of nitric acid, and 66,543 pounds of nitroglycerin

Table 1.1: Top 10 Virginia Facilities Reporting Releases of TRI Chemicals On-Site



were released on-site at the Radford Arsenal (as seen in **Figure 1.1**). In 2020, the Arsenal emitted 842 pounds of lead compounds, which can have serious health effects, including neurological damage and developmental issues (Schiffres 2022). Per the DEQ, there were 26 "excessive releases" (exceeding the releases allowed by regulations) between January 10, 2022, and December 10, 2022. Out of those violations, one was considered to have serious potential for harm. Local News station, WSLS10, notes that eleven of these excessive releases were classified as moderate, 12 were classified as marginal, and two were not considered. In 2023, the Arsenal was fined $21,145 for releasing "excessive levels of toxins into the New River" (Smith 2023).

It does not come as a surprise, then, that in 2017, community concerns surrounding the Radford Arsenal led to the creation of the grassroots organization, Citizens for Arsenal Accountability (CAA). CAA was launched as a chapter of the Blue Ridge Environmental Defense League and aimed to end the open burning of toxic munitions and advocate for increased transparency by the Arsenal to the community. The documentary *Fallout* emerged as part of this activism in 2020 when Madison Hill, a graduate student at Duke University, contacted CAA co-founder Alyssa Carpenter about creating a film on the community as part of her MFA thesis project (Hemphill 2023). As Fallout was produced by one of the subjects —activist Alyssa Carpenter— the documentary is, in part, a community-created media intended to draw attention toward an environmental justice issue rather than an external representation of the community's struggles.

2019 Toxics Release Inventory

Appendix F

Facility County/Independent City / Facility Name/Address / Chemical Name	form A*	On-Site Releases from Section 5 of Form R: Fugitive Air (pounds)	Stack Air (pounds)	Total Air (pounds)	Land (pounds)	Water (pounds)	Total On-Site Releases (pounds)	On-Site Management from Section 8 of Form R: Energy Recovery (pounds)	Recycling (pounds)	Treatment (pounds)	Total On-Site Management (pounds)	Off-Site Transfers from Section 6 of Form R: POTW (pounds)	Total Other Off-Site Transfers ** (pounds)
MECKLENBURG	**AMERICAN BUILDINGS COMPANY-LA CROSSE**							**501 GOLDEN EAGLE DR**				**NAICS Code**	**332311**
MANGANESE	N	24	0	24	0	0	24	0	0	0	0	0	10,684
Total for American Buildings Company-La Crosse		**24**	**0**	**24**	**0**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**10,684**
Total for Above County : (1 record)		**24**	**0**	**24**	**0**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**10,684**
MONTGOMERY	**ALLIANT TECHSYSTEMS OPERATIONS LLC (NEW RIVER ENERGETI**							**RT 114 RADFORD ARMY AMMUNITION PLANT**				**NAICS Code**	**325920**
DIPHENYLAMINE	N	0	447	447	0	0	447	0	1,758	0	1,758	0	966
NITRATE COMPOUNDS	N	0	180	180	0	0	180	0	1,154	0	1,154	139,588	132,087
NITROGLYCERIN	N	0	33,693	33,693	0	0	33,693	0	115,117	0	115,117	71,470	112,567
Total for Alliant Techsystems Operations Llc (New Ri		**0**	**34,320**	**34,320**	**0**	**0**	**34,320**	**0**	**118,029**	**0**	**118,029**	**211,058**	**245,620**
MONTGOMERY	**BAE SYSTEMS, ORDNANCE SYSTEMS INC**							**RADFORD ARMY AMMUNITION PLANT 4050 PEPPER**				**NAICS Code**	**325920**
2,4-DINITROTOLUENE	N	0	0	0	0	0	0	0	0	7,014	7,014	0	0
AMMONIA	N	19,233	61	19,294	0	848	20,142	0	0	0	0	0	0
CHLORINE	N	0	0	0	0	0	0	0	0	4,643	4,643	0	0
COPPER COMPOUNDS	N	233	2,087	2,320	0	62	2,382	0	0	0	0	0	0
DIBUTYL PHTHALATE	N	8	2	10	0	0	10	0	0	2,316	2,316	0	0
NITRATE COMPOUNDS	N	0	0	0	0	9,119,342	9,119,342	0	0	15,086	15,086	0	0
NITRIC ACID	N	733	659	1,392	9,275	0	10,667	0	31,232,952	9,119,342	40,352,294	0	0
NITROGLYCERIN	N	0	66,543	66,543	0	9,557	76,100	0	0	341,650	341,650	0	0
Total for Bae Systems, Ordnance Systems Inc		**20,206**	**69,352**	**89,558**	**9,275**	**9,129,809**	**9,228,642**	**0**	**31,232,952**	**9,490,051**	**40,723,003**	**0**	**0**
MONTGOMERY	**FEDERAL MOGUL POWERTRAIN LLC.**							**300 INDUSTRIAL PARK RD SE**				**NAICS Code**	**336350**
ALUMINUM (FUME OR DUST)	N	106	10,587	10,693	0	0	10,693	0	0	0	0	0	274,046
AMMONIA	Y	0	0	0	0	0	0	0	0	0	0	0	0

Figure 1.1: Excerpt from the 2019 Virginia Toxics Release Inventory [1]

[1] **Figure 1.1**. Excerpt from the 2019 Virginia Toxics Release Inventory (TRI) Summary Report, showing on-site releases and off-site transfers of reportable toxic chemicals from various facilities in the Commonwealth, including BAE Systems/ The Radford Arsenal.

Chapter 2

Literature Review and Theoretical Framework

In this Chapter, I review three adjacent topics that informed this research. Collectively, these topics help in understanding if and how environmental documentaries such as *Fallout* can galvanize attention toward slow violence and provide context for previous uses of film to raise awareness toward social and environmental issues. First, I examine the history and principles of environmental justice that inform this work. Environmental justice frameworks are essential to this study because they reveal how certain communities bear environmental burdens and how environmental grassroots organizing efforts have emerged in response to these inequities. Secondly, I explore Nixon's concept of slow violence, which largely serves as the theoretical backbone for this research. Environmental justice is closely related to the concept of slow violence. When there is slow violence, there is environmental injustice, and potentially, efforts to rectify that injustice through environmental justice. Slow violence provides a valuable framework for understanding the unique challenges that occur when environmental harm is experienced slowly, and to some people, imperceivably over time.

Lastly, I explore the literature on documentaries and social cinema that are activist-made, with a particular focus on eco-cinema. Documentaries can be "used by and for the communities" to help counter power-controlled narratives (Temper et al. 2024:337). Community-made media, such as community-made documentaries, can serve multiple functions: making invisible harms visible, validating community experiences, building solidarity, and mobilizing resistance. This literature on social cinema and eco-documentaries directly relates to *Fallout*, which serves as community-created media designed to bring attention to the community impacted by the Radford Arsenal. By examining the literature and history behind eco-cinema, we gain insight into

whether and how eco-documentaries communicate harm and better understand their potential to galvanize attention toward slow violence.

2.1 Environmental Justice

While slow violence provides the primary theoretical framework for this study, environmental justice scholarship provides crucial context for understanding how communities organize in response to environmental harm. The origins of environmental justice as a distinct branch in academic literatures has been credited to the environmental justice movement that many position as beginning in (or at the least, propelled by) "the 1982 protest demonstrations against a decision to site a toxic waste landfill in a primarily African American community in Warren County, North Carolina" (Murdock 2020:6). Environmental justice frameworks reveal how environmental harm concentrates in vulnerable communities and how grassroots organizing efforts emerge in response to inequities. A study conducted by the United Church of Christ (UCC) in 1987 concluded that race was the most important factor in predicting where waste sites would be located, and the Executive Director of the Commission for Racial Justice at the UCC first coined the term "environmental racism," defining it as "racial discrimination in environmental policy making, the enforcement of regulations and laws, the deliberate targeting of communities of color for toxic waste facilities, the official sanctioning of the life-threatening presence of poisons and pollutants in our communities, and the history of excluding people of color from leadership of the ecology movements" (Mohai et al. 2009:406).

Robert Bullard, Paul Mohai, Robin Saha, and Beverly Wright are credited with first coining the term "environmental justice" in the 1980s. Generally speaking, environmental justice links social justice to the environment and highlights inequalities in terms of who and how people experience environmental problems (Isgren and Andersson 2021:70). In 1990, Bullard –

considered by most to be the "father of environmental justice" —defined *environmental justice* as the principle that "all people and communities are entitled to equal protection of environmental and public health laws and regulations" (Bullard et al. 2008:376; Claudio 2007:501; Mohai et al. 2009:407). Currently, the EPA defines environmental justice as:

> "the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment so that people: are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices" (2024).

Some scholars have argued against a universal definition of environmental justice, asserting that diverse geographic, historical, political, and institutional contexts lead to varied understandings. They contend that the world's heterogeneity and cultural differences result in differing perceptions and experiences of environmental justice (Holifield 2001:78; Chemhuru 2019:30; Murdock 2020:8). Notwithstanding these contextual variations, differing definitions of environmental justice (hereafter EJ) have overlapping components which have allowed scholars and activists to apply EJ frameworks across geographic, racial, social, and economic boundaries. In the decades since the Warren County protests and the findings presented by the UCC, many communities across the globe have identified environmental injustices and worked toward fighting against these injustices (Claudio 2007). Although the history of racial discrimination and

the role of race in our environmental policies and in toxicity exposure remains a crucial component of environmental justice, environmental justice scholars and activists have expanded their work to include other factors – including class and geography —that make certain groups of people more at risk for environmental harms. Highlighting the universality of environmental justice and the broad applicability of environmental justice principles, Bullard notes that the "same guiding principles [of E.J.] that challenge the ecological destruction and threat to public health in West Dallas also apply in Appalachia, on Native American reservations" (Bullard 2000:125).

Environmental justice "attempts to uncover the underlying assumptions that may contribute to and produce unequal protection" (Bullard 2000:121). Bullard identifies five different characteristics of the environmental justice framework:

1. The environmental justice framework incorporates the principle of the right of all individuals to be protected from environmental degradation.
2. The environmental justice framework adopts a public health model of prevention (elimination of the threat before harm occurs) as the preferred strategy.
3. The environmental justice framework shifts the burden of proof to polluters and dischargers who do harm, discriminate, or do not give equal protection to racial and ethnic minorities and other "protected" classes.
4. The environmental justice framework would allow disparate impact and statistical weight, as opposed to "intent," to infer discrimination.
5. The environmental justice framework redresses disproportionate impact through "targeted" action and resources.

Isgren and Andersson suggest that E.J. research can help to frame popular mobilization or collective action taken by communities and activists in response to environmental harm (2021). Similarly, White has suggested that environmental justice is a valuable and practical framework, particularly in cases where there is "scientific uncertainty as to the nature of the potential damage or the likelihood of risk,"as the third characteristic of E.J. identified by Bullard shifts the burden of proof to those that cause environmental injustices (2022:49).

This framework becomes particularly important when confronting what Rob Nixon calls "slow violence" —environmental harm that occurs gradually and often invisibly over time. The challenges of proving intent and demonstrating causality that environmental justice activists face are magnified when environmental harm occurs slowly over time. Therefore, these challenges require unique approaches to understanding and communicating these injustices.

One possible approach is through grassroots initiatives. As relayed earlier in this section, the environmental Justice movement itself emerged from community organizing; The Warren County protests, for example, were spearheaded by community activists, and the PCB Landfill that prompted the protests also led to the creation of the grassroots environmental group Warren County Citizens Concerned, which was formed in late 1978 (McGurty 2007). Since then, communities across the United States have formed organizations to document, resist, and demand remediation for environmental harm. Still, these communities and organizations often confront a significant obstacle: how to draw attention to (make visible) environmental harm that unfolds gradually over time?

2.2 Slow Violence and Environmental Harm

"Slow violence" was first coined in 2011 by Rob Nixon in his book *Slow Violence and the Environmentalism of the Poor*. There, Nixon defined slow violence as violence that eludes

visibility, occurs gradually, and has ambiguous boundaries between space and time, "a violence of delayed destruction that is dispersed across time and space" (2011:2). To understand slow violence, we must first examine the influential work of Galtung's theorization of violence. In his work on slow violence, Nixon was notably inspired by Galtung's work, in which he describes how institutionalized forms of racism, sexism, and classism restrict the quality of life and are violent in their outcome. In the article "Violence, Peace, and Peace Research", Galtung defines violence as "the cause of the difference between the potential and the actual, between what could have been and what is" (Galtung 1969:168).

Like Galtung, Nixon wished to expand how violence is conceptualized. As with Galtung's conceptualizations of violence, slow violence perspectives are concerned with the structures that perpetuate social injustice and violence. As with Galtung's theorization of violence, slow violence is a product of social structures; those who experience slow violence are typically those who do not hold the power to make key decisions about human-environment relations. Nixon (2011), however, noted that there had been massive changes in media and technology since Galtung first wrote on violence forty years prior. According to Nixon, "to talk about slow violence, then, is to engage directly with our contemporary politics of speed" (Nixon 2011:11).

Because of Nixon's attention to the temporal scales of environmental harm, slow violence provides a useful lens for analyzing those harms that accumulate and develop gradually. Indicating how slow violence requires a dramatic rethinking of how, why, where, and when environmental harm unfolds, Davies notes that "slow violence provokes us to expand our imaginations of what constitutes harm" (2019:410). Slow violence occurs out of sight (to the general population) because it is attritional and generally does not involve grand, spectacular

disasters that might draw media attention (El 2020; Nixon 2011:2). In 2011, Nixon noted that we were (and still are) living "in an age when the media venerates instant spectacle[s]" (6). As slow violence often does not fit the image of a spectacular disaster with immediate need, the effects of slow violence persist undetected by the public, are left unaddressed, and are often compounding. In other words, slow violence is "delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all" (Nixon 2011:2).

While Nixon laid the groundwork for understanding slow violence's defining qualities of invisibility and spatial and temporal dispersal, in the years since he introduced the concept, scholars have expanded upon the concept of slow violence. Rice, for example, incorporates the concept while defining three distinct forms of violence experiences: 1) A sudden onset crisis accompanied by acute injuries and damage —the conventional definition of a disaster; 2) Organizational disasters with an abrupt crisis point with both acute and slow onset effects, and 3) Crescive organizational disasters in which there is no sudden and readily salient crisis point signaling the onset of disaster and forcing a re-interpretation of the situation (2016:180). In this thesis, I focus on the third form noted by Rice: slow violence that has neither a dramatic, sudden crisis (such as Hurricane Katrina or the Gulf Oil Spill) nor a clear crisis point. This particular form of slow violence is, perhaps, among the most difficult to address as it more easily eludes public attention.

While Nixon and Rice argue that slow violence is often invisible to broader society, Davies points out that slow violence is very visible to the communities who experience it firsthand: "For those who live in the midst of toxic geographies and polluted landscapes, 'everyday exposure' to the accumulations of slow violence is not necessarily a 'formless threat' but can be a very real and often tangible brutality" (2022:411). Building on this point about

community visibility, Davies argues "that slow violence does not persist due to a lack of arresting stories about pollution, but because those stories do not count, thus rendering certain populations and landscapes vulnerable to sacrifice" and that, therefore, we must amplify these stories. Davies, notes that "we must not overlook the situated knowledge that people who inhabit toxic geographies embody and live with" (2019:10). In other words, Davies suggests that slow violence persists not because of a lack of compelling stories about pollution, but because those stories do not count in dominant discourse.

While there are legal frameworks intended to protect communities from environmental injustice, in practice, these protections often fall short. For example, the Equal Protection Clause of the 14th Amendment should theoretically safeguard individuals and communities from facing discrimination. However, the burden of proof in such cases presents a significant obstacle. Although the 14th Amendment should protect individuals and communities from facing discrimination, intent to discriminate must be proven for action to be taken. Taylor noted that to prove intent under the Equal Protection Clause, one must demonstrate that:

> "(1) governmental action must be involved for the equal protection clause to be violated;(2) the clause applies to local, state, and federal government action; (3) private acts of discrimination are not covered under the equal protection clause unless they are somehow aided, mandated, or abetted by state law; (4) proof of governmental intent to discriminate is required to show that equal protection is denied; and (5) only insidious or unjustifiable discrimination is prohibited" (2014:105).

"Intent," though, is an elusive concept, and its elusiveness presents a clear challenge when marginalized communities experiencing slow violence try to take legal action to address the problem. In light of the challenges that communities face in addressing environmental harm and

slow violence, Nixon asks, “How can we turn the long emergencies of slow violence into stories dramatic enough to rouse public sentiment and warrant political intervention?”(2011:3). Nixon suggests that writer-activism plays an essential role in addressing this dilemma, a suggestion echoed by literary scholars like Erden El, who claims that “writer-activism raises awareness of slow violence. In writer-activism, the writer draws attention to slow violence and engages in environmental activism to raise awareness of environmental disruptions”(2020:19). Writer-activism might extend beyond traditional literary forms to include other forms of media, such as documentary films. By creating narratives that make slow violence visible and accessible to wider audiences, these works serve as valuable tools in environmental justice efforts, bridging the gap between academic discourse and public awareness.

In contrast to Nixon’s characterization of slow violence and its frequent invisibility, Davies argues that slow violence may be disguised but can be made visible to the general public through what he calls “slow observations” (Davies 2018:1549; Davies 2019:2). Further developing his critical analysis of slow violence, Davies offers his examination of violence and different theories relating to violence, arguing that what a given society labels as violence is a mirror of that society’s value system. To name something “violent,” he claims, emphasizes two key characteristics: the presence of brutality and the notion of intent (2022:412).

These conceptualizations of slow violence provide a valuable framework for understanding the nature of environmental harm in affected communities. Experiences of environmental harm are often tied to slow violence. Though there are differing definitions of harm, there are some that are particularly useful when considering environmental harms like those associated with the Radford Arsenal: Presser defines harm as “trouble caused by another”and notes that the “study of harm privileges the vantage of victims, and where

perpetrators maintain more social power than victims do, this privileging can contribute to social justice" (Presser 2013:3-4). This definition is particularly useful for environmental justice studies because of its social justice focus, as it highlights the victims, which can include people, nonhuman animals, and the environment, of environmental harm and how that harm is connected to and caused by imbalances of power. Harm, however, is difficult to measure, and attempts to quantify harm do not always provide a clear and accurate depiction of how harm is experienced. This is especially true for the social and cultural implications of environmental harm, which are often overlooked (such as disruptions to traditional ways of life, changes in community dynamics, shifts in local economic structures, alterations to spiritual or religious practices tied to the natural environment, and erosion of place-based identities) (Bisschop and Walle 2013:35).

Many scholars, such as White, have noted that the elite has the power to define environmental harm and to choose how to address what they deem to be environmentally harmful (2022:52). White alludes to how the construction of environmental harm can lead to slow violence, writing that "harm can be rendered invisible to the extent that it is externalized to more vulnerable population groups that do not have the social and political power to match that of the powerful" (White 2022:52).

Similarly, Pain and Cahill note that "political geographies of slow violence require critical engagement surrounding not only which violent histories are variously erased or foregrounded, forgotten or memorialized; but how those histories and their ongoing legacies are witnessed, articulated, and recorded, and by whom" (Pain and Cahill 2021:10). Here, Davies, along with Pain and Cahill, add necessary critical environmental justice perspectives to the conceptualizations of slow violence. Galtung's key definition of violence is complemented by Pain and Cahill's focus on how legacies are observed and documented.

Another aspect of slow violence is the erasure or marginalization of narratives about the environmental harm experienced by particular communities, which widens the gap between what could have been (recognition, justice, remediation) and what is (continued invisibility and harm). Pain and Cahill argue that we must critically engage with "which violent histories are variously erased or foregrounded, forgotten or memorialized; but how those histories and their ongoing legacies are witnessed, articulated and recorded, and by whom" (2021:10). Effectively, Pain and Cahill question who and how stories are created and shared.

2.3 Eco-Documentaries and Social Cinema: Making the Invisible Visible

Community and grassroots-created documentaries offer a potential medium that challenges those who traditionally have control over narratives. I must preface this by noting that community-created documentaries and media can have many limitations. Among these challenges are procuring funding for film creation, funding for distribution, and challenges in audience engagement. Filmmaker and writer Borum Chattoo points out that, "without adequate distribution, independent documentaries are limited in their ability to spark public dialogue" (p.51). For smaller non-profit organizations and communities with fewer resources, finding the funds to create and distribute a community-created film can be especially challenging. In a study that analyzed 50 social impact campaigns that used documentaries, the Center for Media and Social Impact found that the field of social cinema was in need of varied funding sources and initiatives aimed at supporting filmmakers and producers "who are not economically advantaged" (Borum Chattoo et al. 2024:18). Nevertheless, Borum Chattoo suggests that we live in a participatory media era, "that has witnessed a surge in community engagement organizations and initiatives with nonfiction storytelling at the fore" (p. 81). Additionally, the expansion of

modern media platforms, including digital streaming, can at least mitigate challenges of reaching multiple audiences (Borum Chattoo 2020:51).

Documentaries have the potential to serve as particularly effective tools for depicting slow violence because they can disrupt dominant narratives through creative storytelling. As Borum Chattoo (2020) argues, "Documentaries that probe social challenges and realities, particularly independently produced ones, are disruptive because they reflect creative vision and perspectives that are often invisible elsewhere in the media landscape" (p. 188). Environmental documentaries —or "ecocinema"— function as what Brereton (2005) calls "an agent for knowledge dissemination, consciousness-raising, public and ethical debate, and even political action" (p. 211). Documentaries offer the ability to combine visual evidence, personal testimony, and narrative cohesion, making them uniquely positioned to translate abstract environmental concerns into tangible, relatable experiences for viewers. This capacity makes documentary film an ideal medium for addressing Nixon's central question about slow violence: how to "turn the long emergencies of slow violence into stories dramatic enough to rouse public sentiment and warrant political intervention" (2011:3).

The historical development of social issue documentaries provides important context for understanding how environmental documentaries are employed today. In *The Whole World is Watching*, Gitlin (1980) examined how mass media played a crucial role in shaping public perception of the New Left and the antiwar movement in the 1960s. Though documentaries were still a relatively young concept at the time, Gitlin notably pointed out how media coverage has the potential to both amplify and distort the messages of social movements. Gitlin argued that by the late twentieth century, political movements felt compelled to rely on mass media communications in order to matter (p. 3).

During the 1970s, influenced by social movements of the era, a community of "socially conscious documentary storytellers" emerged (Borum Chattoo 2020:32). In 1979, for example, a historic film conference was held at Bard University where "over 400 filmmakers, activists, distributors and exhibitors" attended "to discuss funding, distribution, and community engagement through documentary"(Borum Chattoo 2020:32). Such was the significance of this conference that cineaste and curator Amos Vogel wrote in 1979 that it was "a turning point in social cinema" and "a harbinger of the coming social initiatives of the Eighties." According to Vogel, "The purpose of the conference, clearly, was to make the invisible visible"(Vogel 1979).

The challenge of visibility is central to both slow violence and environmental justice. In her article "The Visual Politics of Environmental Justice" (2019), Gabrielson wrote, "The slow and insidious violence of environmental injustice owes much to the invisibility of its sources" (p. 28). Traditional media contributes to this invisibility by "rarely reporting the systematic and disproportionate environmental harms" experienced by marginalized groups such as people of color (Gabrielson 2019:28). In response, some EJ advocates and community members have worked to counteract media invisibility by creating and sharing photography and documentaries that share accounts of environmental injustices.

In their book on understanding and supporting just transformations toward alternative futures born from community resistance, Temper et al. (2024) shared and unpacked a three-year international research project referred to as ACKnowl-EJ (Academic-Activist Co-produced Knowledge for Environmental Justice) in which "academics and resistance movements across the world worked together, analysing and learning from citizen-led transformations" (p. 3). One method of successful community activism and resistance to dominant narratives was through grassroots-created visual storytelling projects. Temper et al. share, for example, that in rural

India, community media emerged from the grassroots, with youth and women's collectives creating documentaries, short videos, and visual storytelling projects. These locally-produced media served dual purposes —helping communities share research findings in culturally meaningful ways while also creating counter-narratives to challenge government control of information (Temper et al. 2024:337).

In a 2017 essay on Barbara Kopple's participatory documentary on a community coal mining strike, Hale highlights the value of authenticity and thoughtful filmmaking presented in participatory documentaries (another form of social cinema) such as Kopple's *Harlan County, U.S.A*. While filming the documentary, Kopple lived in the coal camp for a year, developed relationships with community members, and was present at the picket lines even when not filming. Though not a community-created media, Hale notes that the documentary *Harlan County, U.S.A*. "became a part of the movement it sought to represent, a film about the strike as well as a part of the strike, an example of participatory documentary. In this way, the film did not simply represent reality but played a role in making a new reality in which the Brookside strikers won [United Mine Workers] recognition."

According to Borum Chattoo (2020), documentaries, such as *Harlan County, U.S.A*., can illuminate "the struggles of ordinary people and community groups fighting back" while providing a "visceral lens" that can "spark meaningful, action-oriented public conversation" (p. 3). In her essay, Hale also evaluates how documentaries such as Harlan County U.S.A. use sensory techniques such as slow visual disclosure, where disembodied sounds can be heard before the source of the sound is visually revealed. According to Hale, this "practice pushes the viewer to become a self-conscious listener too, to pay careful attention to the sound" and disrupts

easy comprehension (p. 22). Slow visual disclosure can, therefore, push viewers to practice a form of "slow observation"as described by Davies.

Hale notes that in *Harlan County, U.S.A.,* Kopple tries to engage all the senses, including touch and smell, through visual cues. Hale states, for example, that in *Harlan County, U.S.A.,* sound "anchors, explains, and makes 'authentic' visual imagery compromised" by the history of documentary making in Appalachia and use of tropes in Appalachian-focused documentaries (p. 11). According to Hale, these strategies counter the long-romanticized depictions of poor Appalachia in the media. Participatory and community-created documentaries such as *Harlan County, U.S.A.,* have challenged tropes and stereotypes in Appalachia by giving the communities involved a chance to have agency in how they are represented, creatively and narratively, rather than being subject to outside interpretations that may perpetuate harmful stereotypes.

In recent years, filmmakers have produced several environmental documentaries that specifically address slow violence and toxic contamination. Films such as *Food Inc.* (2008), which examines industrial food production, and *The Devil We Know* (2018), which investigates PFAS contamination from Teflon manufacturing, exemplify how documentary filmmaking has evolved to address complex environmental issues. These films employ specific sensory techniques to make invisible contamination perceptible to audiences. As documentary filmmaker Stadelmann (2015) reflected during the production of her film *This Creek*, which documents chemical contamination, the central challenge was: "How could I as a filmmaker represent something invisible and silent, such as slow-working chemical contamination with image and sound?"In *This Creek,* Stadelmann answers her question by developing a sonic motif to represent Nixon's concept of slow violence using ambient sound design (such as the sound of running water and "textural drones tracks") to convey contamination that appears gradually and out of

sight by giving “the impression of time being fluid” and underscoring a “the dark and nightmarish quality.”

In his analysis of two eco-documentaries, *A Plastic Ocean* and *Silent River*, Mridha (2021) explored the efficacy of “the narratives of ecocinema as a powerful cultural and political text in making environmental slow violence perceptible to human imagination and in taking us one step further to environmental justice activism.” While Mridha provides valuable analysis of these documentaries, his work stops short of empirically examining audience responses or measuring their effectiveness in mobilizing action. This gap in the literature suggests that there is a need for studies that combine analysis of documentary content with audience reception research. By investigating both how *Fallout* represents slow violence and how viewers interpret and respond to these representations, this thesis contributes to our understanding of documentary film’s potential as an environmental justice tool. Documentaries created by affected communities can serve not only as records of harm but as forms of resistance that challenge dominant narratives and galvanize action by making the invisible visible, by challenging viewers to engage with sound, visual composition, and pacing.

Chapter 3

Methods and Data

In this chapter, I outline the methodological approach used to examine how documentary film can galvanize attention toward slow violence. Through an analysis of the documentary *Fallout* and focus group discussions revolving around the film, I examine how audiences engage with and make meaning of documentaries that highlight slow violence. This methodological approach aligns with my research questions about how documentary techniques make slow violence visible and how viewers interpret and respond to these representations.

Here, I elaborate on the specific methods used for data collection and analysis, including focus group composition, recruitment strategies, and analytical techniques. I also provide detailed information about the documentary *Fallout* as both a data source and a form of media with the potential to draw attention toward slow violence central to this study. These methodological choices were designed to provide rich insights into how documentary film can function as a tool for environmental justice.

3.1 Methods and Sample

For this research, I opted to use two complementary qualitative methods: content analysis of the documentary and focus group discussions with viewers. This dual approach allowed me to examine both the textual and visual strategies employed in the film and how audiences interpret and respond to these strategies. By analyzing both the documentary's content and viewers' responses, I can better understand the relationship between documentary techniques and their effectiveness in galvanizing attention toward environmental harm.

The qualitative approach is particularly useful for this study because it allows for an in-depth exploration of meaning-making processes. As Denzin and Lincoln (2011) note,

qualitative research is concerned with "the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry" (p. 8) This perspective aligns well with my interest in how documentaries construct representations of environmental harm and how viewers interpret these representations within their own social and environmental contexts. I then opted to use focus groups as a method for this study because, as Morgan (2011) notes, they explicitly use "group interaction to produce data and insights that would be less accessible without the interaction found in a group" (p. 6). This interaction allowed participants to build upon each other's observations about the documentary, creating a richer understanding of how viewers could collectively interpret environmental harm narratives.

In January 2025, I contacted two organizations that are involved in social justice projects to recruit participants who would align with a social justice group and act as a control group. I then attempted to recruit lay people as a second focus group. However, I experienced challenges with securing this second group. Instead, my colleagues at the University of Tennessee offered to share the recruitment flyer with their students. Individuals who were interested in participating in the research were asked to fill out a survey to gather participant availability and demographic information such as age, gender identity, level of education, racial and ethnic background. The survey also included the question "Do you have an interest in social justice?"

The initial survey received responses from thirteen individuals. Of these respondents, twelve identified as female, including one transgender female, and one as male. Most survey respondents were young adults, with seven aged 18-24, three aged 25-34, two aged 35-44, and one aged 45-54. Racial and ethnic backgrounds included seven white/caucasian respondents, four Black/African-American respondents, one Hispanic/Latino respondent, and one Native

American respondent. Educational levels varied, with six respondents having some college experience, three with associate degrees, two with bachelor's degrees, and two with master's degrees. All survey respondents who were over the age of 18 and indicated availability to participate were then contacted to confirm their participation.

Of the thirteen survey respondents, nine individuals ultimately opted to participate in the focus groups. The final focus group composition consisted entirely of women, including one transgender woman, ranging in age from 18 to 54 years old (six aged 18-24, two 25-34, and one 45-54). The racial and ethnic makeup of participants included six white/caucasian and three Black/African-American individuals. Educational backgrounds of participants varied, with four having some college education but no degree, two holding associate degrees, two holding bachelor's degrees, and one having a master's degree. All but one participant indicated interest in social justice issues. This participation pattern aligns with research showing that women are generally more likely to both volunteer for and follow through with participation in research studies, particularly those concerning environmental and social issues (Ramstetter and Habersack 2019).

In February 2025, I conducted two focus group sessions with these 9 participants recruited through the university network and contacted community organizations. The first session included 3 participants, while the second focus group included 6 participants. Four participants were undergraduate students at the University of Tennessee. The remaining participants came from broader university and community networks, including one participant who was recruited through the non-profit organization where she was employed. Each participant received a $25 gift card as compensation for their time.

Both focus group sessions followed a protocol that included an introduction, documentary viewing (20 minutes), and a semi-structured discussion lasting 45-60 minutes. Sessions were conducted in community spaces and audio-recorded using OtterAI transcription software. The discussion explored participants' initial reactions, emotional responses, recognition of technical and sensory elements, understanding of environmental impacts, and personal connections to environmental threats. Questions asked during the focus groups included: "What are your first impressions upon seeing this?" "How potent did this feel?" and "What particular segments or components make you feel a certain way, and why does it make you feel that way?" Additional analysis was conducted using *Fallout*. The 20:09-minute documentary, released in 2023, presents narratives of three individuals experiencing illness while living near or working at the Radford Arsenal. Directed by Madison Hill and produced by Alyssa Carpenter, the film was funded through donations and a Grassroots Grant from the Blue Ridge Environmental Defense League.

3.2 Data Analysis

For my analysis, I employed thematic coding techniques to analyze both the documentary content and focus group transcripts. Through multiple viewings and iterative coding, I developed initial codes that were refined through constant comparative analysis. For the documentary analysis, I created a coding spreadsheet that I used to catalog sensory elements, including sound design (ambient sounds, breathing, voice patterns), visual composition (color, framing, symbolism), and temporal techniques (pacing, transitions, juxtapositions). Focus group transcripts were coded using constant comparative analysis, looking for patterns in emotional responses, connections to personal experience, and interpretations of documentary techniques. This process revealed two ways that the documentary communicates environmental harm:

emotional dimensions and sensorial dimensions. Participants frequently connected the film's content to their own experiences with environmental threats, from Oak Ridge to the Kingston coal ash spill. The focus group responses demonstrate how audiences connect broader environmental justice issues to their local contexts through documentary storytelling. Many expressed strong emotional responses to the sense of loss and disrupted connection to place depicted in the film. These sentiments were then coded into three themes: Nature and identity, uncertainty and ambiguity, and loss.

The sensorial dimensions emerged after participants noted how the documentary's sensory elements —particularly sound design, visual imagery, and pacing— effectively conveyed the reality of environmental harm. Analysis of the documentary and the focus groups also revealed how the sensorial components of *Fallout* convey the temporalities of harm.

Chapter 4

The Emotional Dimensions of *Fallout*

In this chapter, I attempt to address how documentary film makes visible the "slow violence" of environmental contamination that often remains imperceptible to wider audiences. Specifically, I examine how Fallout employs emotional dimensions —disrupted connections to place, uncertainty, and experiences of loss— as affective devices to help make slow violence tangible and accessible to viewers. The documentary *Fallout* communicates environmental harm by depicting how toxic exposure disrupts deep connections to place and creates profound experiences of loss. By focusing on these emotional dimensions rather than technical or legal aspects alone, the film creates affective entry points that help viewers connect to environmental issues that might otherwise seem abstract or distant. Documentary films such as *Fallout* use emotional connections to place and experiences of loss as affective devices. In this chapter, I examine how *Fallout* communicates environmental harm through deeply personal narratives that make slow violence tangible and emotionally resonant for audiences.

4.1 Nature, Identity, and Sense of Place

In *Fallout*, interviewees touch on their relationships to the natural world. Alyssa discusses her experience of "growing up in the forest" near Bent Mountain, Virginia, stating that "Growing up in the midst of a forest has always stayed with me to my core." She also describes how she "feels so connected to the seasons." Alyssa expresses a connection to the changing seasons and the mountains, and her recollection of the forests she grew up in signifies what she understands as a deep spiritual and emotional bond with the natural world.

Elsewhere in the documentary, another interviewee, Kathy, reminisces about cooking and cleaning fish from the New River for family fish fries: "We moved here in '86, and the house we

bought is right on the river. That was a weekend thing —we would all go fishing, us and the kids." Kathy's nostalgia for family fishing by the New River and having fish fries highlights a sense of community and shared identity rooted in the landscape and regional ecology.

The camera follows Kathy as she walks outside of her house, into her yard, and then pans across the river. Kathy leans against her wooden porch railing, with the river and mountains just behind her, and says, "We got established here and didn't want to move. Even though there are problems here now, we couldn't move now. We've been here… ever since. I just wish there weren't as many complications with living here." For those living near the New River, attachment to the environment around them and their sense of identity can be disrupted (or shaken) by exposure to environmental harm. Kathy's concern about breathing in pollutants while sitting on her porch is illustrative of the emotional toll that environmental harm can take on the community's connection to the river and land; Kathy states, "I think about sitting out on my front porch and listening to the river, you know, am I breathing it [harmful pollution related to the arsenal] in as I'm sitting out there? And I don't know. And that's scary."

Kathy's statement struck a chord with some of the focus group participants, who considered the challenges of leaving contaminated home places during our focus group discussions. One participant directly connected with this aspect of the film: "I just think that these people aren't going to go anywhere. They're connected to the land, and even [with] health issues and environmental problems… those people are more than likely going to stay there." Another participant expanded on the practical and psychological dimensions of this dilemma: "If they wanted to go, how could they go? Who would they sell their homes to? And then, what would be the psychological burden of adding, 'I just sold somebody my house in a toxic environment?'" Focus group participants' attempts to reconcile Kathy's tension between

attachment to place and environmental harm exemplify an environmental injustice: communities should not have to choose between their homes and their health and safety.

Another disruption in the positive relationship between community members and their environment is presented when Alyssa drives by her old neighbor's homes near the river and wonders, "Do these people know [that they are being exposed to toxins by the river]… you see these gardens and the sunflowers that they are growing…" Alyssa does not appear to finish her statement on the flowers; instead, the film jumps to her nervousness about swimming in the river. This concern about neighbors' awareness resonated with focus group participants. As one noted, "When the younger woman [Alyssa], like in the car, said she had been on that road, and she wanted to tell all the people, and it's like, 'Why? Why don't they know?' …I was curious about that." This observation highlights how the documentary effectively raised questions about information gaps and environmental awareness within affected communities.

For focus group participants, this portrayal of connection to place resonated deeply and often prompted reflection on their own relationships to their environment. One participant noted, "Thinking about growing up in Oak Ridge[2] before I knew all those things about [Oak Ridge], about, you know, all the environmental issues that that city has in the area around it. I loved [the area]. Went outside all the time. I didn't go into the marina, but there was Melton Hill Dam that we would go to all the time, and we would swim there. Now I wouldn't live in Oak Ridge." This response suggests that documentaries such as *Fallout* can prompt viewers to reconsider their own relationships with familiar environments, bridging specific stories in the film and broader patterns of environmental concerns.

[2] Oak Ridge refers to the Oak Ridge National Laboratory, a U.S. Department of Energy (DOE) facility in the city of Oak Ridge, Tennessee. The EPA placed the site on the Superfund program's National Priorities List (NPL) in 1989 (EPA).

The participant's reflection on growing up in Oak Ridge illustrates a fundamental tension that emerges when deep connections to place collide with new knowledge of environmental harm. Her story traces a journey from relatively innocent attachment to painful awareness —a journey that parallels the experiences of those featured in the documentary. Such transformations in how people relate to beloved places highlight the complex emotional terrain that emerges when environmental knowledge disrupts previously uncomplicated relationships with nature.

4.2 Uncertainty and Ambiguity

The uncertainty that people like Alyssa experience is indicative of the insidious yet subtle ways that environmental degradation can impact communities and their way of life. Our focus group participant demonstrated this same uncertainty when she stated she would never live in Oak Ridge or swim in the Dam again —representing a profound disruption to how people navigate and make meaning of their environments. In addition to disrupting cultural connections to nature, slow violence breeds a sense of uncertainty about the future for affected communities because its effects may not manifest immediately or directly. Uncertainty constitutes a critical dimension of slow violence; As Nixon argued, environmental harm often operates through "delayed destruction" that remains "out of sight" until the impacts are catastrophic. This temporal ambiguity can create a form of psychological violence wherein impacted communities exist in a perpetual state of not-knowing, which can create a sense of uncertainty.

Focus group participants were particularly struck by how the documentary conveyed this pervasive uncertainty. As one observed: "There's some element to it that made it feel —I don't know. There is darkness, but also that it was like an everyday thing…" In reference to a scene at the beginning of the film, where hands can be seen washing and cutting fish, the participant continued, "they did a really good job of conveying some uncertainty around these everyday

things we might be doing in our kitchen." This remark suggests one way that the film communicates the way environmental contamination transforms ordinary activities into potential threats.

Alyssa's unfinished statement about the flowers might speak to a deeper issue that Nixon highlighted in his work on slow violence: the impact on people's ability to imagine and plan for the future. The act of planting flowers, typically a hopeful gesture towards future beauty and growth, takes on a different meaning in the context of environmental contamination. Alyssa's observation seems to imply a sense of futility —why plant for a future that may be compromised by environmental harm? This moment encapsulates how slow violence can erode not just the physical environment, but also the community's capacity to envision a positive future in their place.

Kathy recalls fishing and having fish fries by the river, believing it was safe until uncertainties about environmental safety arose. When Kathy discusses her memories of fishing by the river and having fish fries, she states, "We thought it was safe. Nobody had ever said it wasn't." Here, Kathy expresses that she and her family had previously thought that eating fish from the river was safe. Now, they don't seem so certain. This uncertainty about environmental safety extended to viewers' own environments, prompting reconsideration of familiar places. Another participant connected the film to their own environment as a former student near the University of Tennessee, noting, "there were signs posted all along the Greenway about bacterial contaminants and the streams exceeding safety levels. Yeah, very pretty to look at the little streams… I don't touch that water. I don't… I see people fishing out of it all the time. I wouldn't eat anything out of there." As Davies (2018) argues, these "uncertain temporalities" are not just unpredictable but also "constricting," meaning the future feels foreclosed, time feels compressed

between exposure and potential illness, and normal temporal rhythms of life are disrupted" (p. 1537).

Alyssa also expresses uncertainty about the safety of the river. Typically, one considers whether or not a river or body of water is safe to be in for fear of drowning, but not for fear of toxic exposure. Alyssa states, "I remember swimming in the river and kind of being nervous about it, but feeling like it should be okay." After being diagnosed with thyroid disease, Alyssa looks back on these memories with newfound uncertainty. She states, "I look back at those moments, and it's a lot to grapple with." Alyssa expresses uncertainty when wondering whether or not her former neighbors are aware of their exposure to toxins via open burning. Communities that suspect that they are experiencing environmental harm may encounter skepticism due to the gradual nature of slow violence, which means that even if Alyssa's former neighbors had heard of the potential impacts of open burning, they could not be certain of the implications. For communities experiencing slow violence, the source can be difficult to pinpoint; Slow violence often involves complex, interconnected factors that make it challenging to identify a single cause or perpetrator. Alyssa may have also found people to be skeptical of her experiences with slow violence. Focus group participants recognized this challenge of identifying and addressing invisible contamination. One participant questioned: "What kind of communication is happening from that [arsenal] to that community?" while another participant wondered who discovered the pollutants and how people were getting sick from the water.

Being diagnosed with an illness that is correlated with specific types of toxic exposure can provoke people to reconsider all of the possible times that they may have been exposed to the toxins, leaving them with a deep sense of uncertainty. One might ask oneself, in the face of that uncertainty, if whatever possible exposure they had was worth it. For example, in *Fallout*,

Bill Laws reflects on his experiences working with the Arsenal and expresses a sense of uncertainty about whether or not the stable job the Arsenal provided was worth the consequences of illness. He states, “I don’t know how much we’re giving up for the cash that we’re getting.” At the time of the documentary interviews, Bill was also facing another considerable type of uncertainty: the uncertainty of how much time was left for him. In the film, Bill notes that the arsenal was one of the better-paying jobs in the area and states, “My family was just exposed to a little better standard of life because of the pay scale at the arsenal.” Focus group participants strongly responded to this economic tension presented in the film. As one participant reflected, “He was talking about how [the Arsenal] was his job, they paid them really well, but then, at what cost? And kind of grappling with that. I think I’m going to reflect on that quite a bit.” This observation demonstrates how effectively the documentary communicated the complex economic realities that often bind communities to sources of environmental harm.

4.3 Loss

The experiences of loss described in *Fallout* directly connect to Galtung’s foundational definition of violence as “the cause of the difference between the potential and the actual, between what could have been and what is” (Galtung 1969:168). Through this lens, environmental harm represents a profound form of violence by creating a gap between what lives could have been lived without contamination and the compromised reality that subjects of slow violence actually experience. While grappling with a sense of uncertainty, victims of environmental harm often must also come to terms with this sense of loss: loss of health, of future plans, of connection to place, and ultimately of the life that might have been possible.

For Bill, this meant losing time and future possibilities. Bill also experiences a loss in health and mobility, as he is chair-bound at the time of the documentary. Similarly, Alyssa and

Kathy experience the loss of living healthy lives in which they are not dependent on thyroid medication. By relying on daily thyroid medication, one can feel that they have lost a sense of control over their own lives and have lost future opportunities. Health insurance is generally necessary for adequate health care in the United States. When people such as Kathy and Alyssa experience chronic fatigue, they may struggle to find jobs that are accommodating to their illnesses.

When asked which scenes had struck the focus group participants the most, participants responded that they were particularly moved by the film's portrayal of these health impacts. One participant commented on the scene showing medications: "When they were talking and showing that they're all on these medications that they're going to have to be on their whole lives —I'm sure that the government is not helping them pay for that. I was thinking a lot about that… and it just makes me so mad." This response demonstrates how the documentary effectively communicated not just the physical health impacts but also the ongoing financial and emotional burdens of environmentally induced illness.

Beyond physical impacts, people such as Alyssa find themselves with a sense of loss about their identity after experiencing life-changing health conditions. When Alyssa lost her thyroid to disease, she found herself "losing sight of herself." She states, "I think one of the most difficult things is that having something like this impact you makes you lose sight of yourself. It feels like you are lost in the worst fog that you have ever seen. People look at me, and they say you're only 28. You're too young for this. It's the truth, and it's my reality." This loss of self and imagined future disrupts life trajectories. Victims of slow violence can lose whatever visions for the future they had held before the onset of their illnesses. Alyssa states that she experienced a loss of energy during her initial symptoms. She expressed that her goal was to help young people

by working in library youth services, but her illness and energy loss disrupted her plans for the future.

Despite losing her neighbor and friend to cancer and experiencing uncertainty about the potential of being exposed to toxins by living near the New River, Kathy states, “Even though there are problems here now, we couldn’t move now.” Kathy and her family moved to the area in 1985 and will likely remain there (she states, “We’ll probably be here [at the New River] until we aren’t here [alive] anymore”). In this statement, Kathy expresses the loss of the option to leave and the gradual loss of an environment once perceived as safe. However, Kathy's statement also highlights the deep-rooted connection to place that persists despite these losses. Kathy’s deep-rooted connection to place illustrates how environmental harm can create a profound tension between loss and attachment within affected communities.

For the three individuals in *Fallout*, discovering the open burning at the Radford Arsenal and experiencing health issues has shattered their sense of comfort and security. Since learning about the open burning at the Radford Arsenal and the onset of their health problems, the three individuals in *Fallout* have lost their sense of comfort and security. They have also lost the ability to safely engage with their natural environment. Loss extends beyond the personal to encompass a sense of losing one’s social world as one previously knew it.

The sense of loss caused by slow violence extends beyond the immediate victims. For their loved ones stricken by terminal sickness caused by the environmental ills spawned by the arsenal, they must endure the loss of a spouse, relative, or friend. While no one’s death is attributed to toxic exposure by Kathy, she makes a passing remark about losing her neighbor to cancer. While the documentary did not include friends’ and families’ accounts, one might speculate that Bill Laws’ death was a loss to his loved ones and friends. These various ways of

losing themselves and their community counterparts will eventually destabilize their sense of self, environment, and community. This sense of certain loss is grounded by the film's postscript text, wherein one learns that "Five days after [filming for *Fallout*], Bill Laws died at his house in Lindside, West Virginia." This blunt disclosure makes the imminent loss audiences witness Bill suffer during his interview an admitted reality, and makes the documentary's emotional impact greater. The brevity and factuality of disclosure mirror how environmental devastation is normally covered —as a statistical asterisk rather than as a human tragedy— yet subvert that norm by correlating Bill's death to his testimony of environmental exposure.

These accounts of ruptured attachments to land and of serial losses are affective strategies that make environmental harm affectively real to audiences. By showing how slow violence dissolves attachments to loved places and recrafts identities, *Fallout* makes environmental harm understandable to audiences not only as expertized pollution but as lived experience. Focus group responses confirm the efficacy of these narrative strategies, showing how the documentary allows individual accounts of environmental harm to shape audiences' daily environmental knowledge and concerns.

Chapter 5

Sensorial Dimensions in *Fallout*

In this chapter, I analyze how *Fallout* employs specific sensory elements and documentary techniques to make slow violence visible to audiences. While I examined how the film uses emotional connections to place and experiences of loss as affective devices in Chapter 4, this chapter focuses on the film's technical and sensory execution as the second of two complementary lenses through which environmental harm is communicated. By deliberately crafting an immersive audiovisual experience through sound design, visual composition, pacing, and temporal manipulation, *Fallout* translates the abstract concept of slow violence into a tangible reality that audiences can grasp on a visceral level.

5.1 Sensory Components as Communication Tools

Audio Composition

One of *Fallout*'s most effective communication devices was through the use of sound. Through its use of sound, *Fallout* addresses a central question asked by Stadelmann (as previously discussed in Chapter 2): "How could I as a filmmaker represent something invisible and silent, such as slow-working chemical contamination with image and sound?" *Fallout* uses a sensory approach to storytelling, beginning with its initial scene. In the opening scene, the sound of running water is heard first in the documentary, followed by the sound of bustling voices. The opening sounds are evocative of Bissett Park, a popular community park in Radford, Virginia, by the New River. These opening auditory components highlight how environmental spaces such as rivers serve as gathering places and are a foreshadowing of the deeply personal relationships with nature that unfold throughout the documentary.

Perhaps the most notable way *Fallout* addresses the question Stadelmann posed is through the inclusion of Bill's labored breathing in the audio. Participants in the focus group described this audio component as having an intense effect. "You could hear, I don't know, like a death rattle… it definitely didn't sound good," one participant remembered, and another participant emphasized the impact of "his heavy breathing." In addition to being a useful sensory technique, Bill's labored breathing also acts as a sensory reminder of the sense of loss and uncertainty that can result from environmental harm, as discussed in Chapter 4. Additionally, the sounds of Bill's labored breathing make the slow violence he was experiencing more tangible, rendering harm visceral to what might otherwise only be an abstract environmental concern and acting as auditory proof of Bill's deteriorating health.

Visual Composition

Visual composition and pacing also play vital roles in the film's sensory communication. *Fallout* begins and ends with black and white footage –water at the beginning, and flames at the end (as seen in **Figure 5.1** and **Figure 5.2**) —while the interview scenes appear in color. This deliberate visual contrast created what Stadelmann (2015) calls a sensory framework for environmental contamination. Similar to how Stadelmann used water motifs in *This Creek* as a "sonic motif"for slow violence, *Fallout*'s visual bookending with water and fire creates a visual metaphor for the manifestations of environmental harm.

Focus group participants appeared attuned to these visual strategies. Regarding the images of the film, one participant noted, "I like scenes, like the old timey [black and white] scenes where they are cutting fish and planting. I think that's a style thing for me, as an Appalachian girl. So that [film] felt very relatable to me, which is why [the environmental harm] is so concerning." When asked what scenes and visuals (if any) stood out, another participant



Figure 5.1 Black and white footage of water. Still frame from *Fallout*. [3]

[3] **Figure 5.1** Black and white footage of water. Still frame from *Fallout*, Madison Hill (Director), 2023.



Figure 5.2. Fire imagery from *Fallout*. Black and white footage depicting flames. [4]

[4] **Figure 5.2.** Fire imagery from *Fallout*. Black and white footage depicting flames. Still frame from *Fallout*, Madison Hill (Director), 2023.

also noted the initial scene with the water, the running faucet, the cutting of the fish, as well as the images of the dirt and hands in the soil. These participant reflections demonstrate how the film's visual imagery created emotional connections and (for some) a sense of relatability that made the environmental concerns feel more immediate and personal to participants.

Participants also noted the film's attention to visual indicators of contamination: "All those bubbles were, like, on the edge of the river… It's like they zoned in on the edges… Like, if you see [foam like that] somewhere, like, it's probably a problem area." This observation is an example of how the documentary directed viewers' attention to subtle visual cues of environmental harm that might otherwise go unnoticed –another strategy for making slow violence visible. Though not a direct visual in the film, another participant recalled the visual imagery Kathy used to describe air pollution in the film, when she stated, "even going outside [there's] this yellow flame around in the air. You know you're not supposed to go outside." This observation demonstrates how the documentary effectively communicated visible manifestations of industrial pollution, making environmental harm perceptible through visual cues that transform everyday activities, like simply going outdoors, into potential health risks.

Pacing and Editing

The film's deliberate pacing plays a crucial role in communicating these temporal dimensions. One focus group participant noted how the rhythm of the documentary during the end and beginning of the film enhanced its message: "The simple visual style, the slow pace of scene transitions… helped emphasize the words rather than the scenery." This comment provides insight into how the documentary's measured tempo created a viewing experience that invited the kind of slow, attentive observation that Davies (2019) argues is necessary to perceive slow violence. By resisting the rapid editing often favored in contemporary media, *Fallout* creates

space for viewers to process the gradual nature of environmental harm, while still maintaining their engagement through personal narratives.

Through these sensory techniques, *Fallout* creates an experience that engages viewers not just intellectually but viscerally. The documentary's sound design, symbolic visual composition, and deliberate pacing work together to transform invisible environmental harm into tangible, relatable experiences. As focus group responses suggest, these sensory techniques help *Fallout* effectively communicate what technical explanations or statistics alone cannot: the lived reality of slow violence and its profound impacts on communities and individuals. By making environmental harm perceptible through the senses, *Fallout* bridges the gap between abstract environmental concepts and embodied understanding.

5.2 Temporalities of Harm Through Sensory Components

While Chapter 4 explored uncertainty as an emotional dimension of environmental harm, here I examine how the documentary's sensorial techniques specifically translate the temporal complexities of slow violence into visceral experiences for viewers. Environmental harm's complex temporalities can create major hurdles for representation. Through careful editing and sensory juxtapositions, *Fallout* effectively captures the paradoxical nature of slow violence: it is violence characterized by gradual, imperceptible accumulation of harm and can be punctuated by sudden, devastating impacts.

The film's treatment of Bill's illness exemplifies this temporal approach. When the director asks how Bill has been since their last conversation one month prior, Bill explains that while things were "pretty good" then, they "changed quicker this time than they had at any time in the past. They really went downhill fast." Bill Law's rapid decline is a jarring contrast with the long-term exposure that preceded it. By juxtaposing Bill's decades of work at the Arsenal with

his current rapid deterioration, the documentary makes tangible what Nixon describes as the "attritional catastrophes that overspill clear boundaries in time and space" (2011:6). This sensory technique helps viewers grasp the temporal paradox of slow violence —how environmental harm can accumulate gradually over years yet manifest suddenly in devastating ways.

The last of the epilogue text serves as arguably the most powerful temporal marker in the film; it reads, "five days after our interview, Bill Laws passed away in his home…"This part of the documentary creates a temporal bridge that connects decades of incremental harm to Bill's passing, forcing viewers to confront the immediate consequences of prolonged exposure. While slow violence typically unfolds over extended timeframes, its ultimate manifestations can be sudden and devastating. This technique directly addresses Nixon's concern about how to make slow violence "dramatic enough" to warrant attention and intervention.

The documentary's approach to time is further enhanced by deliberate rhythm and pacing, which alternate between extended landscape shots and more urgent sequences of illness and contamination. This rhythmic variation creates a viewing experience that mirrors the temporal disorientation of slow violence itself. One focus group participant noted this technique when commenting on the film's measured pace: "The simple visual style, the slow pace of scene transitions… helped emphasize the words rather than the scenery." This suggests the documentary's tempo created space for viewers to process the gradual nature of environmental harm, while still communicating its urgency, precisely the kind of "slow observation" that Davies (2019) argues is necessary for recognizing slow violence.

Fallout also employs strategic temporal compression by condensing decades of environmental contamination into a 20-minute narrative arc. These techniques bridge the gap between institutional timeframes (which often prioritize immediate, visible impacts) and the

extended temporality of environmental harm. When one participant observed, "There's darkness, but also it was like an everyday thing," they were responding to this temporal manipulation —the film's ability to show how slow violence infiltrates ordinary life gradually before manifesting in dramatic ways. The documentary demonstrates how environmental harm can continue unchecked for decades precisely because its temporal dimensions work against conventional mechanisms for recognition and response.

By shaping the viewers' feeling of time through editing, juxtaposition, and narrative structure, *Fallout* transforms what Nixon called "calamities that patiently dispense their devastation" (2011:6) into tangible experiences that viewers can grasp. These temporal techniques fulfill a necessary function in galvanizing attention to slow violence; they make perceptible the otherwise imperceptible timeframes over which environmental harm operates, creating both emotional understanding and motivation for action.

Through its strategic use of sound design, visual composition, temporal manipulation, and authentic narrative presentation, *Fallout* demonstrates how documentary film can overcome the representational challenges of slow violence. By engaging multiple senses and manipulating viewers' experiences of time, documentaries such as *Fallout* can help transform abstract environmental concepts into tangible, relatable experiences that foster both emotional understanding and motivation for action. Focus group responses confirm that these techniques effectively communicate environmental harm in ways that statistical data or technical explanations alone cannot accomplish.

Chapter 6

Conclusions and Recommendations

This analysis of *Fallout* and audience responses suggests that community-created documentaries can use sensory techniques and evoke emotional dimensions that are effective at galvanizing the focus groups' interest and attention, in this case, toward the Radford Arsenal and the New River Valley. Some focus group participants reported feeling deeply affected by the film and expressed that the documentary changed how they think about environmental threats in their own lives. One participant stated that she would be "yapping about this for a while," and suggested that she would be thinking about the documentary for a while and mention both the film and the Radford Arsenal to friends and family.

The documentary also appeared to make distant environmental problems feel more immediate and relevant. One participant noted, "Living in Appalachia, seeing people who are also living in Appalachia in a similar [way]… I can envision these communities that are pretty similar to where we're living. And so it's like, I think in that respect, it feels closer to home." This bridging of distance through emotional and sensory engagement demonstrates how documentaries like *Fallout* can effectively galvanize attention to environmental harm by making the harm feel relevant and immediate to audiences regardless of their connection to the geographic space (in this case, by the New River).

While *Fallout* demonstrated effectiveness in galvanizing attention toward slow violence through sensorial and emotional strategies, documentary filmmaking as an environmental justice strategy faces several significant constraints. Limited resources for funding production and distribution costs can present a challenge for grassroots organizations and community members that wish to create documentaries that are representative of social problems from the

community's perspective. Even well-crafted documentaries may have limited reach if producers lack adequate marketing budgets or strategies. In *Fallout's* case, the producer and director have had some film showings at local theaters and libraries, and fortunately for the creators, a version of the documentary was released on PBS, which significantly expanded its potential audience beyond the New River Valley.

Unfortunately, an additional drawback to using eco-documentaries to draw attention to slow violence can be found in research on climate anxiety. Some individuals choose to avoid potentially distressing environmental-related information entirely and experience climate anxiety and will therefore not engage with media that would otherwise bring attention to slow violence (Chapman and Peters 2024). Though participants were recruited for this study and *Fallout* has had successful viewings, the fact that some potential viewers may have climate anxiety and may want to avoid eco-documentaries can limit documentaries' reach to audiences who might benefit most from increased environmental awareness.

6.1 Limitations

Through this research, I was able to gather valuable insights from the nine focus group participants who watched the documentary *Fallout.* However, future research would benefit from recruiting more focus group participants, including participants who are men. This research would also benefit from including a follow-up survey to be sent out to participants two weeks after the film to better understand if and how they communicated about the film to friends, family, and coworkers. Future research should prioritize amplifying marginalized voices and analyzing more documentaries created by grassroots environmental organizations.

6.2 Documentaries as Resistance and Transformation

The analysis of the focus groups and *Fallout* suggests that there is notable potential in using grassroots and community-created media in drawing attention toward slow violence. Making visible the "slow violence" of gradual environmental harm through community-created narratives is a key strategy toward environmental justice work (Nixon 2011). The emotional dimensions of identity, uncertainty, loss, and the temporal nature of slow violence depicted in *Fallout* allowed viewers to connect to and empathize with the individuals experiencing slow violence. Elevating narratives that are presented through community-created media can challenge dominant narratives that too often marginalize the perspectives and realities of communities that experience gradual, "invisible" environmental harm.

Fallout also demonstrates that community members are not merely victims. *Fallout* functions not just as an account of slow violence, but as an act of narrative resistance against institutional accounts that minimize or obscure environmental harm. The fact that *Fallout* was produced by one of the subjects, activist Alyssa Carpenter, also positions the documentary as an environmental justice intervention. *Fallout*'s position as an environmental justice intervention is strengthened by the documentary's sense of sensory authenticity, which validates lived experiences that might otherwise be dismissed in more technical or institutional discourses.

Focus group participants recognized and valued the sense of authenticity of the documentary. For example, one participant stated, "I felt like it was really good at delivering the message. I really liked the end, when it was just, very matter of fact, like, 'this is what's going on, this is what's happening.'" This participant's appreciation for the film's directness and simplicity suggests that sensory authenticity can be more effective at galvanizing attention toward slow violence than more elaborate or exaggerated presentations. Communities and

producers might then address Stadelmann's central filmmaking challenge of representing slow violence, but ensuring authenticity in the sensory techniques and emotional dimensions of their films.

The documentary's effectiveness in generating concern and potential action was also demonstrated by participants' interest in learning more about the people experiencing slow violence. One participant remarked, "This film makes me want to hear from those people now. I want to hear from them. I want to know their stories… So it's definitely sparked something new for me to research later on." Another participant seemed to connect the documentary to a broader fundamental shift in their understanding of community-led activism: "I feel like more and more I'm like, 'Okay, we have to take care of us. No one's coming… the government doesn't care really, and so we really have to take care of each other and build community… Unless these communities that are being directly impacted make a huge fuss and sue the crap out of… the [perpetrators] they're just gonna keep doing it."

This participant's reflection on government care and community is a sentiment that is reflected in Mutual Aid and other environmental justice literature. McKane et al. point out that not only is there an absence of the state's care with environmental crises, but when the state is present, it often "routinely exacerbates violent inequities"(2024:582). Even still, McKane et al. suggest that "while state-based solutions to climate change should not be abandoned, our movements should seek, and have often sought change through radical practices that 'rely less on the state to achieve their goals'" of building a community power that is equitable, democratic, and efficacious" (2024:582-583). The realization that "no one is coming" and that community-led activism —such as galvanizing attention toward slow violence through documentaries like *Fallout*— is necessary to combat environmental harm was arguably the most

sobering sentiment expressed to me by participants during this research. I have come to share this sentiment as well.

After learning about open burning at the Radford Arsenal, I, like Alyssa, found myself reframing my memories and experiences of tubing in the New River. I think back to the comments so often made about the river's (lack of) safety and pollution, and I now understand them as part of a larger story of slow violence. I think of Bill, whose life was cut short, and wonder how many others in the community may be unknowingly sick or slowly being impacted. How many other Bill Laws will there be? What is most troubling is how little we truly know about the long-term impacts of open burning at the Radford Arsenal. It should not have to be the burden of communities facing environmental harm to investigate and stop it, yet most of our qualitative information comes from activists and victims of harm, such as Alyssa, who have taken it upon themselves to draw attention to the slow violence that is very visible to themselves. The narratives of Alyssa, Kathy, and Bill do more than just document environmental harm – they illuminate how slow violence reshapes lives, communities, and our relationship with the natural world we call home.

References

"A Natural Fit." 2021. Virginia's New River Valley. Retrieved May 18, 2023 (https://www.newrivervalleyva.org/).

"ARC's History and Work in Appalachia." 2023. Appalachian Regional Commission. Retrieved May 13, 2024 (https://www.arc.gov/arcs-history-and-work-in-appalachia/).

Bisschop, Lieselot and Gudrun Vande Walle. 2013. "Environmental Victimisation and Conflicts: Social Justice and Environmental Crime." Pp. 33-54 in *Environmental Crime and Social Conflict: Contemporary and Emerging Issues*, edited by Avi Brisman, Nigel South, and Rob White. Surrey, UK: Ashgate Publishing.

Borum Chattoo, Caty. 2020. *Story Movements: How Documentaries Empower People and Inspire Social Change*. New York: Oxford University Press.

Borum Chattoo, Caty, David Conrad-Pérez, and Aras Coskuntuncel. 2024. "Beyond the Impact Report: What's Really Needed to Produce and Sustain Social Impact in Documentary Film?" Documentary Power Research Institute, Center for Media & Social Impact, American University. Spring.

Brereton, Pat. 2016. *Environmental Ethics and Film*. New York: Routledge.

Bullard, Robert D. 2000. *Dumping in Dixie: Race, Class, and Environmental Quality*. 3rd ed. Boulder, CO: Westview Press.

Bullard, Robert D. 2001. "Environmental Justice in the 21st Century: Race Still Matters." *Phylon (1960-)* 49(3/4):151-171.

Bullard, Robert D., Paul Mohai, Robin Saha, and Beverly Wright. 2008. "Toxic Wastes and Race at Twenty: Why Race Still Matters After All of These Years." *Environmental Law* 38(2):371-411.

Chapman, Daniel A. and Ellen Peters. 2024. “Examining the (Non-Linear) Relationships Between Climate Change Anxiety, Information Seeking, and Pro-Environmental Behavioral Intentions.” *Journal of Environmental Psychology* 99:102135.

Chemhuru, Munamato. 2019. “The Paradox of Global Environmental Justice: Appealing to the Distributive Justice Framework for the Global South.” *South African Journal of Philosophy* 38(1):30-39.

Claudio, Luz. 2007. “Standing on Principle: The Global Push for Environmental Justice.” *Environmental Health Perspectives* 115(10):A500-A503.

“Climate Analysis - Invest Appalachia.” 2024. Invest Appalachia - Community Investment by and for the People of Central Appalachia. Retrieved May 13, 2024 (https://investappalachia.org/climate-analysis/).

Davies, Thom. 2018. “Toxic Space and Time: Slow Violence, Necropolitics, and Petrochemical Pollution.” *Annals of the American Association of Geographers* 108(6):1537-1553.

Davies, Thom. 2019. “Slow Violence and Toxic Geographies: ‘Out of Sight’ to Whom?” *Environment and Planning C: Politics and Space* 40(2):409-427.

Davies, Thom. 2021. “Geography, Time, and Toxic Pollution: Slow Observation in Louisiana.” Pp. 21-39 in *A Research Agenda for Geographies of Slow Violence*.

Denzin, Norman K. and Yvonna S. Lincoln. 2011. “Introduction: The Discipline and Practice of Qualitative Research.” Pp. 1-32 in *The Sage Handbook of Qualitative Research*, 4th ed., edited by N. K. Denzin and Y. S. Lincoln. Thousand Oaks, CA: Sage Publications.

El, Erden. 2020. *Slow Violence in Contemporary American Environmental Literature*. Newcastle upon Tyne: Cambridge Scholars Publishing.

Eller, Ronald D. 2008. “Rich Land—Poor People.” Pp. 9-52 in *Uneven Ground:*

Appalachia since 1945. Lexington: University Press of Kentucky.

Gabrielson, Teena. 2019. “The Visual Politics of Environmental Justice.” *Environmental Humanities* 11(1):27-51.

Galtung, Johan. 1969. “Violence, Peace, and Peace Research.” *Journal of Peace Research* 6(3):167-191.

Gangloff, Mike. 2017. “RAAP Report: Drone Tests Find More Toxins than Expected above Open Burning Ground.” *Roanoke Times*, August 8. Retrieved June 9, 2024 (https://roanoke.com/news/article_68509637-4ea2-5807-b390-cd71c44c5047.html).

Gitlin, Todd. 1980. *The Whole World Is Watching: Mass Media in the Making and Unmaking of the New Left*. Berkeley: University of California Press.

Grangoff, Mike. 2017. “RAAP Report: Drone Tests Find More Toxins Than Expected Above Open Burning Ground.” *The Roanoke Times*, August 8. Retrieved July 24, 2025 (https://roanoke.com/news/article_68509637-4ea2-5807-b390-cd71c44c5047.html).

Greenberg, Pierce. 2016. “Spatial Inequality and Uneven Development: The Local Stratification of Poverty in Appalachia.” *Journal of Appalachian Studies* 22(2):187-209.

Hale, Grace Elizabeth. 2017. “Documentary Noise: The Soundscape of Barbara Kopple's Harlan County, U.S.A.” *Southern Cultures* 23(1):10-32.

Harris, Robbie. 2014. “Public Meeting over Environmental Concerns at Radford Arsenal.” *WVTF*, December 7. Retrieved May 13, 2025 (https://www.wvtf.org/environment/2014-12-07/public-meeting-over-environmental-concerns-at-radford-arsenal).

“Hazardous Waste Cleanup: Radford Army Ammunition Plant in Radford, Virginia.” *EPA*. Retrieved June 9, 2024

(https://www.epa.gov/hwcorrectiveactioncleanups/hazardous-waste-cleanup-radford-army-ammunition-plant-radford-virginia).

Hemphill, Emily. 2023. “Documentary Premieres about Open Burning at Radford Arsenal and Thyroid Cancer.” *Cardinal News*, April 11. Retrieved June 7, 2024 (https://cardinalnews.org/2023/04/11/documentary-premieres-about-open-burning-at-radford-arsenal-and-thyroid-cancer/).

Holifield, Ryan. 2001. “Defining Environmental Justice and Environmental Racism.” *Urban Geography* 22(1):78-90.

Isgren, Ellinor and Elina Andersson. 2021. “An Environmental Justice Perspective on Smallholder Pesticide Use in Sub-Saharan Africa.” *The Journal of Environment & Development* 30(1):68-97.

Kimbrell, K. Diane and Kathleen E. Hiatt. 1995. “Radford Army Ammunition Plant.” Retrieved March 5, 2024 (https://apps.dtic.mil/sti/pdfs/ADA316522.pdf).

Lucas, Rachel. 2016. “WSLS 10 Investigates Pollution at the Radford Army Ammunition Plant.” *WSLS*, May 18. Retrieved May 13, 2025 (https://www.wsls.com/news/2016/05/18/wsls-10-investigates-pollution-at-the-radford-army-ammunition-plant/).

McGurty, Eileen. 2007. *Transforming Environmentalism: Warren County, PCBs, and the Origins of Environmental Justice*. New Brunswick, NJ: Rutgers University Press.

McKane, Rachel G., Patrick Trent Greiner, and David Pellow. 2024. “Mutual Aid as a Praxis for Critical Environmental Justice: Lessons from W.E.B. Du Bois, Critical Theoretical Perspectives, and Mobilising Collective Care in Disasters.” *Antipode* 56(2):581-602.

Mohai, Paul, David Pellow, and J. Timmons Roberts. 2009. “Environmental Justice.” *Annual*

Review of Environment and Resources 34(1):405-430.

Mohamed, Ibrahim. 2017. “The Radford Arsenal Must Be Designated As a Superfund Site.” *Collegiate Times*, April 10.

Morgan, David L. 2011. *Focus Groups as Qualitative Research*. 4th ed. Thousand Oaks, CA: Sage Publications.

Mridha, Shibaji. 2021. “Ecocinema, Slow Violence, and Environmental Ethics.” *Crossings: A Journal of English Studies* 12:108-122.

Murdock, Esme G. 2020. “A History of Environmental Justice.” Pp. 6-17 in *Environmental Justice: Key Issues*, edited by B. Coolsaet. New York: Routledge.

Nixon, Rob. 2011. *Slow Violence and the Environmentalism of the Poor*. Cambridge, MA: Harvard University Press.

Pain, Rachel and Caitlin Cahill. 2021. “Critical Political Geographies of Slow Violence and Resistance.” *Environment and Planning C: Politics and Space* 39(6):1130-1147.

Presser, Lois. 2013. *Why We Harm*. New Brunswick, NJ: Rutgers University Press.

Ramstetter, Lena and Fabian Habersack. 2019. “Do Women Make a Difference? Analysing Environmental Attitudes and Actions of Members of the European Parliament.” *Environmental Politics* 29(6):1063-1084.

Rice, James. 2016. “Slow Violence and the Challenges of Environmental Inequality.” *Environmental Justice* 9(6):176-180.

Roach, Ron. 2022. *Appalachia: Persistence of the Region*. Lexington: University Press of Kentucky.

Schiffres, Meg. 2022. “Residents Link Cancer-Causing Emissions to Health Problems in Radford.” *VPM*, February 14. Retrieved June 9, 2024

(https://www.vpm.org/news/2022-02-14/residents-link-cancer-causing-emissions-to-health-problems-in-radford).

Smith, Samantha. 2023. “Radford Army Ammunition Plant Cited for Toxins in New River, Fined $21,145.” *WSLS*, April 13. Retrieved June 9, 2024 (https://www.wsls.com/news/local/2023/04/13/radford-army-ammunition-plant-cited-for-toxins-in-new-river-fined-21145/).

Stadelmann, Tanya A. 2015. “The Sound of Slow Violence and the Making of Eco-Documentary: This Creek.” Master's thesis, State University of New York at Buffalo.

Taylor, Dorceta E. 2014. “Enforcing Environmental Protections.” Pp. 98-122 in *Toxic Communities: Environmental Racism, Industrial Pollution, and Residential Mobility*. New York: New York University Press.

Temper, Leah, Mariana Walter, and Iokiñe Rodríguez. 2024. “Takeaways for Environmental Justice Movements.” Pp. 333-340 in *Just Transformations: Grassroots Struggles for Alternative Futures*, edited by L. Temper, M. Walter, and I. Rodríguez. London: Pluto Press.

U.S. Environmental Protection Agency. 2017. “Oak Ridge Reservation (USDOE) Site Profile.” Retrieved May 7, 2025 (https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.cleanup&id=0400364).

Virginia Department of Environmental Quality. 2021. *Virginia Toxics Release Inventory Report*. Retrieved May 7, 2025 (https://www.deq.virginia.gov/home/showpublisheddocument/13988/637843478873430000).

Vogel, Amos. 1979. “Independents: A Turning Point in Social Cinema.” *Film Comment*,

November-December. Retrieved May 13, 2025 (https://www.filmcomment.com/article/independents-alternative-cinema-vogel/).

White, Rob. 2013. “Environmental Justice and Harm to Humans.” Pp. 43-74 in *Environmental Harm*. Bristol: Policy Press.

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