

**APPENDIX 1: POTENTIALLY RESPONSIBLE PARTIES AT THE
PALMERTON ZINC SITE**

The following list was provided by the US EPA in response to Freedom of Information Act Request 03-RIN-00896-96:

1. Mr. Sumner Redstone, President, Viacom International, Incorporated (Viacom)
1515 Broadway
New York, NY 10036
2. Mr. Martin S. Davis, Chairman and Chief Executive Officer
Paramount Communications, Inc., A Viacom Company
15 Columbus Circle
New York, NY 10023
3. Mr. David O. Carpenter, President
Horsehead Industries, Inc.
110 East 59th Street
New York, NY 10022
4. Mr. David O. Carpenter, President
Zinc Corporation of America
a Division of Horsehead Industries, Inc.
110 East 59th Street
New York, NY 10022
5. Mr. William M. Quirk, President
Horsehead Resources Development Company, Inc.
110 East 59th Street
New York, NY 10022
6. Milliport Crushed Aggregates
Palmerton, PA

APPENDIX 2: DEFINITIONS AND TERMS

“ ‘When I use a word,’ Humpty Dumpty said, in a rather scornful tone, ‘it means just what I choose it to mean--neither more nor less.’

‘The question is,’ said Alice, ‘whether you can make words mean so many different things.’

‘The question is,’ said Humpty Dumpty, ‘which is to be master--that’s all.’ ”

(Lewis Carrol, Through the Looking Glass, 1866)

The following glossary is intended to minimize any confusion surrounding my use of numerous technical terms. In most instances, I provide references for the source of definitions that I have chosen.

Codified knowledge - (in this work also called **Official knowledge**; compare with **Fugitive knowledge**). The term codified knowledge is used in this study to refer to the “received canon” of knowledge that has obtained the ointment of “truth” by professional makers of knowledge--specialists who produce, promulgate and monitor it. It is often esoteric, that is, meant for a few initiated elite, and is built on a consensus of belief among the privileged. It is arrived at by way of consensus, and becomes “certified” by those who produce it and by those who accept it. Epistemologically, it is situated--at least in Western contemporary societies--in positivist thought and the belief that “there must be a universal foundation, a ground, a base, a framework, a structure of some sort behind knowledge or beneath it, upon which what we know is built, assuring its certainty or truth” (Bruffe, 1986, p. 776). Based on the theories of Gramsci (1985), codified knowledge is that knowledge that supports the dominant paradigm or master narrative in a culture. It becomes the common sense and norm for the culture through production, dissemination, and reification by the privileged.

In the realm of environmental science, codified knowledge is equivalent to “scientific knowledge.” Merrifield (n. d.) describes this knowledge, in part, as: based on theory, developed by rigorous rules of proof written from its own paradigm, not tied to its use, passed on through formal publications, and often requiring high technologies (p. 30). “Science has its own set of values which...guide scientists when they decide between, for example, competing theories or experimental methodologies” (Aikenhead, 1985, p. 457). It has “elite modes of inquiry”, such as, separation of researcher from researched, “objectivity,” specialized skills, arcane knowledge, specialized language, and is portrayed as non-political.

I recognize that knowledge generation and dispersion is more complex than is reflected in the use of the polar terms, “codified” (official) and “fugitive” (popular). Some knowledge may be neither. For instance, **collateral knowledge** is coterminous yet subordinate to codified knowledge. This type of knowledge is allowed to coexist along side codified knowledge so long as it does not challenge the master narrative. As Cunningham says, like popular knowledge, it “clearly reflects the reality of the nondominant cultures that produce it” (1988, p. 137). However, unlike popular knowledge that always calls power relations into question, this extra knowledge (e.g. in *addition* to the common sense and norms of the dominant culture) poses no overt threat to the dominant culture. In fact, it may be placed at the service of codified knowledge and manipulated so as to keep the master narrative, and its oppressive dimensions, in place. The kind of multiculturalism that celebrates the food and costume of ethnic groups often is ancillary knowledge since it is coextensive with the dominant culture, but never challenges it. Some indigenous knowledge is collateral, e.g. in Asian cultures, traditional medical practices and ethnopharmacological knowledge is practiced along side Western-based medicine. It should be noted that the language, and to some extent the ways in which the concepts are developed around the terms “**Fugitive** and **Collateral knowledge**” are original contributions of this dissertation research.

Contaminated communities - Defined as “residential [areas] located within ...identified boundaries for a known exposure to some form of pollution” (Edelstein, 1988, p. 138).

Counterhegemony - (See **Hegemony**).

Culture - Simply stated, culture is the knowledge that people share. It has characteristics such as emergent qualities of dynamism, is learned behavior, is a channel for action. Culture shapes thoughts and perceptions, maintains boundaries by limiting the range of acceptable behaviors and attitudes, instills in its adherents a sense of the naturalness of its beliefs, and prescribes certain social arrangements (Eitzen & Zinn, 1995, p. 115). It is used in this study in a manner compatible with Geertz (1972) as “the religious, philosophical, aesthetic, scientific, [and] ideological...programs [that] provide a template or blueprint for the organization of social and psychological processes” (p. 261). The key point is that “the patterns that make up a culture are largely invisible yet always present sources of authority in people’s lives. Even the power of rational thought and creativity are expressed in terms of culturally shared patterns” (Bowers, 1993, p. 21). It is misgiving to talk about culture and not talk about cultural politics. Quantz (1992) states, “culture is not so much the area of social life where people share understandings as that area of social life where people struggle over understandings” (p. 487).

Curriculum - I employ the term “curriculum” in this study not in the common usage as in “formal school curriculum,” but in a more cultural sense, e.g. from the sociology of knowledge. For instance, the master narrative of a community has an educational curriculum associated with it. In this sense, the curriculum of the industry alliance in Palmerton consists of the ideas (content), the method by which these ideas are produced or appropriated and put to use (forms of learning), the social practices in which those ideas and methods are materialized, and “above all, those three things in combination--as necessarily intersecting with the processes that constitute social interests, embodying relations of social power....A curriculum [is] an ongoing social organization and [a] distribution of knowledge [that] helps to constitute social interests and arbitrate the relations among them....[A curriculum] is a common learning program...which

seeks to operate across the whole population, embodies and negotiates relations of hegemony among interests in the society it deals with” (Connell, 1989, p. 122-123).

Emancipatory - Use of the term “emancipatory,” like “empowerment” and many other signifiers of critical theory, is problematic. It is used in the literature in a plethora of ways. It is utilized here in the manner after Quantz (1992) to indicate a process that enables people to “overcome their historically structured culture, which, in turn, requires that they step outside of their cultural views and reflect on their positioning in the world (p. 473).

Emergent citizen group - (abbreviated **ECG**). The sociological literature calls local, action oriented, problem-solving grassroots groups, ECGs. The term is used precisely in that manner in this study.

Fugitive knowledge (compare with **Codified knowledge**) - Fugitive knowledge, akin to **Popular knowledge**, is knowledge that is based on every day experience. It is outside of the control of knowledge-elites or professional knowledge makers. It is fugitive in the sense that it has escaped their control. I have adapted the term from the field of environmental engineering where fugitive pollution is that contamination that has escaped the pollution control mechanisms meant to manage it. Based in the concepts of the Gramscian organic intellectual, fugitive knowledge is the “common sense knowledge belonging to the people at the grassroots and constituting part of their heritage. [It is not normally codified, but is] practical, vital and empowering knowledge which has allowed them to survive, interpret, create, produce, and work...[It] “has its own rationality and causality structure....It remains outside the formal scientific structure built by the intellectual minority of the dominant system because it involves a breach of the rules, and hence its subversive potential” (Fals-Borda, 1982). I locate fugitive knowledge as a subset of *people’s knowledge*. It differs from the latter in that fugitive knowledge is *dangerous knowledge* that specialists attempt to actively disregard or suppress. It can be subjugated knowledge. Fugitive knowledge is, therefore, revolutionary knowledge

and is overtly political; not all people's knowledge is such (e.g. see **Collateral knowledge** in this glossary under **Codified knowledge**). Merrifield (n. d.) writes that "people's knowledge" is based on experience, involves those affected, is appropriate to the needs of its producers, is passed on orally (often but not exclusively), and is a part of the people's culture. Fugitive knowledge shares these characteristics with people's knowledge. Fugitive knowledge is often produced by emergent citizen groups contesting environmental hazards in their communities (Hill, 1995a; in press-a). The makers of the dominant discourse often delegitimize, or at least attempt to, the knowledge of grassroots groups. Schneider (1985) remarks that regulatory bureaucracies are often entrepreneurs of social problems. They take citizen claims, based on local experience, and transform them into a language constructed and controlled by experts (Latour, 1983), often dominating--or even changing--the definition of the problem. One of many ways that makers of the institutionalized discourse devalue popular knowledge is by attacking the credibility of the producers of the alternative knowledge (Martin, 1988, 1991).

Hazardous material - The federal Environmental Protection Agency defines hazardous waste as any discarded chemical that can cause harm because it is, (1) flammable, (2) unstable (explosive or releases toxic fumes), (3) corrosive, or toxic (cadmium, lead and other heavy metals fall into the toxic category of hazardous material) (Miller, 1992, p. 556). It should be noted that the definition does not include many types of harmful materials that the lay person would call hazardous. Substances such as radioactive material, household chemicals, mining waste, oil and gas drilling waste, cement kiln dust, municipal incinerator ash, waste from small businesses and factories that generate less than 220 pounds of "hazardous" materials per month, waste generated by the military except 116 sites so polluted they are on the federal priority cleanup list, and otherwise "hazardous" material that is licensed to be burned in industrial furnaces and cement kilns, which the EPA labels "recycling" waste. It should be apparent from the review of this list, that, like Humpty Dumpty, the EPA has chosen to define "hazardous" in its own way. The definition is an economic one, not a biological one. Miller (1992) reports that if the EPA would classify municipal incinerator ash as hazardous waste, "the increased cost of

[managing it] would make incineration of municipal garbage too expensive, and the whole industry would collapse. This would sharply reduce the profits of the big waste management companies (the largest of which are run by former EPA officials) and the large construction companies that build incinerators” (p. 557). The manipulation of language has been identified by environmentalists as “linguistic detoxification.” The impact of power asymmetries is evident in the list of materials not designated as hazardous: elected officials in states where special interests are especially strong, well-heeled organizations equipped with strong lobbyist, and government agencies have influenced the law.

Hegemony - The concept of hegemony was developed by Gramsci in the *Prison Notebooks* to describe the power of the state over others through the institutions of society rather than by direct force alone. The history of the use of the term precedent to Gramsci is provided by Coben (1995). It is used here, as reported in Gramsci (1985), to describe the spontaneous consent given by citizens to the narrative imposed on daily life by the dominant group in society. The consent is a function of peoples’ assent to it, due to the prestige, and consequently confidence, which the dominant group enjoys because of its location in the world of production. The hidden values, norms, feelings, beliefs, and ideologies of the master narrative are reproduced and passed on in the institutions of society. It is, however, always contested and never merely an automatic function of power. As such it is only a temporary balance in favor of the “ruling class” but one that is constantly negotiated and renegotiated. Change, therefore, is an intellectual, moral, and educational phenomenon. **Counterhegemony** is cultural production; it is the source of “struggle, hope, affirmation, and a possibility for...meaning making...that is rooted in social transformation or resistance to hegemonic control” (Kanpol, 1994, p. 35). Constructing alternative meaning and the generation of **Fugitive knowledge** go against the grain of the dominant discourse.

Ideology - In this work, I use the word “ideology” in the sense of Thomas (1993), as “a shared set of fundamental beliefs, attitudes and assumptions about the world that justify ‘what is’” (p.

8). The beliefs can be about “the physical, social, or metaphysical world [and] can be a prime mover or an impediment to change” (Laurer, 1973, p. 120). Ideologies help people interpret events and they provide the rationale for particular forms of action. Since ideologies can divide as well as unite people, they are powerful cultural forces within society (Eitzen & Zinn, 1995, p. 119).

Knowledge - A term used in many different ways. Knowledge, like learning, and other educational concepts in wide circulation, is not easily defined. However, it has been described as the social justification of beliefs (Bruffe, 1986). Knowledge has a social context and is a social construct. Language is at the center of knowledge and of the authority of knowledge (p.778), making language a site of contest.

I am most concerned here with what is defined as “emancipatory knowledge.” This form of knowledge “increases awareness of the contradictions hidden or distorted by everyday understandings, and, in doing so, it directs attention to the possibilities for social transformation inherent in the present configuration of social processes” (Lather, 1986, p. 259). Emancipatory knowledge is possible only when a pedagogy of inclusiveness exists, and when the agents of learning are willing to lay bare their own positionality and attendant biases (Ellsworth, 1989).

Landscape - Landscape is an environmental experience and a “complex of configurations and life forms distributed in space.” There are many meanings associated with landscape, including: *concrete* meaning (suggesting a physical place), *use* meaning (suggesting utility and function), *value* or *emotional* meaning (suggesting aesthetics, sensation and sentiment, and *symbolic* meaning (signifying or coding for something else such as freedom, nature etc.) (see Sonnenfeld, 1966).

Natural disasters - (See **Technical disasters**).

Official knowledge - (See **Codified knowledge**).

Place - (See **Landscape**, and **Space**). Place, space and landscape are often used as equivalents, although they differ in many respects. Space is “conceptually abstract,” and refers to the “distribution and arrangement of objects.” Landscape “although it involves environmental features distributed in space, is both more specific and more variable” (Sonnenfeld, 1966, p. 73).

Place is a term defined differently by the insider than by the outsider. To the insider, “place constitutes the processes and events normally unnoticed and unquestioned. He or she dwells in place and rarely conceives it as an explicit entity which might be made the object of directed attention” (Seamon, 1980, p. 192). To the outsider, place is viewed as an artifact. Relph (1993) suggests that “place” is “those fragments of human environments where meanings, activities and a specific landscape are all implicated and enfolded by each other” (p. 37). Place is the center of felt value (Tuan, 1977, p. 4). “What begins as undifferentiated space becomes place as we get to know it better and endow it with value” (p. 6). These concepts are essential to understanding the pedagogy of space in Palmerton.

Popular knowledge - (See **Fugitive knowledge**).

Space - Space is a very complex phenomenon. It can be both imagined and material. I am especially interested in social space, originally described by Durkheim (1933). It has both a subjective dimension of sociological dynamics and an objective dimension of concrete and physical form. The term is often, but not exclusively, used in this study to define material tangibility. Space is the presumed effect of location where social processes are taking place; it is a politically charged location (Agnew, 1994). A series of definitions of social space is found in Buttner (1980, p. 21ff).

Technical disasters - Disasters are classified into two major categories: natural and technical (Baum, Fleming, & Singer, 1983). **Natural disasters** are the assaults of nature. They are

often not precisely predictable, and their impact is rapid, such as floods, earthquakes and tornadoes. **Technical disasters** are the result of human actions, and are often the outcome of system malfunctions. Both types of disasters are uncontrollable, however, natural disasters represent a *lack* of control, while technical disasters mean a *loss* of control (p. 120). The loss of control of technology results in hazards that lead to illness and death, as well as environmental, social and economic impacts. They have been termed “technological hazards” by researchers (Hohenemser, Kates, & Slovic, 1983). The pollution at Palmerton is an example of a technical hazard that has become a technical disaster. Technological hazards that result in technical disaster “generate greater post-accident uncertainty than due natural disasters (Baum, et al. 1983, p. 121). Few studies have examined the long term effects of technological disasters (p. 121). It has been suggested (Edelstein, 1988) that the victimization of individuals by technical disasters may produce emotional numbing and maladaptive passivity. These responses have been described by Peterson & Seligman (1983) as “learned helplessness.” Gaventa (1980) has labeled this response to environmental disaster, “quiescence.”

Toxic material (See **Hazardous material**) - One of several categories of hazardous waste that releases chemicals into the ecosystem when handled or manipulated (Miller, 1992).

Values - The “criteria that members of society use to evaluate objects, ideas, acts, feelings or events as to their relative desirability, merit, or correctness” (Eitzen & Zinn, 1995, p. 127).

They are the source of both social integration and social problems.

APPENDIX 3: "IN THE SHADOW OF A GIANT," A POEM BY TESS ROBERTS

I already knew that I couldn't see clearly - all of my
surroundings.
I could hear what was taught to me.
I observed many people, places, and events.
But never could I see Palmerton brilliantly.
Why I thought, despite the brightness of the day, couldn't I see?

Motherhood wonderfully intensifies a woman's senses.
And it was at this point in my life that I saw the shadow.
The source of this great shadow was a corporate giant
standing between the community and the sun.
Now as I really thought about it, I knew "it" had been there
for a long, long time.
All my life, all my parents lives, and my grandparents before
that.

"It" was not evil.
But the giant designed life in this community and always
watched to see that we followed "its" plan.
The hospital, the swimming pool, the library, jobs, and
revenues were all part of "its" self-proclaimed benevolence.
Most people seemed content.
Yet I felt fearful.
I knew that the giant demanded allegiance for these things.
It stood tall above us and everything good and bad occurred
in its shadow.

One day, as I watched my two small children, a sadness
overtook me.
I was helping another generation learn, as had I, to live
comfortably in the shadow of a giant, unable and afraid to
seek out what was really around them.
Then it occurred to me!
Not even the most mammoth giant can stand in one spot for a
hundred years.
A shift or a turn sideways for one day, one hour, or one
moment would give me a chance to see everything fully
illuminated!

I began a vigil, ever watching for the giant to move.

It happened.

As the giant turned to one side, I finally saw my home, my
community, and my surroundings quite clearly.

Myriads of emotions welled up inside me.

I wanted to cry, but there was no time.

Gently I pulled my children to me.

I told them a story; and as I did, pointed to a cloud of dust
to the east.

I asked them to look closely at the steep, dry, and barren
slopes of the mountain.

They looked at the trees resembling toothpicks standing as a
testimony to pollution.

A huge coffin of slag ran all the way along the base of the
mountain.

I showed them how the waters of the little creek could be
tainted and this water in turn would meet up with a greater
river.

I asked them to listen closely to the words people spoke and
to be cautious when those individuals chanted carelessly
“Nothing is wrong in Palmerton.”

The giant shifted and once again blocked the sun just as “it”
had done for decades.

I was so relieved that my children had caught a glimpse of
truth.

It had taken me so much longer.

Months later, I learned that some others in our town had
waited just like me to see the shadow fade - if only for a
brief moment.

They too saw what I had seen in a new and fleeting light.

All that we do in Palmerton is still greatly influenced by a
corporate giant.

I now know that the giant never steps willingly to the side.

Truth would be “its” death knell.

The best I can hope for is a desire on the part of others to
search for what truly lies in the shadow of this giant.