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A Historical Overview
of the Bumpass Cove Landfill
Controversy, 1972 - 2002

A thesis
presented to
the faculty of the Department of History
East Tennessee State University

In partial fulfillment
of the requirements for the degree
Master of Arts in History

by
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ABSTRACT

A Historical Overview of the Bumpass
Cove Landfill Controversy, 1972 – 2002

by

Robert Clinton Marsh III

With the assistance of information collected by residents of Bumpass Cove, Tennessee Department of Public Health records and interviews with residents and local health officials, this study provides an historical overview of the inception of Bumpass Cove Landfill, the resulting problems stemming from its misuse, and the reaction of a persistent community during the 1970s and early 1980s. In its early days, Bumpass Cove was an active and productive mining site; however, the area would become a threat to the local residents' safety with the opening of Bumpass Cove Sanitary Landfill. Years of illegal hazardous waste land filling wreaked havoc on the environment and endangered area residents' health. In the end, citizen protest and the intervention of the Superfund Program would result in the closing of the landfill and the restoration of the area. Taken together, these occurrences paint a vivid picture of the controversy surrounding Bumpass Cove Landfill.

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CHAPTER 1

ESTABLISHMENT OF BUMPASS COVE LANDFILL

Bumpass Cove is a small mountain community that lies between Rich and Embreeville Mountains. Located in the southwest corner of Washington County and including a small portion of northern Unicoi County, the area is some four miles long and almost two miles wide. Its watershed is drained by the Bumpass Cove Creek into the Nolichucky River. The cove had been one of the richest mineralized areas in East Tennessee, which helped establish the area's long history of iron, lead, zinc, and manganese mining. Throughout the years the cove's mines experienced times of great productivity as well as stagnation. In June 1972 Bumpass Cove's history took a turn for the worse when the Bumpass Cove Environmental Controls and Minerals Corporation obtained a permit from the Tennessee Department of Public Health to operate a sanitary landfill located in an old mining site near the head of the cove.

For nearly eight years waste from throughout East Tennessee and Southwest Virginia as well as countless other areas was dumped into the landfill. Although many of the items buried in the landfill were approved, numerous items were disposed of without proper authorization. Individuals within the community began to notice the illegal practices that were constantly occurring in the cove and became aggravated at the Tennessee Department of Public Health's lack of initiative in stopping these illegal practices. Yet it was not until a flash flood in July 1979 that the appropriate attention was given to the problem. In response, the citizens of Bumpass Cove formed the Bumpass Cove Citizens Group, which eventually played an integral part in the closing and cleanup

of the landfill. In 1980 the landfill was finally closed, yet the years of mistreatment to the area's environment had left a mark that could not easily be erased. This study examines the inception of the Bumpass Cove Landfill, the resulting problems stemming from its misuse, and the reaction of a persistent community during the 1970s and early 1980s.

Bumpass Cove contains the only major mineral deposits in the Washington-Unicoi-Greene County area and has, therefore, played a major role in local history. Indians were the first to use the minerals in the cove. The iron ore, yellow limonite, and rich, red hematite supplied all the pigment they could use in making the brightest colors of any tribe on the Nolichucky, or any other river for that matter. Numerous remains of the Cherokees and their villages have been found at the mouth of the cove.¹ Not only was the cove prosperous for the Indians, but it also proved to be a wise investment for a long line of investors.

According to tax lists of the 1780s, the first known landowner in the cove was William Coyler, who bought 350 acres of land in Bumpass Cove containing a lead mine. Coyler started mining lead in the 1770s, which was reportedly used to fire bullets against the British in 1780 at the Battle of King's Mountain. The mine eventually became known as "Coyler's Mine." In 1791 Coyler sold the property, which then consisted of 550 acres of land, to Louis Newhouse and Andrew Leuthold for four hundred pounds. This and adjacent land, totaling 3,100 acres was sold in 1800 to John Sevier Jr., the son of General John Sevier, for 3,000 pounds.²

¹ Bob Hurley, "The Mines, Mills and Mints of Bumpass Cove and Embreeville," *The Greeneville Sun*, 10 February 1973, 6.

² John F. Nash, "Elijah Embree and the Embreeville Ironworks," A paper presented to the Washington County Historical Society, April, 1997, 6.

Mining continued in 1812 when William P. Chester bought 260 acres near the mouth of the cove and eventually built a forge for iron ore. He later sold the forge to Elijah and Elihu Embree, and, with the property's acquisition, the area came to be known as Embreeville. The Embrees acquired many additional acres, built forges, furnaces, and nail factories, and by 1820 were widely known for their high-quality cast and forged iron products. In 1830, after the death of his brother Elihu, Elijah formed a partnership with Robert L. Blair, John Blair, and William Blair. When Elijah died in 1849, the Blair brothers became the sole proprietors. Their "Pleasant Valley Iron Works" soon became the largest producer of iron in East Tennessee.

With the onset of the Civil War, the Confederacy turned toward Bumpass Cove to supply ammunition and cannons. The Confederate government sent Duff Greene, a politician, journalist, and industrial giant to Embreeville to insure maximum wartime production. Greene entered into a contract with Confederate Chief of Ordinance Josiah Gorgas under which one half of the total production would go to the government and the other half would be sold commercially. Called the Confederate Iron Works, it proved to be of great value to the East Tennessee campaign.³ Greene and the Confederates built the finest furnaces of the day near the mouth of the cove, and, if it were not for the defeat of the Confederates, they had planned to build several more. The manufacturing of war materials at the cove was so important to the Confederates that men could enlist to come there and work instead of going off to war.⁴

³ Nash, "Elijah Embree," 6-7.

⁴ Hurley, "The Mines, Mills and Mints," 6.

After the war and the fall of the Confederacy, Duff Greene remained in Embreeville and attempted to industrialize the area. Greene formed a corporation with several other financiers and attempted to bring business to the cove. However, with the collapse of the Confederacy and the paralyzing effect of Reconstruction, the mines reverted to the Blair interests of mining iron.⁵

In 1890 British capitalists purchased the Embreeville Iron Works from the estate of John Blair as part of the 45,000 acres of the surrounding land and operated under the title of the Embreeville Freehold Land, Iron and Railway Company. Elaborate plans were laid out to establish a town; however, the financial panic of 1893 caused the furnace to shut down, thus ending the capitalists' plan for a town. It wasn't until 1903 that the Embree Iron Company, created by New York and Chicago interests, introduced hydraulic mining. The operation was not successful and in 1909 the Iron Company was shut down.⁶

In 1913 the Embree Iron Company was reorganized and began to mine zinc. Intensive churn drilling to locate deposits of zinc and lead resulted in the discovery of rich deposits. Large shipments of zinc and lead continued through the post-World War I period. Nations were in desperate need of rebuilding and the crucial materials that came from the cove were still in high demand. People from all over East Tennessee came to work at the mine, but by 1930 the mine began to falter once again.⁷

⁵ Nash, "Elijah Embree," 7.

⁶ Paul M. Fink, "The Bumpass Cove Mines and Embreeville," *The East Tennessee Historical Society's Publications*, No. 16 (1944), pp.48-64.

⁷ Hurley, "The Mines, Mills and Mints," 7.

It was not until 1935 that more drilling began to take place. Because of the limited amount of imported manganese, companies sought new deposits in this country, and in 1939 the Embree Iron Company became the single largest producer of metallurgical-grade manganese concentrates in the country. Yet the ore, mined by power shovel, was quickly exhausted. Some hand mining continued throughout the 1940s, but another period of growth had ended. Tri State Mines, owned by the Wa Cheng Corporation, bought the mining interests in 1952. Within three years, Tri-State removed almost all of the remaining ore, and by 1960 mining in the area was finished.⁸ The extensive history of mining in Bumpass Cove would eventually play a defining role in determining the usability of this area as a sanitary landfill.

In 1969, a survey of all organized solid waste disposal facilities in the state of Tennessee revealed there were 270 organized disposal facilities in operation. In 1970-71 the Office of Enforcement and Grants of the Tennessee Department of Public Health undertook an evaluation of these 270 existing disposal facilities to determine which should be closed and which could be converted to sanitary landfills. A team of specialists, including a soils scientist from the Soil Conservation Service, a geologist from the Tennessee Conservation Department, Division of Geology, and a representative from the Office of Enforcement and Grants evaluated the sites from the standpoint of topography, geology, soils, and hydrology. At the conclusion of their evaluations, they furnished a written report to each Solid Waste Office Field Representative, who was responsible for writing a letter of approval or rejection of the sites based on the studies.⁹

⁸ Fink, "The Bumpass Cove Mines," 52.

⁹ Bobby Morrison, Division of Sanitation and Solid Waste Management to [William Hubbard, Assistant Attorney General], Tennessee Department of Public Health Records,

Gary Phillips, the East Tennessee Field Representative for the Solid Waste Office, wrote a letter of rejection for numerous sites in the counties of Carter, Unicoi, Washington, Sullivan, and Hawkins.¹⁰ Most of the operators of these facilities blamed him personally for finding their disposal sites unsuitable.¹¹

Two of the sites that Gary Phillips wrote a letter of rejection for were operated by the Unicoi County Health Department. The team had determined that the site owned by Rex Lewis and operated by Harry Cheney, a sanitarian for the Unicoi County Health Department, was unsuitable as a landfill because of problems located in the water table of the adjacent Nolichucky River and the large slick rocks they were using in the cover material. They found that the other site owned by Bill Britt and also operated by Harry Cheney was leaching waste into a small stream of water and releasing strong odors due to waste from a nearby cannery. Gary Phillips' recommendations closed both sites.¹²

The Unicoi County Health Department proposed only one new landfill site. Located approximately three hundred feet from the recently closed sites and a little higher in elevation, officials found the new site, known as Bumpass Cove, suitable.¹³

23 May 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

¹⁰ Bobby Morrison, Division of Sanitation and Solid Waste Management to [Joe W. McCaleb, Attorney, Tennessee Department of Public Health], Tennessee Department of Public Health Records, 11 June 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

¹¹ Bobby Morrison, Division of Sanitation and Solid Waste Management to [William Hubbard, Assistant Attorney General], Tennessee Department of Public Health Records, 23 May 1975.

¹² Solid Waste Management, Field Visit #1, Tennessee Department of Public Health Records, 6 May 1971, Bumpass Cove-Embreeville Collection, Archives of Appalachia, East Tennessee State University, Johnson City, Tennessee.

The area, an abandoned manganese mine, consisted largely of mine pits and dumps, according to Bobby Birdwell, a soil conservationist from the United States Department of Agriculture. In December 1971, Birdwell stated that there were several former sediment basins two or three acres in size in which trenches could be cut and appropriate cover material could be easily obtained. He also determined that there were no special soil problems and that the available cover material seemed very suitable for landfill use.¹⁴

Gary Phillips, upon reviewing Birdwell's recommendations, contacted David Witherspoon, of the Tennessee Department of Public Health, on January 10, 1972, to let him know that Bumpass Cove was possibly a suitable site for a new landfill according to Birdwell's assessment. In the letter, Phillips indicated that there were areas in Bumpass Cove that had to be protected by leaving a "clay pad" to insure against pollution to underground water. Also, because of the slope and topography, the site operators would have to practice extreme measures in order to control surface runoff from the disposal area.¹⁵

Gary Phillips resigned his position as the East Tennessee Field Representative for the Solid Waste Office on January 28, 1972, to become effective April 3, 1972, at the end

¹³ Bobby Morrison, Division of Sanitation and Solid Waste Management, Landfill Summary, Tennessee Department of Public Health Records, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

¹⁴ Bobby Birdwell to [Gary Phillips, Unicoi County Health Department], Tennessee Department of Public Health Records, 7 December 1971, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

¹⁵ Gary Phillips to [David Witherspoon, Tennessee Department of Public Health], Tennessee Department of Public Health Records, 10 January 1972, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

of accumulated leave time.¹⁶ Upon Gary Phillips' request, Charles Orr, director of the Tennessee Department of Public Health's Solid Waste Management Division, reaffirmed the suitability of the Bumpass Cove site as a sanitary landfill in March 1972. After reviewing and evaluating Bumpass Cove, Orr agreed with Birdwell's findings concerning the extra measures that would need to be taken in order to safely operate the landfill as a solid waste disposal operation. He also stated that most of the areas along and immediately adjacent to Bumpass Cove Creek would have to be avoided throughout the disposal operations; however, certain areas of the cove were certainly suitable for disposal operation, specifically a trench extending from the Polly Hollow mine to the Baptist Hollow mine. Orr gave tentative approval of the Polly Hollow-Baptist Hollow Mine for the future operation of a solid waste disposal site on the condition that special measures were taken to repair the condition of the dam in the middle of the cove. Approval for other specific parts of the cove would have to wait until a future date. Mr. Orr concluded by saying that, "The potential of this area of Bumpass Cove for a safe sanitary solid waste disposal operation is excellent; however, improper operating or construction practices can limit the effectiveness of the entire Bumpass Cove area."¹⁷

¹⁶ Bobby Morrison, Division of Sanitation and Solid Waste Management to [William Hubbard, Assistant Attorney General], Tennessee Department of Public Health Records, 23 May 1975.

¹⁷ Charles Orr, Tennessee Department of Public Health to [Gary Phillips, Bumpass Cove Environmental Control and Minerals], Tennessee Department of Public Health Records, 10 March 1972, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

Before the site could be registered, an approved feasibility study and construction and operating plan were required.¹⁸ In May 1972, the Division of Sanitation and Solid Waste Management conducted a feasibility study that was sufficient enough in scope and detail to warrant approval of additional areas within the cove; however, two points had to be followed: the area known as the Fowler mine could not be used at the present time, nor could hazardous or toxic wastes be accepted at the fill.¹⁹ Gary Phillips, now employed by Bumpass Cove Environmental Control and Minerals, the owner of the Bumpass Cove landfill site, also reported that a distinct drainage problem did exist and that he knew that extreme caution would have to be taken to avoid difficulties. In reply, the Division of Sanitation and Solid Waste Management would plan to discuss the details of the design of these specific areas before operation could begin.²⁰ While certain areas of the cove were still problematic, a majority of the cove was ready for use.

With all of Unicoi County's landfill sites closed including the town of Erwin's landfill, which Phillips also had a direct hand in closing, and with the Bumpass Cove Landfill ready for use, Erwin decided to turn its garbage collection service to a "private concern." According to the *Kingsport Times-News*, "On June 27, 1972, the City of

¹⁸ Ibid.

¹⁹ J.M. Apple, Division of Sanitation and Solid Waste Management to [Gary Phillips, Bumpass Cove Environmental Control and Minerals], Tennessee Department of Public Health Records, 4 May 1972, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

²⁰ J.M. Apple, Division of Sanitation and Solid Waste Management to [Gary Phillips, Bumpass Cove Environmental Control and Minerals], Tennessee Department of Public Health Records, 24 May 1972, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

Erwin, with virtually no other alternative, entered into a contract with Bumpass Cove.”²¹

It would have cost the town \$84,000 initially to provide a landfill that would meet the requirements of the state, and additional monies would have been necessary to manage and maintain the landfill. With a promise for improved service and a savings to the taxpayer, the Erwin City Council agreed to terms with the Bumpass Cove Environmental Control and Minerals Corporation, an agreement which saved the town approximately \$20,000.²² In changing to the new contracted garbage collection, the town “was said to be getting out of the garbage business.”²³

On July 1, 1972, the Tennessee Department of Public Health approved Bumpass Cove Landfill for operation. The site was available to all of Unicoi County. There were approximately 200 acres in use with an estimated projection of 5,000 to 8,000 acres available for future use. Cover was to be constant during operating hours. A gateman, a record keeper, three machine operators, a grademan, and a night watchman operated the facility. According to Harry Cheney, now a health department official, this was an approved landfill.²⁴

The cove continued to expand. On July 10, after not even a week of operation, Tri-Cities Mining Corporation out of Delaware sold Bumpass Cove Environmental

²¹ David Osterhout, “Health Department Clears Ex-Employee in Cove Probe,” *Kingsport Times-News*, 1 July 1975, 1 (A).

²² *Erwin Record*, 14 June 1972.

²³ *Erwin Record*, 8 June 1972.

²⁴ Division of Environmental Sanitation, Field and Activity Report, Tennessee Department of Public Health Records, 2 July 1972, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

Control and Minerals a tract of land containing 5,000 acres.²⁵ On July 19, Gary Phillips' hope of further expansion was set into motion when the Mineral Exploration and Mining Consultants contacted the Division of Sanitation and Solid Waste Management in regards to Phillips' request for more details concerning the design of even more land. The Mineral Exploration and Mining Consultants sent a step-by-step plan for construction.²⁶ The landfill expanded to more than 5,000 acres almost overnight.

As the landfill grew, Phillips realized more and more that industrial waste hauling and land filling were going to make up a large part of his operation, but he still had an obligation to the citizens of Unicoi County. In accordance with the services he had promised, he supplied the town with approximately five hundred thousand garbage disposal containers marked Bumpass Cove, which he hoped would help in providing more sanitary, efficient disposal for Unicoi County.²⁷ In November, nearly three months after opening, Bumpass Cove Environmental Control and Minerals mailed a questionnaire to citizens asking whether they favored the new system; of the eighty-two questionnaires returned, thirty-six individuals replied that the new system was excellent;

²⁵ Deed between Tri-Cities Mining Corporation and Bumpass Cove Environmental Control and Minerals, Tennessee Department of Public Health Records, 10 July 1972, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

²⁶ Deane F. Kent, Mineral Exploration and Mining Consultants to [J.M. Apple, Division of Sanitation and Solid Waste Management], Tennessee Department of Public Health Records, 19 July 1972, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

²⁷ *Erwin Record*, August 30, 1972.

thirty-five-good; five-fair; three-poor; three-no opinion.²⁸ In the beginning, Bumpass Cove Environmental Control and Minerals lived up to the citizens' expectations.

As expected, the number of requests for industrial waste hauling and land filling increased. On August 1, 1972, Phillips wrote Tom Tiesler, an official in the Office of Industrial Waste Management of the Tennessee Department of Public Health, a letter describing the types of materials the Tennessee Eastman Company desired to place in the Bumpass Cove Landfill. To accept the solid waste from Eastman, Phillips hoped to install a small transfer station for compacting solid waste into a forty cubic yard container.²⁹

Sensing that even more nearby counties and industries might need to dispose of "special" waste, Mr. Phillips sought to prepare Bumpass Cove for such disposal in May 1973 by contacting Jerry Loftin of the Division of Sanitation and Solid Waste Management. He in turn informed Phillips of Regulation 6, Section C-1-j of the Regulations Governing Solid Waste Processing and Disposal in Tennessee in a letter dated May 18, 1973. The regulation stated, "Dead animals, sewage solids or liquids, and other materials which are hazardous or hard to manage shall be disposed of in a sanitary landfill only if special provisions are made for such disposal and are approved by the Department." In order to meet departmental requirements, a thorough understanding of the nature of each special waste had to be gained to insure that the waste could be handled at a particular site without posing a threat to public health or to the well being of

²⁸ *Erwin Record*, November 1, 1972.

²⁹ Gary Phillips, Bumpass Cove Environmental Control and Minerals to [Tom Tiesler, Industrial Waste Management, Tennessee Department of Public Health], Tennessee Department of Public Health Records, 1 August 1972, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

the operator and the environment. Bumpass Cove Environmental Control and Minerals would need to submit the following information: physical characteristics, such as color, texture, density, and viscosity; a complete chemical analysis; the generation source (schematic flow diagram of the manufacturing process which creates the waste stream or schematic flow diagram of waste treatment facilities if special waste is resultant from waste treatment); the quantity including the amount taken to processing or disposal facility per trip, and the number of trips in a stated amount of time; and the location, owner, and registrant number of the site at which the processing or disposal would occur.³⁰ Before the landfill could accept special waste, it would have to get permission from the Division of Sanitation and Solid Waste Management.

In November 1973, Charles Scott of Bumpass Cove Environmental Control and Minerals continued to pursue the disposal of special waste by approaching Tom Tiesler about beginning plans for a liquid waste incinerator. Tiesler agreed with the design of a liquid waste incinerator and expressed that the Division of Sanitation and Solid Waste Management felt it would be of great benefit to the industries of the East Tennessee area generating hard to treat liquid wastes. After some discussion with Mr. Scott, Tiesler agreed that a complete feasibility study did not need to be submitted for this unit and that a study only containing information pertinent to the burner should be included in an

³⁰ Jerry Loftin, Division of Sanitation and Solid Waste Management to [Gary Phillips, Bumpass Cove Environmental Control and Minerals], Tennessee Department of Public Health Records, 18 May 1973, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

addendum.³¹ While Bumpass Cove was still not ready to accept special waste, two very important steps had been taken towards approval.

In mid May Suburban Sanitary Services, the new name of Bumpass Cove Environmental Control and Minerals, continued to pursue their plans for operating a liquid waste incinerator to process various by-products from surrounding industries. On May 10, Mike Apple of the Division of Sanitation and Solid Waste Management approved the Bumpass Cove Complex as a waste processing facility in a letter to Gary Phillips. Apple stated that the operating plans for the liquid waste incinerator fulfilled the requirements of the regulations. Prior to the actual operation of the system, however, several aspects that were crucial to safe operation could not be evaluated. These unknown factors were related to the liquids, which were to be incinerated, and the processing required prior to incineration. The approval of the facility, therefore, would have to be reviewed within sixty days following initiation of processing. At that time, any unforeseen problems that had arisen would be evaluated. This would be a continuing process as new materials were received and additional facilities were constructed to insure proper processing. As such, the maintenance of records pertaining to waste types and volumes would be necessary. Apple affirmed that as of May 14, 1974, the operation of the incinerator was approved.³²

³¹ Tom Tiesler, Division of Sanitation and Solid Waste Management to [Charles Scott, Bumpass Cove Environmental Control and Minerals], Tennessee Department of Public Health Records, 1 November 1973, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

³² J.M. Apple, Division of Sanitation and Solid Waste Management to [Gary Phillips, Suburban Sanitary Services, Inc.], Tennessee Department of Public Health Records, 14 May 1974, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

While Bumpass Cove could now accept special liquid wastes, it was not approved to begin accepting *hazardous* wastes. Over the next several months, however, Suburban Sanitary Services, now known as Wasteplex, Inc., was approached with several disposal offers. Tom King, Operations Manager for Wasteplex, spoke with Mike Apple about the possibility of disposing of waste for Beecham-Massengill Pharmaceutical of Bristol, Tennessee, even though Bumpass Cove currently had no other means of disposing of special solid wastes besides landfill. A few of the materials included in the dump which were emphasized were Arsenic Trioxide, Strychnine, and Digitoxin. A local poultry company also approached Wasteplex to dispose of 350,000 pounds of contaminated poultry.³³ On October 18, Jerry Loftin responded to King's letters requesting the disposal of the hazardous wastes, stating that the materials could not be approved for landfill because the materials were considered hazardous by the Tennessee Department of Public Health.³⁴ Wasteplex had gained the opportunity to submit a proposal for handling such material.³⁵

On January 14, 1975, Gary Phillips requested a site evaluation of Bumpass Cove for the possibility of being registered for the disposal of hazardous wastes in accordance

³³ Tom King, Wasteplex, Inc. to [J.M. Apple, Division of Sanitation and Solid Waste Management], Tennessee Department of Public Health Records, 9 September 1974, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

³⁴ Jerry Loftin, Division of Sanitation and Solid Waste Management to [Tom King, Wasteplex, Inc.], Tennessee Department of Public Health Records, 18 October 1974, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

³⁵ Tom King, Wasteplex, Inc. to [Jerry Loftin, Division of Sanitation and Solid Waste Management], Tennessee Department of Public Health Records, 7 October 1974, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

with the Tennessee Solid Waste Disposal Act. Mr. Phillips felt that the property had the physical potential for this type of disposal program.³⁶ On February 7, a preliminary geologic evaluation of the proposed hazardous waste disposal site to be operated by Wasteplex was made. Geologist John Hines made the following recommendations: “Before a final decision as to the suitability of this site can be made, the following requirements must be fulfilled to the satisfaction of the Tennessee Department of Public Health: a seismic survey of the entire site, auger borings in order to obtain a more accurate construction of the bedrock, uniformly distributed soil samples, preliminary ground observation wells must be installed to determine the depth of the water table, and a test of the natural background quality of the small unnamed streams adjacent to the site and Bumpass Cove Creek.” All other aspects of the facility dealing with the handling of the wastes, chemical or physical treatment, and the ultimate disposal methods would have to be under the supervision of the Engineering Staff of the Tennessee Department of Public Health.³⁷ Wasteplex had become a landfill in demand and had assumed the responsibility for disposing of a majority of different forms of wastes throughout East Tennessee. As demand from local industries increased, so did problems in the cove.

³⁶ Gary Phillips, Wasteplex Inc. to [Larry Gilliam, Tennessee Department of Public Health], Tennessee Department of Public Health Records, 14 January 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

³⁷ John Hines, Geologist, Preliminary Geologic Evaluation, Tennessee Department of Public Health Records, 7 February 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

CHAPTER 2

PROBLEMS ARISE

Since the very beginning, the operators of the Bumpass Cove Landfill were interested in accepting special and hazardous wastes. As early as August 1972, one month after the landfill's opening, officials from Tennessee Eastman Company asked Gary Phillips to accept special waste, a request that Phillips was eager to fill.¹ As the requests for special waste disposal increased, Phillips sought permission from the Division of Sanitation and Solid Waste Management to accept this type of waste that included dead animals, sewage solids or liquids, and other materials that were hazardous or hard to manage. In May 1973, Jerry Loftin of the Division of Sanitation and Solid Waste Management granted approval for several sites at Bumpass Cove to receive such waste but made it very clear that no hazardous or toxic wastes could be disposed of until his office had been notified, the necessary forms completed, and approval given for each request.² Additionally, in November of the same year, Bumpass Cove Landfill sought

¹ Gary Phillips, Bumpass Cove Environmental Control and Minerals to [Tom Tiesler, Industrial Waste Management, Tennessee Department of Public Health], Tennessee Department of Public Health Records, 1 August 1972, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

² Jerry Loftin, Division of Sanitation and Solid Waste Management to [Gary Phillips, Bumpass Cove Environmental Control and Minerals], Tennessee Department of Public Health Records, 18 May 1973, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

approval for a liquid waste incinerator that could handle hard to treat liquid wastes.³

Approval for the incinerator was eventually granted in May 1974.⁴

Evidences of unauthorized waste disposal and bad practices at the landfill soon began to emerge. Officials of the Division of Sanitation and Solid Waste Management discovered that the Bumpass Cove Landfill was already ponding contaminated water from the Westinghouse Corporation in Abingdon, Virginia. Sixty thousand gallons of contaminated water from Westinghouse had reached Bumpass Cove and were placed in a soil holding pond before the dumping could be ordered stopped by the Division of Sanitation and Solid Waste Management.⁵ Additionally, Ronald Cooper, Ralph Loyd, and Jerry Loftin of the Division of Sanitation and Solid Waste Management discovered more liquid wastes being disposed of illegally. On November 8, 1973, they found numerous barrels containing chemicals on the site as well as a large pile of dry chemical waste spilled on the ground and a large number of drums that were leaking or missing covers allowing rainwater to enter the drums and displacing oil based chemicals.⁶

³ Tom Tiesler, Division of Sanitation and Solid Waste Management to [Charles Scott, Bumpass Cove Environmental Control and Minerals], Tennessee Department of Public Health Records, 1 November 1973, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

⁴ J.M. Apple, Division of Sanitation and Solid Waste Management to [Gary Phillips, Suburban Sanitary Services, Inc.], Tennessee Department of Public Health Records, 14 May 1974, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

⁵ Jerry Loftin, Division of Sanitation and Solid Waste Management to [Washington County File], Tennessee Department of Public Health Records, 30 May 1973, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

⁶ Bobby Morrison, Division of Sanitation and Solid Waste Management to [Joe W. McCaleb, Attorney, Tennessee Department of Public Health], Tennessee Department of

Another inspection of the Bumpass Cove facility on November 18, 1973, revealed more violations of the Regulations Governing Solid Waste Processing and Disposal in Tennessee. Inspectors from the Tennessee Department of Public Health found a truck loaded with burning waste dumping the waste with no attempt to extinguish the blaze. Additionally daily cover was not being placed on the refuse, and there were barrels of liquid waste leaking onto the ground that had been stored on-site in anticipation of the installation of the liquid waste incinerator. These wastes were stored outside the fence within fifty feet of a public road, which meant that anyone had access to them and could cause a serious incident by setting them on fire. The inspectors also discovered that there were a variety of materials on the ground or leaching out of the ground that had the smell and appearance of petroleum based liquids, insecticides, and paint sludges, all classified as hazardous wastes. Yet, no approval had been given to dispose of these types of materials at the site.⁷ After citing the unauthorized practices, Tennessee Department of Public Health official Bobby Morrison gave the landfill fifteen days to bring the operation back into conformance, and in early December the landfill received a satisfactory evaluation.⁸

Public Health Records, 9 April 1976, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

⁷ Bobby Morrison, Division of Sanitation and Solid Waste Management to [Charles Scott, Bumpass Cove Environmental Control and Minerals], Tennessee Department of Public Health Records, 20 November 1973, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

⁸ Bobby Morrison, Division of Sanitation and Solid Waste Management to [Charles Scott, Bumpass Cove Environmental Control and Minerals], Tennessee Department of Public Health Records, 4 December 1973, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

With the approval and installation of the liquid waste incinerator, requests for permission to dispose of special and hazardous wastes increased. On September 9, 1974, Tom King, the operations manager of the Bumpass Cove Landfill, requested permission to landfill outdated drugs from Beecham-Massengill Pharmaceutical Co. that were made up of chemicals including arsenic trioxide, strychnine, and belladonna extract powder. A few days later he asked permission to accept 348,000 pounds of contaminated chickens. On September 23, 1974, he wrote to request permission to landfill chemicals, many of them unknown, from the University of Tennessee. The requests continued in early October when he asked permission to dispose of plating wastes, paint, varnish, epoxy, and an industrial sludge, which he admitted could reach ignition temperatures through chemical action.⁹ In response to these requests Jerry Loftin informed King that none of these wastes could be placed in the landfill due to their hazardous nature. He also advised King that when anyone approached his company for the disposal of a hazardous waste that he was not equipped to handle, that is liquids or waste that could not be incinerated, he should advise the person to contact a company equipped for such waste.¹⁰

Former Wasteplex employees Kenneth Hughes and Paul Richardson confirmed that some of these hazardous wastes were being disposed of despite the disapproval from the Division of Sanitation and Solid Waste Management. Richardson said that he was ordered to list drums of liquid waste being hauled into the landfill as “water.”

⁹ Jerry Loftin, Division of Sanitation and Solid Waste Management to [Gary Phillips, Wasteplex, Inc.], Tennessee Department of Public Health Records, 16 May 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

¹⁰ Bobby Morrison, Division of Sanitation and Solid Waste Management to [Joe W. McCaleb, Attorney, Tennessee Department of Public Health], Tennessee Department of Public Health Records, 9 April 1976, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

Richardson also reported that contact with the liquids could be the reason for the severe skin disease that was affecting his feet. Hughes, who was a truck driver for the company from April to July 1975, said that he had hauled liquid wastes into the dump numerous times. He added that on several occasions he drove a 3,000-gallon capacity tanker from the Westinghouse plant in Abingdon, Virginia, to the landfill. Hughes said he did not know what became of the contents once it arrived but added that he had hidden knowledge that the liquid incinerator was not in operation during his term of employment. Another former employee said he witnessed the dumping of at least 6,000 gallons of different liquids onto the ground and that he observed the unauthorized burial of thousands of barrels from the Abingdon Westinghouse Corporation. He alleged that the chemicals contained were similar to those responsible for a large fish kill in Virginia in 1973. Phillips responded to the allegations concerning the illegal burial of liquid wastes by saying that it was either done under the direction of the landfill's former manager or else the barrels were mixed in with municipal refuse and were buried unknowingly.¹¹

At the same time that Wasteplex's operational procedures were being scrutinized, residents of Bumpass Cove had begun to inquire about the questionable practices they feared were being carried out by Wasteplex employees. They cited numerous problems involving the use of the incinerator, the policies regarding the disposal of solid and liquid wastes, the necessary cover for sanitary operation, the quality of the water supply, as well as problems associated with the access road to the landfill from the highway including the condition of the road, the weight limit, and the speed limit. Their concerns led to a

¹¹ *Johnson City Press Chronicle*, 5 February 1975.

formal investigation of the landfill by the Tennessee Department of Public Health. On February 5, 1975, in a *Johnson City Press Chronicle* article discussing the current state of the investigation at Bumpass Cove, Gary Phillips replied that he saw the current investigation as a means by which his company and health officials could work together to clear up the problems facing his operation.¹²

Although Phillips believed this investigation would resolve the problems, local residents remained critical. Bumpass Cove resident Gene Turner branded the investigation a “whitewash.” Turner said he told the investigating panel of the numerous violations at the Bumpass Cove Landfill including the burial of harmful liquid wastes and the failure to cover the garbage on a daily basis. Turner also showed the investigators a map of the area that indicated that there was easy access for pollutants to reach the area’s water table. Another resident, Skip Foss, reported he had seen stacks of 55-gallon drums containing liquid wastes in an area behind the liquid incinerator and that pools of oils and other liquids were forming behind the incinerator. Julian Story, a resident and critic of Wasteplex, said that the investigative panel told him his reports of questionable activities were useless unless he could supply specifics including the exact date of each infraction.¹³

As news of these deficiencies circulated, Erwin’s mayor, Herman May, asked the Tennessee Attorney General’s office to investigate whether the former county landfill at Devil’s Looking Glass was rightfully condemned. The mayor cited a recent *Kingsport Times-News* article in his letter to the Attorney General that “implicated that everything wasn’t right” about the condemning of area landfills by the former state official Gary

¹² Ibid.

¹³ Ibid.

Phillips. The article reported that Phillips, in his role as Health Department environmentalist, closed down all seven dumpsites in Sullivan County and was also involved in the closing of Erwin's landfill in July 1972. His actions, the article alleged, left the city of Erwin with no other alternative and they entered into a contract with Bumpass Cove, which Phillips was now managing.¹⁴ The mayor also pointed out to the Attorney General that the cost of Erwin's present garbage collection and disposal contract had more than doubled.¹⁵

In response to the allegations passed down from the Attorney General's office to the Health Department, Bobby Morrison wrote to Attorney General William Hubbard giving his interpretation of the closings and stating that, "No one person made the decision. A team of specialists was used."¹⁶ On July 1, 1975, the State Attorney General's Office, concluding its probe into whether certain garbage dumps in the area were closed improperly, found no wrongdoing on the part of Gary Phillips. However David Osterhout, a *Kingsport Times-News* staff reporter questioned Hubbard stating that he felt this merely amounted to the Health Department investigating the Health Department.¹⁷ Doubt and suspicions of Phillips lingered.

Frustrations were still growing among local residents, and in May 1975 Julian Story wrote to Governor Ray Blanton concerning the problems associated with the

¹⁴ *Kingsport Times-News*, 1 July 1975.

¹⁵ *Erwin Record*, 14 May 1975.

¹⁶ Bobby Morrison, Division of Sanitation and Solid Waste Management to [William Hubbard, Attorney General of Tennessee], Tennessee Department of Public Health Records, 23 May 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

¹⁷ David Osterhout, *Kingsport Times-News*, 1 July 1975.

landfill. Story described how the area was approved three years before by the Department of Health as a sanitary landfill for Unicoi County for the disposal of solid waste. At that time the residents had no objection to the landfill since all of the waste was to be biodegradable. He noted that places as far as Rogersville, Kingsport, and Elizabethton were now using the landfill. Story claimed that Sullivan County was even transporting its waste to the landfill in large tractor-trailers over Highway 81, flagrantly violating the weight limit laws of the state. He pointed out that there was also a problem with these large vehicles and the Wasteplex vehicles speeding through their residential zone. Story recalled that in early 1973 he had presented a petition signed by over a hundred residents of the area to the Washington County courts requesting that weight and speed limit signs be posted and enforced for the county road leading from Highway 81 to the garbage dump. While a 35 mph speed limit was imposed at this time, the county officials claimed that the road was so far out of the way they could not afford to send officers out there to enforce the speed limit on a regular basis.¹⁸

Story also informed the governor that there was, at the time, industrial waste being buried above the community's water source, and that this could be a potential source of dangerous pollution to the Nolichucky River. He described a distinct smell of chemicals in the area that could be detected for about three miles. He mentioned that he had spoken with Larry Hobbs, an environmentalist with the Health Department. Story had informed Hobbs that he had exploration maps of Bumpass Cove that were made by the old Embree Iron Company, which he believed showed the strata as well as the general

¹⁸ Julian Story, Bumpass Cove resident to [Ray Blanton, Governor of Tennessee], Tennessee Department of Public Health Records, 31 May 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

lie of the land to be unsatisfactory for a landfill. In response Hobbs remarked, “I can’t understand why Bumpass Cove is the only place for a landfill. There is not supposed to be any industrial waste, sludge from sewage plants, or anything other than solid waste disposed of in the site.” Story appealed to the governor to check the legality as well as the practicality of having several hundred acres of land, the Cove, rendered useless forever.¹⁹

In response to Story’s letter, Governor Blanton requested that the Bureau of Environmental Health Services acknowledge the letter.²⁰ He also referred Julian Story’s letter to Tom Tiesler with the Division of Sanitation and Solid Waste Management. Tiesler acknowledged that industrial wastes were being received in the Bumpass Cove Landfill, but maintained that the fact that this material was generated by industry did not necessarily mean that it would present any greater hazard than normal municipal solid waste. He commented that the Bumpass Cove Complex also operated a liquid waste incinerator for the disposal of liquid industrial materials, and it was very possible that the odors from this area were coming from the incineration process. Tiesler continued by addressing Story’s complaints about the area’s land being destroyed. He pointed out that when the site was approved, an extensive study was conducted by the Tennessee Department of Public Health and by a consultant obtained by the Bumpass Cove Complex. Tiesler did not feel that the area had become degraded as a result of solid

¹⁹ Ibid.

²⁰ Wayne K. Scharber, Health Administrator, Bureau of Environmental Health Services to [Julian Story, Bumpass Cove resident], Tennessee Department of Public Health Records, 6 June 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

waste disposal, and, therefore, no substantial action was taken to investigate Story's claims.²¹

Julian Story replied to Tom Tiesler indicating that he had spoken with Harry Cheney, Unicoi County's Health Officer, who stated that chemicals were being incinerated at the site, but he could not explain why 2,000 – 3,000 barrels of liquid waste were being stored adjacent to the incinerator. Story explained that during the week following the publication of a letter to the Editor of the *Johnson City Press-Chronicle* describing the haphazard storing of this liquid waste, a large excavator was brought in and the material was rapidly covered. Cheney did admit to an accidental spill being buried at the site but claimed that it was at least a mile below the landfill. Cheney also stated that the chemicals that were considered harmful were buried in specially made containers and were mapped for future referral. Story disagreed with Cheney stating that while he might have received a report detailing this procedure, it was not the way the operation was being carried out. While Cheney inspected the area once a month, he admitted that a little dirt could hide a lot. Story added that it was his contention that the incinerator had never operated, and, if it had, why had landfill operators stored large amounts of barrels for years and then suddenly decide to bury them. He then posed to Tiesler that if there was no dangerous matter being disposed of in Bumpass Cove and all the material was biodegradable then why was it being trucked here from as far as Chattanooga, Tennessee and northern Virginia. He questioned why industries were passing all of the closer sanitary landfills and, at considerably more expense, were

²¹ Tom Tiesler, Division of Sanitation and Solid Waste Management to [Julian Story, Bumpass Cove resident], Tennessee Department of Public Health Records, 23 June 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

bringing it to Bumpass Cove. Story concluded by saying that this situation deserved a comprehensive investigation and that he was also forwarding a copy of this letter to the federal agency concerned in such matters.²²

In his communications with Tiesler, Julian Story noted that he had discovered a number of discrepancies about what was actually happening at the landfill. Story questioned Larry Hobbs, an environmentalist with the Health Department, who said that Bumpass Cove was approved for solid waste only and was not meant to be used for the disposal of industrial chemicals or non-biodegradable matter. Yet, Larry Gilliam of the Division of Solid Waste Management commented that Mr. Hobbs was not qualified to make such a statement. Additionally, Mr. Cheney of the Erwin office said the chemicals were being buried in special containers, but Mr. Gilliam said they were not to that stage yet. Mr. Cheney also said the chemicals being incinerated were totally destroyed after being mixed with other agents and left no residue, causing no smoke or any other way of discerning the incinerator process. But, Wayne Scharber, Health Administrator for the Bureau of Environmental Health Services, said the odor detected 2-3 miles below the incinerator was “probably” from the incinerator process. Story also wondered how Tiesler could have possibly missed the thousands of barrels located near the incinerator in his visits to the site unless Wasteplex had made a concerted effort to conceal them.²³

²² Julian Story, Bumpass Cove resident to [Tom Tiesler, Division of Sanitation and Solid Waste Management], Tennessee Department of Public Health Records, 24 June 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

²³ Julian Story, Bumpass Cove resident to [Tom Tiesler, Division of Sanitation and Solid Waste Management], Tennessee Department of Public Health Records, 21 July 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

Story continued by informing Tiesler that Hoza Morrow, a 34-year-old resident of Bumpass Cove, had recently died. The health department, awaiting the results of the water sample test, could not say whether the water contributed to Morrow's death. The death of Morrow and at least two serious illnesses of cove residents led Health Department officials to warn families living in Embreeville not to use their water supply.²⁴ Dr. Lawrence Moffatt, Director of the Washington County Health Department, indicated that the warning was merely precautionary and that there was no indication that the water supply was contaminated.²⁵ Story then pointed out that Morrow's water supply was a drill hole under the hill where the landfill was located and saw a direct correlation between his illness and his water supply. Story believed that there was so much difference in opinion expressed by so many people working for the same department about the practices at the landfill that "some had to be aware of the possible negative effects, some did not care, and some were simply negligent."²⁶

The discrepancies surrounding Julian Story's correspondence with health department officials and the questionable death of Hoza Morrow led Julian Story to write once again to Governor Ray Blanton and the Commissioner of the Department of Public Health on July 23, 1975, to request a thorough investigation of the Bumpass Cove Landfill operated by Wasteplex, including the probing, drilling, exhumation, or digging

²⁴ Ibid.

²⁵ Bill Jones and David Osterhout, "Tainted Water Supply Suspected in Death," *Kingsport Times-News*, 23 July 1975.

²⁶ Julian Story, Bumpass Cove resident to [Tom Tiesler, Division of Sanitation and Solid Waste Management], Tennessee Department of Public Health Records, 21 July 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

up samples of the entire area.²⁷ In response, Grady Wray from the Division of Air Pollution Control appeared at the site on September 15, 1975, and succeeded in catching Wasteplex violating the operational procedures of the liquid waste incinerator. There were several barrels of liquid industrial waste that had been partially buried, a clear violation of the Regulations, which stated that no liquid waste was to be disposed of in a sanitary landfill. Some of this material was highly flammable and, therefore, a fire hazard. He found that it was also likely that some of these liquids were toxic and could possibly pollute the ground water in this area. Samples of the liquids were collected to determine their toxicity.²⁸

Pictures taken by a local resident indicated that this material had been buried in the past and that the landfill itself was burning on September 14, 1975. The Tennessee Department of Public Health viewed these violations of the Regulations Governing the Processing and Disposal of Solid Waste in Tennessee as a very serious matter. To remedy the situation, the Tennessee Department of Public Health informed Wasteplex that they were required to dig up and remove the barrels of waste, and for the site to be operated in accordance with the Regulations that absolutely no industrial liquids could be accepted for burial because the landfill was not approved for this type of waste. Furthermore, the Division of Air Pollution Control found that the liquid waste incinerator did not meet all applicable air quality standards and ordered Wasteplex to halt all

²⁷ Julian Story, Bumpass Cove resident to [Governor Ray Blanton and Eugene Fowinkle, Commissioner of the Department of Public Health], Tennessee Department of Public Health Records, 24 June 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

²⁸ Ibid.

operations of the incinerator until the emission standards were brought up to Department standards.²⁹

On October 2, 1975, Douglas Neeley, Chief of the Surveillance and Enforcement Program of the Division of Air Pollution Control, wrote to Tom King, the operations manager for Wasteplex, Inc., outlining the steps that would need to be taken in order to comply with the Regulations. Visible emissions tests performed while Grady Wray was at the incinerator site indicated marginal compliance with the visible emission standards, and Wasteplex was required to have a source test conducted in compliance with the office of Air Pollution Control within the next thirty days. Neeley warned King that if a subsequent visible emission evaluation indicated that the incinerator was operating in non-compliance with the standards, he would advise him to cease operation or face the legal consequences. Neeley refused to issue Wasteplex an operating permit for the incinerator until testing was complete and he was satisfied that the incinerator would consistently meet the visible emission standards. Neeley then emphasized the need for Wasteplex to keep the Division of Air Pollution Control informed about any problems that arose from the operation of the liquid waste incinerator, and chastised Wasteplex for not communicating with the Division of Air Pollution Control as it should have in the past.³⁰

After finding the illegally buried liquid waste and the poor operation of the liquid waste incinerator, the Division of Air Pollution Control also requested that Bobby

²⁹ Ibid.

³⁰ Douglas Neeley, Division of Air Pollution Control to [Tom King, Wasteplex, Inc.], Tennessee Department of Public Health Records, 2 October 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

Morrison of the Division of Sanitation and Solid Waste Management get a complete list of the industrial liquid and hazardous waste contracts Wasteplex had made since its inception on July 1, 1972. Morrison requested the contract information from Gary Phillips on October 23, 1975, in order to determine the monitoring and corrective parameters necessary to protect the public's health and the environment in the area of the disposal facility.³¹ Having received a letter from Howard Bessonnette of the Abingdon Westinghouse Corporation that listed the dates and volumes of shipments of liquids to Wasteplex, Morrison was surprised to find that the list submitted by Gary Phillips on November 11 did not contain the Westinghouse Corporation. Instead, Phillips stated in his letter that due to several mergers and personnel changes, record keeping had been poor. Phillips continued that to the best of his knowledge and others that were with his company, no other industrial firms outside the ones outlined had ever used the disposal site for waste material considered as "special."³² After securing this list, the Division of Sanitation and Solid Waste Management decided that the harm from digging up the site far outweighed any potential harm from the liquids that might have been disposed in the site. It was agreed that ground water monitoring would be done in order to detect any possible contamination.³³

³¹ Bobby Morrison, Division of Sanitation and Solid Waste Management to [Gary Phillips, Wasteplex, Inc.], Tennessee Department of Public Health Records, 23 October 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

³² Gary Phillips, Wasteplex, Inc. to [Bobby Morrison, Division of Sanitation and Solid Waste Management], Tennessee Department of Public Health Records, 11 November 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

³³ First Affidavit of Bobby W. Morrison, Division of Sanitation and Solid Waste Management, Tennessee Department of Public Health Records, December 1979,

In the wake of these recent revelations concerning the dumping of potentially harmful chemicals at the landfill, Leon Gray, a Jonesboro filter plant operator decided to have water from the Bumpass Cove Creek analyzed for evidence of possible chemical pollution. On November 12, 1975, Gray began collecting water samples from the creek, which feeds into the Nolichucky River a short distance upstream from the town's water intake, and found high bacterial levels in the water.³⁴ Subsequently, on December 3, 1975, the Division of Water Quality Control conducted a water survey encompassing five sample points, the first complete chemical and biological evaluation of the water quality since the landfill opened. The results of the chemical analysis of the water showed that the Wasteplex Landfill was having little if any adverse effects on the water quality in Bumpass Cove Creek; however, the weather on that day was clear, sunny, and cold. Results could be expected to be much different during rainy weather.³⁵

On January 12, 1976, Julian Story wrote to Tom Tiesler inquiring that because Wasteplex had been ordered not to dump any more "liquid" at the landfill, what was to be done about the numerous barrels and tankers of liquid waste brought to the landfill before the construction of the incinerator. All of this led to the conclusion that the personnel responsible for monitoring this hazardous operation had been negligent and unconcerned, and obviously swayed by someone's influence to look the other way. Story then

Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

³⁴ *Kingsport Times-News*, "Septic Systems, Illegal Dumps Threaten Town's Water Supply," 12 November 1975.

³⁵ Division of Water Quality Control, Bumpass Cove Creek Survey, Tennessee Department of Public Health Records, 3 December 1975, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

informed Tiesler that the method used by Wasteplex for removing the barrels from the landfill consisted mostly of simply puncturing the barrels with a back hoe and allowing the contents to seep into the ground. Story then stated that he could not understand how the Department of Health could allow such inconsistencies and concluded by requesting the immediate closing of the landfill or a statement that the Department of Public Health was powerless or unconcerned.³⁶

With increased attention to the problems surrounding the landfill, the state health department sent representatives to the Johnson City/Erwin area in February 1976 to conduct meetings of an investigative nature into the alleged environmental abuses of the Bumpass Cove Landfill. Joe McCaleb, a health department attorney, told the *Kingsport Times-News*, “We’re looking very seriously at taking some sort of legal or administrative action against Bumpass Cove/Wasteplex.” Larry Gilliam concurred commenting that the state health department wanted to give the people of the area who had knowledge of some of the problems of the landfill a chance to share their information.³⁷

In January 1976 Joseph McCaleb informed Wasteplex Inc. that a recent source sampling report found that the incinerator was again not in compliance with Air Pollution Control standards, which meant that any further operation of the incinerator without a permit would subject Wasteplex Inc. to an enforcing action by the Tennessee Department

³⁶ Julian Story, Bumpass Cove resident to [Tom Tiesler, Division of Sanitation and Solid Waste Management], Tennessee Department of Public Health Records, 12 January 1976, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

³⁷ David Osterhout, “Incinerator Closed; State to Air Landfill Complaints,” *Kingsport Times-News*, 1 February 1976, 1 (A), 10 (A).

of Public Health.³⁸ After successfully shutting down the incinerator for not complying with air pollution regulations, the Tennessee Department of Health sent representatives to conduct a thorough investigation concerning the allegations made by local residents in the Bumpass Cove area as well as interview the affected residents of the area. Acting on residents' complaints the health department began to take an even closer look at the landfill's practices, discovering more barrels of liquid waste buried illegally and the illegal operation of the air curtain destructor and the authorized incinerator. The air destructor, which was used to reduce combustible material to less than one percent of its original volume, was shut down, and the company was also ordered to dig up some of its barrels. Additionally, tests were conducted in nearby streams for possible contamination. Tom Tiesler, the Director of the Division of Solid Waste Management, in reaction to the recent findings concluded that, "The big problem is not being caused by the operational procedures of the incinerator but by the overall operation of the landfill itself."³⁹

After the shutdown of the liquid waste incinerator, the Tennessee Department of Public Health conducted another meeting with local residents to determine if further air pollution violations were occurring and more liquid waste was being transported to the landfill. Residents, Jim Turner, Julian Story, as well as a former truck driver for

³⁸ Joe W. McCaleb, Attorney, Tennessee Department of Public Health to [Duane Snodgrass, Attorney for Wasteplex Inc., Boyd and Lauderback], Tennessee Department of Public Health Records, 19 January 1976, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

³⁹ David Osterhout, "Incinerator Closed; State To Air Landfill Complaints, *Kingsport Times-News*, 1 February 1976.

Wasteplex testified that they had not noticed any more violations occurring.⁴⁰ Although improvements were being made, Julian Story again wrote to the Governor and stated that he was somewhat satisfied with the current investigation of the cove but was still concerned about the road, the speed limit on the road, and the bridge being used by Wasteplex.⁴¹

In late April Bobby Morrison and Larry Gilliam made a visit to the Bumpass Cove Landfill to document conditions and take pictures for a proposed Commissioners Order. Even though Morrison's evaluation stated that the overall operation was "pretty good," he noted that there was a significant amount of blowing litter as well as a small stream of leachate entering Bumpass Cove Creek. He also pointed out that at the incinerator site there were a large number of drums that still contained liquid wastes, and the ground water around the drums was soaked with oil and chemicals.⁴² Because of these findings Morrison requested a Commissioner's Order be issued against Wasteplex, Inc., requiring them to do preliminary geologic investigation to allow the Division of Solid Waste Management to determine and evaluate the potential and existing ground water degradation which might have occurred as a result of unapproved disposal of liquid chemical wastes. After completion of the investigation, an approvable ground water-

⁴⁰ Darrell Hale, Tennessee Department of Public Health to [Barry Bernard, Air Pollution Control], Tennessee Department of Public Health Records, 5 February 1976, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

⁴¹ Julian Story, Bumpass Cove resident to [Ray Blanton, Governor of Tennessee], 17 February 1976, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

⁴² Bobby Morrison, Division of Sanitation and Solid Waste Management, Field Activity Report, 3 April 1976, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

monitoring plan would be submitted to the Tennessee Department of Public Health. Based upon the data obtained from this program, appropriate remedial action would be formulated by the Department in order to properly and effectively control and alleviate any problems which might have arisen.⁴³ On June 17, 1976, a Commissioner's Order was released requiring the Bumpass Cove Landfill to implement a ground water-monitoring plan.

Although the landfill had recently been cited for illegal practices and legal action against the landfill was pending, in early June 1976, a Pennsylvania firm, Waste Resources Inc., began negotiating for the purchase of the Bumpass Cove Landfill. On June 22, 1976, Waste Resources, a national conglomerate, purchased the Bumpass Cove Landfill.⁴⁴ Although the Health Department stated that any legal action would probably be of a corrective rather than punitive nature, the Vice-President of Waste Resources Inc., Joe Mento, told a local newspaper that the possible closing of the landfill was one of the options that would come under consideration when the expense of the survey and corrective action was implemented.⁴⁵

In early August 1976, Wasteplex Inc., now a subsidiary of Waste Resources Inc., contracted with Deane Kent and Associates to conduct and coordinate the geologic and

⁴³ Bobby Morrison, Division of Sanitation and Solid Waste Management to [Joe W. McCaleb, Attorney, Tennessee Department of Public Health], Tennessee Department of Public Health Records, 9 April 1976, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

⁴⁴ Bobby Morrison, Division of Sanitation and Solid Waste Management to [Joseph Mento, Vice-President, Waste Resources], 22 June 1976, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

⁴⁵ David Osterhout, "Pennsylvania Firm Negotiating To Purchase Bumpass Cove," *Kingsport Times-News*, 3 June 1976.

ground water monitoring program required by the Solid Waste Management division of the Department of Public Health.⁴⁶ After reviewing Kent and Associates' first report and talking with John Hines, Staff Geologist, Tom Tiesler concluded that there were many items that were not addressed as required in the recent Commissioner's Order. Tiesler stated how the Kent and Associates' report did not contain any of the testing procedures necessary to adequately locate and monitor the wells, and to be in accordance with the Commissioner's Order, a thorough evaluation of the characteristics of individual wastes which had been disposed of in the landfill either by burial or ponding must be shown to assist in lessening the movement in the ground water environment.⁴⁷

After several lackluster attempts by Deane Kent and Associates to fulfill the Commissioner's Order, Gary Phillips employed Environmental Management Planning and Engineering to assist Wasteplex in complying with the Commissioner's Order since Deane Kent and Associates was unable to do so.⁴⁸ While the change in consulting firms was meant to expedite the completion of the project, Environmental Management Planning and Engineering was only able to analyze and report on one full set of samples. As a result, Larry Watson of the Tennessee Department of Public Health recommended

⁴⁶ Gary Phillips, Wasteplex, Inc. to [Tom Tiesler, Division of Sanitation and Solid Waste Management], Tennessee Department of Public Health Records, 5 August 1976, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

⁴⁷ Tom Tiesler, Division of Sanitation and Solid Waste Management to [Gary Phillips, Wasteplex Inc.], Tennessee Department of Public Health Records, 12 August 1976, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

⁴⁸ Gary Phillips, Wasteplex, Inc. to [David Booth, Environmental Management Planning and Engineering], Tennessee Department of Public Health Records, 4 March 1977, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

that any additional work on a proposed special waste site for Wasteplex be delayed until the required monitoring program was fully implemented.⁴⁹

Not only was the Tennessee Department of Public Health questioning the operational procedures of Wasteplex, but residents also continued to express growing concern. In September 1977 local residents William Story and Julian Story both wrote letters to representatives of the Tennessee Department of Public Health. William Story marveled as to how Wasteplex was allowed to continue to operate even though the company had been cited on numerous occasions for violating state law. Story added how the vehicles carrying the waste continued to speed through the area and how nothing was done to alleviate the problems.⁵⁰ Julian Story began by stating how after several years of local resident complaints, he could see no improvement in the landfill operation. Julian questioned the reason as to why no action had been taken against the operators of the landfill. He, like William Story, also pointed out the road problem, and although he knew that the Tennessee Department of Public Health could not alleviate this problem that the ultimate closing of the landfill certainly would.⁵¹

⁴⁹ John Hines, Geologist, Division of Sanitation and Solid Waste Management to [Douglas Neeley, Division of Air Pollution Control], Tennessee Department of Public Health Records, 4 August 1977, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

⁵⁰ William Story, Bumpass Cove resident to [Tom Tiesler, Division of Sanitation and Solid Waste Management], Tennessee Department of Public Health Records, 17 September 1977, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

⁵¹ Julian Story, Bumpass Cove resident to [Eugene Fowinkle, Commissioner, Tennessee Department of Public Health], Tennessee Department of Public Health Records, 25 September 1977, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

On October 3, 1977, Tom Tiesler, Director for the Tennessee Department of Public Health, responded to William Story's allegations by confirming that some illegal procedures were occurring. Tiesler was also in agreement with Story in that it appeared that the Wasteplex operation had slacked off somewhat, but assured Story that his department had already initiated the proper enforcement.⁵² Story responded to Tiesler by questioning if anything sufficient in scope would really be done against the landfill operation and continued by stating, "It seems like the Department of Public Health has caught the landfill before but the Department inevitably allows the landfill to continue operating."⁵³

As the problems persisted, it became clear that Bumpass Cove's wish to expand its operation to include special waste landfilling and liquid waste treatment was proving unsuccessful. While the operators of Wasteplex were given permission to begin accepting such waste, the operational problems that resulted and evidence of illegal dumping caused citizen complaints to increase, which led to several investigations of the site. Investigators consistently found no daily cover, leaking barrels of hazardous waste, blowing litter, leachate entering the Bumpass Cove Creek, improper use of the incinerator, and problems with the access road. The Tennessee Department of Public Health gave the facility operators numerous extensions to correct these problems, but the problems persisted, as did resident complaints.

⁵² Tom Tiesler, Division of Sanitation and Solid Waste Management to [William Story, Bumpass Cove resident], Tennessee Department of Public Health Records, 3 October 1977, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

⁵³ William Story, Bumpass Cove resident to [Tom Tiesler, Division of Sanitation and Solid Waste Management], Tennessee Department of Public Health Records, 20 October 1977, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

CHAPTER 3

CITIZENS TAKE ACTION

In 1979 all of the problems and complaints concerning Bumpass Cove Landfill began to attract more and more attention from state and federal officials. This attention helped to fuel citizen complaints. During this time, access to the landfill became questionable, studies on the effects of the hazardous materials on the environment prompted national attention, and the citizens of the area united in a formal effort to fight for the safety of their health and environment. The culmination of the complaints, national attention, and the citizens' actions would result in the demise of the landfill.

As early as 1976, Henry Derthick, Engineer of Structures for the Tennessee Department of Transportation, did a site evaluation of the bridge used to access Bumpass Cove Landfill and concluded that the bridge should be replaced as soon as possible due to considerable deterioration and a permanent sag. He recommended that in the interim a weight limit be posted at three tons, which would prohibit school buses and trucks from crossing.¹ During the following three years, this weight limit was never enforced.² It was not until the flood of July 1979 that the deteriorating bridge once again became an issue.

¹ Henry Derthick, Tennessee Department of Transportation to [C.R. McAmis, Tennessee Department of Transportation], Tennessee Department of Public Health Records, 12 October 1976, Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

² Linda Sanders, "Weight Limits Result in Suit Against County," *Johnson City Press Chronicle*, 31 July 1979.

Following the flood, approximately one hundred residents picketed in the middle of the road leading to the landfill in an attempt to close it. They reported having seen barrels being carried by floodwaters from the landfill into the Nolichucky River as well as a potent chemical odor emanating throughout the cove.³ As a precautionary measure, the Jonesboro Water Treatment Plant ceased operations for a day in an effort to avoid possible contamination.⁴ The protest was further fueled by the Washington County Sheriff's Department's decision to finally enforce the three-ton weight limit for the bridge leading to the landfill.⁵ When the Washington County officials began enforcing the bridge and road weight limits, their actions effectively eliminated access to the landfill and temporarily closed the site.⁶

In response to the closing, Waste Resources and Unicoi County officials filed a complaint and a motion for injunctive relief against Washington County and four county officials, accusing the county of setting "arbitrary" weight limitations on the Bumpass Cove Road and the bridge that was part of that road.⁷ They stated that the county failed to notify the company of the recommended limitations from 1975 to July 1979 and that

³ Pat Bible, "Weight Limits, Protest Halt trucks from Sullivan County at Bumpass Cove," *Kingsport Times-News*, 24 July 1979.

⁴ "Bumpass cove residents demand action at landfill," *Jonesboro Herald and Tribune*, 26 July 1979.

⁵ Pat Bible, "Weight limits, protest halt trucks from Sullivan County at Bumpass Cove," *Kingsport Times-News*, 24 July 1979.

⁶ Linda Sanders, "Weight limit blocks dump access," *Johnson City Press Chronicle*, 24 July 1979.

⁷ Linda Sanders, "Weight limits result in suit against county," *Johnson City Press Chronicle*, 31 July 1979.

the arbitrary enforcement had caused “irreparable harm and economic loss as well as endangered the health, safety and welfare of the citizens of Unicoi County, Washington County and other localities.” The complaint stated that there were compensatory damages in the amount of \$45,000 to Waste Resources and in the amount of \$100,000 to Unicoi County.⁸ The injunction would restrain the defendants from enforcing the weight limits on the bridge and road and prevent the people accused of blockading the road from doing so.⁹

The U.S. District Court requested that Waste Resources and Washington County attempt to reach an agreement about the bridge, but by August 28, 1979, no agreement had been reached. At a meeting of the Washington County Public Works and Planning Committee a member of the committee made a motion to let Waste Resources build a new bridge according to state specifications, but two members of the committee voted against it stating that they did not “want to open the road for whatever wanted to go into the landfill - A 73,000-ton limit would turn it loose to anything and anybody going in there.” In the meantime, because Erwin’s garbage was backing up, the landfill began using an alternate route into the site called Bumpass Cove Cemetery Road.¹⁰

Residents of Bumpass Cove began detaining the trucks on Cemetery Road claiming the road was privately owned with the only connection to Washington County being that the county would spread gravel on the road occasionally when there was a

⁸ Linda Sanders, “Waste Resources threatens lawsuit,” *Johnson City Press Chronicle*, 28 July 1979.

⁹ Linda Sanders, “Location for hearing landfill complaint still undetermined,” *Johnson City Press Chronicle*, 3 August 1979.

¹⁰ Linda Sanders, “No agreement reached on bridge for Bumpass,” *Johnson City Press Chronicle*, 28 August 1979.

funeral. Waste Resources maintained that Cemetery Road was a county road and that the people had no right to stop travel on the road.¹¹ Resident Dwight Rogers claimed that he owned the first quarter mile of the road and filed a restraining order against Waste Resources in order to prohibit the company from “trespassing, crossing or coming upon the lands especially including any driveway known as Cemetery Road.” A judge of the Washington County Law Court issued a temporary restraining order; however, it was dissolved a few days later until a hearing was held to determine if the road was public or private.¹² On September 4, 1979, the Bumpass Cove Cemetery Road was declared a public road, opening it for use by Waste Resources Sanitary Landfill trucks.¹³ As employees for Waste Resources began to build a temporary bridge over Bumpass Cove Creek, local residents complained about how Waste Resources trucks were blocking the citizens’ right of way on the public road. Citizens again took Waste Resources to court, and with the help of the Tennessee Department of Environmental Control, who determined that no alterations could be made to the creek, the residents of the cove denied Waste Resources access to the landfill again.¹⁴

In addition to problems with access to the landfill, the Public Service Commission, who has authority over the transportation of hazardous materials on state

¹¹ Linda Sanders, “Trucks enter landfill by alternate route,” *Johnson City Press Chronicle*, 14 August 1979.

¹² “Hearing to determine use of Cemetery Road,” *Jonesboro Herald and Tribune*, 23 August 1979.

¹³ Linda Sanders, “Bumpass Cove Cemetery Road declared open,” *Johnson City Press Chronicle*, 5 September 1979.

¹⁴ Skip Foss, interview by author, Former President, Bumpass Cove Concerned Citizens Group Incorporated, Erwin, TN, 6 June 2002.

thoroughfares, sent two representatives to Bumpass Cove to determine if Waste Resources should be regulated by the state's Public Service Commission. The Public Service Commission not only discovered that Waste Resources as well as the former owners of the landfill never received authorization for proper transportation but that Health Department officials had failed to check several ground water monitoring wells for at least eight months. Although the Public Service Commission had no jurisdiction over the ground water monitoring system, they did threaten to shut down Bumpass Cove Landfill for failing to get proper authorization to transport garbage on public roads.¹⁵

In light of the Public Service Commission's recent findings, the Jonesboro Board of Mayor and Aldermen voted to move the town of Jonesboro's water intake pipe to a location above the Bumpass Cove Landfill. Members of the board agreed that due to possible dangers concerning the landfill they were willing to spend as much as \$300,000 to move the pipe.¹⁶ The Mayor of Jonesboro, Jimmy Smith, told the county health department that it was not up to the town to determine which site was best for the intake pipe but it was up to the health department. Ronnie Snyder of the Water Quality Control Division of the Health Department said the proposed intake site was just below the output for the Erwin waste disposal plant and close to the site of the old Unicoi County-Erwin garbage dump near the Nolichucky River. Larry Gilliam, of the Solid Waste Management Division, then added that no one really knows what was buried at the old garbage dump and that the dump had recently been found leaching into the Nolichucky.

¹⁵ Mike McKee and Linda Sanders, "PSC could close landfill," *Johnson City Press Chronicle*, 12 September 1979.

¹⁶ Linda Sanders, "Jonesboro board votes to move water pipe," *Johnson City Press Chronicle*, 15 August 1979.

Gilliam and Snyder assured Major Smith that the Environmental Protection Agency's recent testing of the Bumpass Cove Sanitary Landfill and the Bumpass Cove Creek did not reveal any problems to Jonesboro's drinking water sources. In conclusion, the Tennessee Department of Public Health officials disagreed with the Jonesboro board's decision by stating that the proposed site for the intake might be more detrimental to the public's health than leaving it at its present location, and, therefore, would not approve the new location.¹⁷

In October 1979 the Senate and House Subcommittee on Hazardous Materials concluded that, "Millions of tons of dangerous chemicals posed an imminent hazard to man and the environment and that federal and state efforts to control disposal of hazardous wastes were totally inadequate." As the subcommittee conducted its investigation, it found a repeated pattern of polluted water supplies, unexpected illness, and other dangers. The subcommittee came to the conclusion that the proper disposal of hazardous materials had become the exception rather than the rule. At the time, Tennessee produced more hazardous waste than any other state in the Southeast and ranked ninth in the nation in production of such waste.¹⁸

On October 23, 1979, as a result of testimony from a former landfill employee, Kenneth Henley, as well as the state of Tennessee's current waste status and the Environmental Protection Agency's suspicions of the site accepting hazardous waste, the Senate and House Subcommittee on Hazardous Materials called for a state investigation

¹⁷ Linda Sanders, "Moving pipe may be hazardous," *Johnson City Press Chronicle*, 5 October 1979.

¹⁸ Linda Sanders, "State heads Southeast in nuclear waste production," *Johnson City Press Chronicle*, 17 October 1979.

of the Bumpass Cove Sanitary Landfill. Henley, along with Dr. R. Dean Blevins of the Department of Health Sciences and Dr. G. J. Young of the Department of Chemistry at East Tennessee State University, appeared before the subcommittee. Henley testified that illegal chemical waste had been dumped at the landfill and that he personally knew the locations where the hazardous waste was buried. Dr. Blevins' and Dr. Young's purpose at the hearing was to reveal the results of their study that revealed the presence of certain heavy metals, which were some of the most dangerous by-products of transportation and industry in upper East Tennessee, and the possible effects of these metals on fish and the people who consume them. According to their report, ground water, taken from the monitoring wells in the Bumpass Cove Landfill by Waste Resources for the Health Department, contained large amounts of heavy metal contamination, and that all heavy metals are potentially dangerous to most organisms at some level of exposure and absorption.¹⁹

As resident complaints gained validity and pressure from the House and Senate Subcommittee increased, on November 8, 1979, after over seven years of operation, the trouble-plagued Bumpass Cove Sanitary Landfill planned to close down. Before the site was officially allowed to close, landfill officials met with health department officials to discuss what would have to be done before the health department would approve the closing. According to Tiesler, the entire site would have to be planted with grass, all the barrels stacked at the Fowler mine site would have to be removed, drainage problems would need to be solved, the silt pond cleaned, and the remainder of the incinerator removed. Tiesler added that Waste Resources would also be responsible for monitoring

¹⁹ Linda Sanders, "Panel calls for Bumpass landfill probe," *Johnson City Press Chronicle*, 23 October 1979.

the ground water for six months and the surface water for one year. After that time the site would be re-evaluated and the health department would determine who was responsible for continued monitoring. Although preparations were being made for the final closing of the landfill, the recent investigation of the site that had been called for by the Senate and House Subcommittee on Hazardous Materials and the disagreement over who was ultimately responsible for cleaning up the site caused the controversy to continue.²⁰

The controversy itself had brought national attention to the landfill, and with the cooperation of the local sheriff's office and the state highway patrol, the citizens of Bumpass Cove finally succeeded in denying Waste Resources transportation into and out of the landfill, thus effectively closing the landfill. Many residents stated that they were the sole reason the landfill was closed because they were the ones who brought such attention to the dump. After successfully closing the site, area citizens joined together to form a citizens' group. The group's activities would focus on certain factors such as the removal of hazardous wastes from the old mine sites above many of the homes in the community; the development of education and awareness around community health; and community development projects and community improvement. On November 26, 1979, the Bumpass Cove Concerned Citizens Group received its charter from the Tennessee General Corporation Act, thus formally making the group a corporation.²¹

²⁰ Linda Sanders, "Bumpass Cove landfill plans to close," *Johnson City Press Chronicle*, 18 November 1979.

²¹ Background and History: Bumpass Cove Concerned Citizens Group, Inc., 1980. Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

Although the group had received state recognition, it still needed the knowledge and financial support required to carry out its objectives. With the help of individuals from the Center of Health Studies at Vanderbilt University and Highlander Center's Appalachian Health Education Leadership Program and Resource Center, located in New Market, Tennessee, members of the Bumpass Cove Concerned Citizens Group learned about the Freedom of Information Act (FOIA) in which people could request copies of correspondence, internal memoranda, and studies and reports of federal agencies. With the ability to get such information, members of the Citizens Group now had more control and could confront health officials with a list of chemicals suspected to have been dumped at Bumpass Cove.²² The group was able to acquire financial assistance through local fund-raising activities as well as a small grant from Vanderbilt University's Center for Health Services. The Southern Appalachian Leadership Training (SALT) Fellowship also assisted the citizens by providing transportation costs for Bumpass Cove citizens to travel to other areas of the state and country to tell of their local battle and to share their experiences with similar groups.²³

With the proper funding and understanding of what needed to be done in order to properly cleanup the area, the Bumpass Cove Concerned Citizens Group began to take action. During the first few months the community group involved itself in several ways: mapping and pinpointing places where the chemicals were buried so they could be

²² Summary of Session at Highlander Workshop, 13 October 1979. Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

²³ Background and History: Bumpass Cove Citizens Group, Inc., 1980. Bumpass Cove-Embreeville Collection, Archives and Special Collections, East Tennessee State University, Johnson City, Tennessee.

removed; attending and testifying at Tennessee legislative hearings on hazardous materials; conducting a health fair, with the assistance of the Vanderbilt University Student Health Coalition, so that all community residents could receive a physical examination; and educating the entire Bumpass Cove community and other interested persons about the nature of the problems and the effects of toxic chemicals on water and health. Long-range goals for the Group were to assist in the completion of the cleanup operations at the landfill, the removal of all hazardous materials that could be safely removed, and the actual implementation of an alternative water system for the community.²⁴

In conjunction with the goals of the Bumpass Cove Concerned Citizens Group and due to recent health department stipulations mandating that Waste Resources only monitor certain aspects of the site for one year, the Citizens Group filed a suit against Waste Resources in November 1979 to try to prevent the owners from essentially “walking away” from the dump that area citizens still felt threatened their lives. Skip Foss, president of the Bumpass Cove Concerned Citizens Group, stated that local residents were not satisfied with the health department’s ruling and that the group was seeking an injunction to prevent Waste Resources from beginning the cleanup by removing possibly contaminated equipment from the landfill and eventually abandoning responsibility.²⁵

²⁴ Ibid.

²⁵ Pat Bible, “Residents: Dump firm can’t ‘walk away’,” *Kingsport Times-News*, 20 November 1979.

On December 6, 1979, however, Waste Resources started the cleanup process by removing barrels that had been stored near the landfill site in Bumpass Cove. Larry Gilliam of the Regional Health Office said that when Waste Resources was through with the cleanup process there should be no evidence that the landfill ever existed. About twenty-five barrels reported to contain manganese sludge, were removed from a building located at the former site of the incinerator near the landfill. According to Bobby Morrison, the sludge was not harmful and the health department instructed Waste Resources to remove the sludge from the barrels and bury it in the landfill and then take the barrels to a company for recycling. But a *Johnson City Press Chronicle* reporter stated that he saw landfill employees not only burying the sludge but many of the barrels as well.²⁶ Even though the landfill had been closed, problems continued to plague the cleanup process.

While monitoring the ground water wells at Bumpass Cove Landfill in compliance with health department regulations, the Tennessee Department of Public Health found low concentrations of polychlorinated biphenyls (PCBs), a very toxic chemical suspected of causing cancer. A report of the findings stated that even though the chemical was found in the area, it was not found in Bumpass Cove Creek that flows at the base of the landfill and then into the Nolichucky River. Although the report revealed that no PCB's were found in the creek, it did show that the landfill had caused a degradation of Bumpass Cove Creek by discharging leachate. Even though the health department's Division of Solid Waste Management had maintained that the site was a good one for a landfill, the department's Division of Water Quality Control had claimed

²⁶ Linda Sanders, "Bumpass landfill cleanup under way," *Johnson City Press Chronicle*, 6 December 1979.

from the beginning that the site with respect to surface water quality consideration was poor and would cause water quality problems if the surface water runoff were not controlled.²⁷

As Health Department officials continued to clean up, residents of Bumpass Cove and Embreeville communities stopped Tennessee Department of Public Health officials as they tried to remove possible hazardous wastes and equipment from the landfill. Area citizens said they wanted the material removed in a safe manner or not at all, and that the waste material they had uncovered thus far was just “the tip of the iceberg.” Bobby Morrison, with the Division of Solid Waste Management, explained to citizens that the wastes could not be tested on site and would have to be moved. As the barrels were uncovered by heavy equipment operated by Waste Resources employees, they ruptured and various colors and textures of liquids poured from the barrels causing a “noxious odor.”²⁸ Because of the spill, approximately twenty members of six families were evacuated from the Bumpass Cove community. Many of the individuals evacuated experienced such symptoms as watery eyes and difficulty breathing.²⁹ In response, members of the community again imposed their will against Waste Resources by attempting to stop the company’s removal of a bulldozer, which was also thought to be contaminated, from the site. Because of the reported threat of violence from residents, a

²⁷ Linda Sanders, “Chemical found in water, soil from Bumpass landfill,” *Johnson City Press Chronicle*, 8 December 1979.

²⁸ Linda Sanders, “Bumpass Cove officials block health officials,” *Johnson City Press Chronicle*, 14 February 1980.

²⁹ Lloyd Karnes, “Families evacuated,” *Jonesboro Herald and Tribune*, 15 February 1980.

police escort had to eventually be arranged in order to guarantee the equipment's safe removal from the site.³⁰

Although preliminary test results of the chemicals unearthed indicated that the substance that was spilled was a common phenol which could sometimes be found around the house, on February 16, 1980, First District Congressman James Quillen contacted the United States Environmental Protection Agency. Quillen said that he wanted Environmental Protection Agency representatives to serve as consultants to state officials who were responsible for the cleanup. "I don't think those who were removing those barrels were using good common sense, much less any expertise," Quillen concluded. The EPA has had to deal with similar situations in other parts of the country, and should be able to offer some good suggestions to help protect the residents."³¹

After numerous documented reports of threats to the environment as well as the lives of the residents of the area, on February 20, 1980, more than sixty Bumpass Cove and Embreeville residents filed a lawsuit in Washington County Circuit Court against the operators of the Bumpass Cove Sanitary Landfill. The lawsuit, which was seeking twenty million dollars in damages, was filed against the Bumpass Cove Development Corporation, the owner of the land where the landfill was located; Waste Resources of Tennessee Incorporated, Knoxville; and the Waste Resources Corporation, Philadelphia, Pennsylvania. According to the complaint, the defendants were responsible for disposing of solid and liquid waste; toxic, carcinogenic, and nuclear waste; and chemicals of an

³⁰ Linda Sanders, "Police escort equipment from landfill," *Johnson City Press Chronicle*, 16 February 1980.

³¹ Ibid; Linda Sanders, "Chemical spill called common compound," *Johnson City Press Chronicle*, 18 February 1980.

undetermined nature at the landfill and other locations in Bumpass Cove. The plaintiffs also alleged that the defendants were negligent in selecting a proper location for the dumpsite, the transportation of toxic waste, the disposal of toxic waste, and in failing to warn area residents of the hazardous conditions.³²

As the citizens' lawsuit was being examined, information surfaced that state officials had been misled by landfill operators and unknowingly issued a license thinking the site was capable of supporting a longer life span due to the access to vital nearby land. According to a *Kingsport Times-News* article, landfill operators had trespassed onto adjacent land since at least 1973 giving landfill operators access to large amounts of dirt needed to cover garbage and keep the landfill open. Without the extra cover they obtained by trespassing, some experts believed that the landfill might have closed as early as 1974. Charles Orr, a former state solid waste official who supervised the licensing, stated that if he had known this, the licensing might have been withheld or delayed.³³

The Bumpass Cove and Embreeville citizens' lawsuit was further strengthened when in April 1980 a large steel holding tank, suspected of at one time containing toxic chemicals, was uncovered. The tank, which was still releasing strong odors, at one time contained an oil used for dust control on the dirt roads in Bumpass Cove. The Environmental Protection Agency stated that the oil should have never been used on roads, and that the contents should be considered a concern to public health. The tank was found open and draining onto the ground and into the nearby Bumpass Cove Creek.

³² Linda Sanders, "Bumpass Cove residents file suit," *Johnson City Press Chronicle*, 20 February 1980.

³³ Mike Kaszura, "Landfill operators 'borrowed' neighboring land, sources say," *Kingsport Times-News*, 16 March 1980.

The creek empties into the Nolichucky River just above the intake pipe for the Jonesboro's water plant. As a precautionary measure, the Jonesboro water treatment plant was ordered to shut down for the remainder of the day by the Tennessee Department of Public Health.³⁴

As the citizens of Bumpass Cove and Embreeville's lawsuit against Waste Resources came to a conclusion, many of the residents got what they had been fighting for all along. Although several individuals in the cove did receive monetary awards, Skip Foss, president of the Citizens Group, indicated that the two most important factors that came out the court case were the ultimate closing of the landfill and the naming of the parties responsible for dumping the waste.³⁵ The Tennessee Department of Public Health, using records dating back to the opening of the landfill, was able to identify most of the contributing parties. Waste Resources, which had been renting the Bumpass Cove Landfill from the Bumpass Cove Environmental and Mineral Control Company as a temporary storage site for waste, claimed responsibility. After Waste Resources was determined to be the responsible party, they in turn delegated costs to all parties contributing wastes to the landfill over the years.³⁶ Once the responsible parties had been notified and the closing of the landfill was finalized, state and national officials faced the daunting task of cleaning up the site.

³⁴ Linda Sanders, "State shuts off Jonesboro water," *Johnson City Press Chronicle*, 21 March 1980.

³⁵ Skip Foss, interview by author, Former President, Bumpass Cove Concerned Citizens Group Incorporated, Erwin, TN, 6 June 2002.

³⁶ Harold Matraw, interview by author, Tennessee Department of Environment and Conservation, Division of Superfund, Johnson City, TN, 30 May 2002

CHAPTER 4

CLEANING UP

As a result of dissatisfaction with the Tennessee Department of Public Health, Bumpass Cove citizens had filed a formal complaint in 1978 with the Environmental Protection Agency (EPA).¹ This action had launched a series of steps necessary to determine the potential hazardous risk Bumpass Cove Landfill posed to human health and the safety of the environment. During the Discovery/Notification phase of this process, the EPA conducted a preliminary assessment and site inspection in order to obtain initial information necessary for the Hazardous Ranking System (HRS), a numerically based screening system that uses the information from the initial investigations to assess the relative potential of sites to pose a threat to human health or the environment.² The HRS analyzes three categories of risk: the likelihood that the site has released or has the potential to release hazardous substances into the environment, the characteristics of the waste, and the victims of the release (people and environment). Additionally, four pathways of release are scored: ground water migration, surface water migration, soil exposure, and air migration.³

Although Bumpass Cove Landfill's score was high enough for it to be placed on the National Priorities List (NPL), a list that identifies for the states and the public those

¹ Environmental Protection Agency, "CERCLIS Query Results," <www.epa.gov/enviro/fii_master.fii_retrieve>, 23 May 2002.

² Environmental Protection Agency, "Cleanup Process, Superfund Program," <<http://www.epa.gov/superfund/action/process/sfproces.htm>>, 2 June 2002.

³ Environmental Protection Agency, "Introduction to the HRS, Superfund Program," <http://www.epa.gov/superfund/programs/npl_hrs/hrsint.htm>, 23 May 2002.

sites or other releases that appear to warrant remedial actions, it was not placed on the list because the Landfill had been approved to legally accept certain types of industrial waste. Therefore, it was not considered a national priority and its cleanup was turned over to the state. In response, the Division of Solid Waste Management covered the landfill with dirt; however, rain continued to cause constant problems with the cover material. Each time the rain eroded the cover, new dirt was added and concerns over surface and ground water migration and air exposure grew.⁴

As the turmoil and controversy concerning the Bumpass Cove Landfill increased, state legislators were realizing that something had to be done about the government regulation of hazardous waste. The official position of the Environmental Protection Agency was that their tests were not reliable enough to regulate many wastes and that to date government regulation of hazardous waste, from generators to disposers, had been “virtually non-existent.”⁵ Meanwhile, citizens across the nation were becoming more aware of how the dumping of hazardous wastes was affecting public health and the environment. Citizen concern over the magnitude of this problem led Congress to launch the Superfund Program in 1980 to locate, investigate, and clean up the worst sites nationwide.⁶

⁴ Harold Matraw, interview by author, Tennessee Department of Environment and Conservation, Division of Superfund, Johnson City, TN, 30 May 2002; Environmental Protection Agency, “NPL Site Listing Process, Superfund Program,” <http://www.epa.gov/superfund/action/law/npl_hrs.htm>, 2 June 2002.

⁵ United Press, Washington, DC, “Waste regulation ‘virtually non-existent’,” *Kingsport Times-News*, 19 March 1980.

⁶ Environmental Protection Agency, “About Superfund, Superfund Program,” <www.epa.gov/superfund/about.htm>, 23 May 2002.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that might endanger public health or the environment. In particular, CERCLA established requirements for closed and abandoned hazardous waste sites; provided for liability of parties accountable for releases of hazardous waste at these sites; and created a trust fund to make cleanup possible when no responsible party could be identified. Over the first five years, the tax netted \$1.6 billion that went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites.⁷ In 1984, after five years of ineffective state maintenance, Bumpass Cove Landfill became an official Superfund site.⁸

The Superfund cleanup process entails seven phases: discovery or notification, removal site evaluation, removal action, remedial site evaluation, remedial investigation/feasibility study and selection of remedy, remedial design/remedial action, and operation and maintenance.⁹ Having been officially discovered by Superfund in 1984, a removal site evaluation of Bumpass Cove Landfill was complete by 1987.¹⁰ This evaluation estimated the potential risk the landfill posed to human and environmental

⁷ Environmental Protection Agency, "CERCLA Overview," <www.epa.gov/superfund/action/law/cercla.htm>, 9 June 2002.

⁸ Harold Matraw, interview by author, Tennessee Department of Environment and Conservation, Division of Superfund, Johnson City, TN, 4 June 2002.

⁹ Environmental Protection Agency, *Code of Federal Regulations*, 40 CFR 300.400-435 (Rockville, MD: Government Institutes, 1997), 58-80.

¹⁰ Environmental Protection Agency, "CERCLIS Site Actions," <www.epa.gov/superfund/sites/cursites/c3tn/a0404056.htm>, 23 May 2002.

targets. It was determined by this evaluation that there was so much hazardous waste in the landfill that not only would its removal be extremely expensive but it would pose a greater health risk than leaving it in place.¹¹

Because there was no removal action at the landfill, the cleanup process moved into the remedial site evaluation phase. While preliminary assessments had estimated risk, this phase used extensive testing and investigations to produce a description/history of waste handling at the Cove, a list of known contaminants, a complete inventory of potential victims, and a recommendation for further action.¹² Based on the proposed remedy, a remedial investigation and feasibility study was conducted by the Tennessee Department of Environment and Conservation between 1992 and 1994.¹³

This feasibility study resulted in a remedy that provided adequate protection for human health and the environment, as well as addressed the erosion, drainage, and vegetation deficiencies at the landfill. This remedy called for the development of an ongoing ground water monitoring system and the installation of a cap over the hazardous areas of the landfill.¹⁴ This intricate cap, known as a Subtitle D Cap, would be made up of vents for gas to escape, a layer of two feet of clay, one foot of topsoil, and grass, which would be mowed on a consistent basis to keep trees from taking root. The entire area would be contoured to prevent surface water runoff, and ponds built to collect any

¹¹ Harold Matraw, interview by author, Tennessee Department of Environment and Conservation, Division of Superfund, Johnson City, TN, 30 May 2002.

¹² Environmental Protection Agency, *Code of Federal Regulations*, 40 CFR 300.420 (Rockville, MD: Government Institutes, 1997), 66.

¹³ Remedial Action Report, Bumpass Cove Landfill/Fowler Site, Earth Tech Project No. 34961, Tennessee Department of Environment and Conservation, January 2000, I-1.

¹⁴ *Ibid.*

drainage would control leachate. The cap and ponds would effectively close off the threat from surface water migration, air migration, and soil exposure. Thus, with the ground water monitoring system in place, the four pathways of release at Bumpass Cove could be successfully addressed.¹⁵

Once this remedy was agreed upon by the Department and the public notified and given an opportunity to comment, the clean up process progressed into the sixth phase, remedial action, the actual construction and implementation of the remedy. By June 1999, the cap was in place and the semi-annual ground water monitoring reports begun. Harold Mattraw, geologist with the Division of Superfund, Tennessee Department of Environment and Conservation, says the division is satisfied that the levels of chemicals present in both the gas vents and ground water are decreasing due to natural attenuation at a satisfactory rate. The process has now entered the Operation and Maintenance phase, which lasts for a period of thirty years unless further remedial action is required.¹⁶ During this phase, the responsible party, Waste Resources Inc., is responsible for maintaining the effectiveness of the remedy. Operation and Maintenance monitoring includes four components: inspection, sampling and analysis, routine maintenance, and reporting.¹⁷ In 2029, Bumpass Cove Landfill will be reevaluated to determine if ongoing

¹⁵ Harold Mattraw, interview by author, Tennessee Department of Environment and Conservation, Division of Superfund, Johnson City, TN, 30 May 2002.

¹⁶ Ibid.

¹⁷ Environmental Protection Agency, "Operations and Maintenance, Superfund Program," <www.epa.gov/superfund/whatissf/sfproces/opmtc.htm>, 2 June 2002.

monitoring is necessary. If not, the landfill will be “de-listed” and, therefore, considered non-threatening to the safety of public health and the environment.¹⁸

Skip Foss, Bumpass Cove resident and former president of the Bumpass Cove Concerned Citizens Group, having dedicated two years of his life to fighting for the closing and cleanup of the landfill, feels satisfied with the results. Foss stated that “The cleanup was successful—they are still monitoring the water, but I feel that my water is safe and the area is safe.”¹⁹ Former Community Interest Chairman of the Bumpass Cove Concerned Citizens Group Russell Rogers concurred saying, “After Superfund came in and cleaned things up, everything is good.”²⁰

Foss also commented that the lawsuit the Bumpass Cove Concerned Citizens Group had filed against Waste Resources in 1980 led to three important outcomes: the official closing of the landfill, the naming of a responsible party, Waste Resources of Tennessee, Inc., and access to the Jonesboro water supply, paid for by Waste Resources. He also stated that some residents as well as landfill employees did receive an undisclosed amount of money, but that the majority of residents did not. Foss said that the citizens were kept informed about the cleanup process at the landfill through local attorneys and engineering firms, who would send chemical data collection results to group members. While citizens no longer receive these results, the majority of them still live in the area, a testament to Superfund’s success cleaning up the landfill.²¹

¹⁸ Harold Mattraw, interview by author, Tennessee Department of Environment and Conservation, Division of Superfund, Johnson City, TN, 30 May 2002.

¹⁹ Skip Foss, interview by author, Bumpass Cove resident, Erwin, TN, 6 June 2002.

²⁰ Russell Rogers, interview by author, Bumpass Cove resident, Erwin, TN, 27 May 2002.

²¹ Skip Foss, interview by author, Bumpass Cove resident, Erwin, TN, 6 June 2002.

As of May 29, 2002, approximately 1,221 sites were listed on the National Priorities List (NPL) and being assessed by the Superfund program. If a site is listed on the NPL, the site requires long-term remedial response actions to considerably reduce the dangers associated with the hazardous substances. In addition to the 1,221 NPL sites, the hazardous waste inventory for the entire Superfund program, which includes non-NPL sites and sites that have no further remedial action planned (NFRAP), totals about 41,442 sites. Non-NPL sites require short-term removals and necessitate a prompt response.²² As of June 9, 2002 Bumpass Cove Landfill was listed as a non-NPL waste site.²³

At this time, more than six million people live within one mile of the 1,221 NPL sites, with 76 million residing within four miles of these sites.²⁴ For this reason, community involvement is an important part in the planning and cleaning up of a Superfund site. With the establishment of the Superfund Community Advisory Group (CAG) in 1986, citizens are now able to more easily advocate for and strengthen meaningful community participation during Superfund cleanups.²⁵ Similar to the goals of the Bumpass Cove Concerned Citizens Group, the Superfund Community Advisory Group's goals are to keep the community well informed, encourage community members to get involved, and give community members a voice by changing planned actions

²² Environmental Protection Agency, "CERCLA Overview," <www.epa.gov/superfund/action/law/cercla.htm>, 9 June 2002.

²³ Environmental Protection Agency, "CERCLIS Query Results," <www.oaspub.epa.gov/enviro/fii_master.fii_retrieve>, 23 May 2002.

²⁴ Environmental Protection Agency, "Superfund Environmental Indicators: How Many People Live Near NPL Sites and What Are the Risks?," <<http://www.epa.gov/superfund/accomp/ei/risk.htm>>, 10 June 2002.

²⁵ Environmental Protection Agency, "Community Advocation," <www.epa.gov/superfund/tools/cag/index.htm>, 9 June 2002.

where community comments or concerns have merit.²⁶ After all, it was the persistence of the citizens of Bumpass Cove that brought enough attention to the illegal behaviors occurring in their backyard to make a difference, one that has and will serve as an inspiration for future concerned citizens.

²⁶ Environmental Protection Agency, “Superfund Community Involvement,” <www.epa.gov/superfund/action/community/index.htm>, 9 June 2002.

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