Contaminated Properties: History, Regulations, and Resources for Community Members

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Table of Contents

Introduction

Environmentally contaminated properties represent both an opportunity and a burden for many communities. Many sites with perceived or real contamination are located in urbanized areas with access to public transportation or other centrally located amenities, often providing good development options. Regardless of where they are located, when a property suffers from real or perceived contamination – or is simply underused or idle – its full potential and benefits to a community are not being realized. Sites that are either contaminated or perceived as contaminated are called brownfields. Addressing these sites through successful redevelopment efforts can lead to increased land values, new economic activity, potential aesthetic or other area-wide benefits, in addition to reducing risks to human health and the environment.

The goals for these sites vary. For some, cleanup may lead directly to new, active, private sector use. A common example of private sector use is using the site for a new business or residential development. For other sites, planning for temporary or even permanent public sector use, such as a park, may be the more realistic approach to removing the contamination problems. The path leading to the cleanup or redevelopment of many contaminated sites is not always straightforward. Federal, state, and local regulations are numerous, all with complex requirements. Estimates of the number of affected sites vary tremendously. The previously used, and at least potentially contaminated, sites alone are estimated to be between 500,000 and 1 million nation-wide.

The guidelines concerning cleanup and redevelopment can often be overwhelming. Different types of pollution may require specific responses under different federal and state laws or regulations. The various rules may, however, become useful tools when an individual knows how to navigate through them. This guide offers a background history on federal and state laws and regulations. The guide also explains how these laws and regulations can be used to promote re-development and how would-be redevelopers can work with the requirements. Our objective is to demonstrate to individuals, businesses, communities, and public officials the net economic benefits than can be gained from redeveloping these contaminated properties.

Local governments and community-based organizations, even with limited resources, are often in an excellent position to lead redevelopment of contaminated sites. Local groups know the history of an area and have a vested interest in the site. Many different agencies often need to work together to make such a redevelopment project a success (environmental groups, economic development, engineering, planning, architecture, and citizen groups, to name a few). A publicly-oriented local agency can take a lead role, making it easier to bring these groups together to cleanup, coordinate, and plan for the redevelopment of a contaminated site, potentially permitting such an approach to achieve more than any private-sector led effort.

Since many cities and counties are left with ownership of such sites as the result of property tax delinquency, building the redevelopment capacity of municipalities is

extremely important. Even if a municipality is not directly responsible for ownership and remediation of the suspect sites, local officials will undoubtedly be involved and possibly oversee the remediation process. Whether the process is led by an environmental agency acting to protect residents' health and environmental exposures or by an economic development entity pursuing new businesses and sources of income and employment, local governments and community-based organizations are likely to have to address contaminated land issues.

The Guide begins with a history of major federal acts concerning contaminated sites. A description of programs that can offer financial and technical assistance follows. Case studies describe different cleanup scenarios, illustrating how local groups can work with state and federal officials to achieve their redevelopment goal. Appendix A gives a summary of the different environmental remediation programs that exist in each state in the Southeast as well as web resources, and Appendix B contains a listing of various useful websites and resources.

No brief guide can be an exhaustive resource. Our objective here is to provide background information and a sense of direction to officials with little or no experience with contaminated properties. The broad range and extensive material provided may also serve as a convenient reference for busy practitioners.

Background on Federal Laws

A basic knowledge of federal laws and regulations helps us understand why cleanup and redevelopment of contaminated sites has often had a negative stigma. It is important for individuals interested in contaminated properties to understand how these regulations affect a property. There are two important federal acts that have instigated cleanup of contaminated environmental sites and prevention of future contamination of sites–and that, at the same time, may have discouraged their redevelopment:

- The Resource Conservation and Recovery Act (RCRA), enacted in 1976, and
- The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, which is often called Superfund, referring to the special fund used to cover government expenses incurred during cleanup), enacted in 1980.

Both acts attempted to build frameworks to achieve cleanup and management of contaminated sites. There is, however, a major difference between them. RCRA was enacted to protect against future problems for sites that may already have been - or are at risk of – being contaminated as the result of their current uses. CERCLA, by contrast, is focused more on past mismanagement of hazardous materials and addresses how to finance and conduct the mitigation of past contamination. Until 2002 a difference in the hazardous materials covered made coordination across the two acts very difficult: RCRA coverage included petroleum, while CERCLA (and the tax that funded the Superfund) expressly excluded any petroleum-based contamination. While this CERCLA exclusion has been lifted, the coordination of regulations across the two acts to include petroleum coverage is still a problem.

RCRA

In 1976 Congress passed the Resource Conservation and Recovery Act, or RCRA, in order to monitor closely the generation and disposal of hazardous waste. RCRA was created as an amendment to the Solid Waste Disposal Act of 1965, which had no specific focus on toxics in the waste stream. RCRA's amendments and implementing regulations have become so extensive over time that it is generally referred to as an act itself, rather than as an amendment. RCRA gave the Environmental Protection Agency the authority to monitor and control all aspects of hazardous waste management, from its creation in the production process through its transport and disposal at a controlled waste processing facility.

In its current form the act has ten subtitles: A-J. Of these subtitles, three create programs while the remainder deals with provisions of oversight, duties, and other regulatory issues. The three regulatory programs established through RCRA deal with land and water. These programs are Solid Waste, Hazardous Waste, and Underground Storage Tanks (USTs). Subtitle D of RCRA deals with solid non-hazardous waste, mostly in the form of municipal landfills, and as such will not be discussed in detail here.

States may be granted the authority to carry out the duties of the EPA with regards to RCRA by enacting a similar hazardous waste program, so long as it is at least as comprehensive and strong as the federal guidelines. Currently 48 states, the District of Columbia, and Guam have programs which follow the RCRA guidelines, dealing with standard identification and classification of wastes, permits, and facility requirements (1). These programs have been approved by the EPA. Alaska and Iowa are the only states which do not have their own programs; therefore the EPA retains oversight for these states for compliance with the RCRA regulations. The EPA has the power to remove state enforcement power at any time should it find that the state program is not enforcing or carrying out the provisions of RCRA effectively.

Subtitle C: Hazardous Waste

Subtitle C of RCRA deals with hazardous waste. This portion of RCRA is often referred to as a "cradle to grave" control mechanism since it regulates the entire life of hazardous waste. EPA has the power to impose fines on producers of waste if they are not in compliance with the law. Since 1985 an additional stipulation was added requiring all producers of hazardous waste to have a plan to reduce either the quantity of waste generated each year or the toxicity of the waste. In addition, RCRA stipulates that all owners and operators of sites producing hazardous materials, or those individuals planning on constructing a site that would produce hazardous materials, obtain and periodically renew a permit. In order to receive this permit, the operator of a facility is required to demonstrate its financial capacity to pay for the closure, cleanup, and post closure care of the site. This financial capacity, or financial assurance, can be demonstrated in a variety of ways, including bonding, insurance coverage, corporate financial reserves, and the like, but there is growing federal concern about whether or not these demonstrations are adequate. After an initial permit is issued there is further

concern about the ability of an operator of a facility to maintain this financial capacity into the future, despite the basic checks associated with permit renewals.

Subtitle I: Underground Storage Tanks

Subtitle I of RCRA deals with Underground Storage Tanks (UST). This was the first federal law aimed at regulating and monitoring USTs. The stated objective of subtitle I is to "prevent and cleanup releases from tanks". The EPA has developed comprehensive performance standards for any new tanks, upgrading requirements for existing tanks, and regulations to prevent, detect, and cleanup releases caused by an underground storage tank. Like subtitle C of RCRA (hazardous waste), states can gain approval to operate their own UST program as long as their program is at least as strict and comprehensive as the federal regulations.

Subtitle I of RCRA affects a large and diverse group of people, industries, and businesses ranging from industrial manufacturers to local gas stations. Just as the owners of sites with hazardous materials must do, UST owners and operators must also be able to demonstrate financial capacity or assurance, which they can do in the same way (bonding, insurance coverage, corporate reserves, etc.). Due to the enormous expenses associated with leaking underground storage tanks and the number of USTs involved, a great number of states developed programs aimed at providing the financial assurance mandated under RCRA. Given the enormous number of USTs in America it can be expected that a large number of contaminated properties have at least a small amount of contamination resulting from a leaking UST. According to the EPA's Corrective Action Measures report, 443,568 confirmed releases from USTs have occurred through March 31, 2004. Of these confirmed releases 132,443 still need remediation.

CERCLA

Unlike RCRA that only deals with active sites, CERCLA (The Comprehensive Environmental Response, Compensation and Liability Act) also deals with sites that are abandoned, idle, or underused. The act has direct implications for brownfield sites and has gained greater publicity than RCRA. CERCLA established prohibitions and requirements dealing with brownfields, provided for liability or financial responsibility for contamination, and established a trust fund (Superfund) to finance cleanup when no responsible party could be identified. The EPA got support for, and congress passed, CERCLA by using a polluter pays principle. The polluter pays principle simply meant that the people or organizations responsible for the contamination or "polluters" were financially responsible for the consequences of the contamination. In other words, the polluter was legally liable or responsible. Under this principle CERCLA collected taxes from industries that were most likely to have the types of pollution commonly seen on the properties regulated under CERCLA. The money from this tax funded the Superfund portion of CERCLA. Superfund was the fund created to help clean up orphaned (those who's owner cannot be located) sites. In 1995 the "polluter pays" tax expired and was no longer collected. In principle, Superfund was supposed to first clean sites, get payment from the polluter, and then reimburse the fund with this money. In reality, after

identifying the sites that were top priority and beginning cleanup, many of the original polluters were nowhere to be found. Often the liable party was a business or corporation that no longer existed. Therefore, as no new money from the "polluters" was coming in, Superfund was quickly depleted.

CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP outlines guidelines and procedures for responses to releases or threatened releases of hazardous substances that require emergency removal. Under the NCP the infamous NPL (National Priorities List) was created. The NPL placed properties on a list in the order in which they should be cleaned up under CERCLA. Though the method by which authorities have categorized these sites on the NPL has been criticized, this was nonetheless helpful for giving priority cleanup to hundreds of sites that contained dangerous hazardous materials.

After the EPA began seriously enforcing CERCLA, courts broadly interpreted the Act with regard to strict 'joint and several liability.' Joint and several liability means that each of the responsible parties at a site are liable for the entire cost of cleanup, so long as the harm caused by each party is indivisible from harm that other parties caused (2). EPA has the power to choose the party from which it wishes to seek compensation. Under the original CERCLA regulations, this means that not only were original polluting owners and operators held responsible for contamination, but new owners – sometimes purchasing property unaware of the contamination – were liable as well.

Unfortunately, the aftermath of CERCLA's strict liability requirements still affects the redevelopment of brownfields today, despite the introduction of other programs to counterbalance its effects. While CERCLA may have facilitated cleanup of sites, it also hindered redevelopment of brownfields due to its negative stigma. CERCLA perpetuated a fear of liability that has discouraged developers, local government organizations, and financial institutions from becoming involved with brownfield sites.

While brownfield sites are affected by and included in RCRA and CERCLA (including its various amendments) legislation, there is an important distinction between a brownfield site and a Superfund site. A *federal* Superfund site is a site that has been specifically selected by the EPA using a mathematical ranking system and designated as a high priority site for funding and cleanup. There are approximately 1,400 Superfund sites out of an estimated 500,000 or more sites with contamination. Superfund sites are listed on the National Priorities List and undergo federal cleanup. Superfund sites cannot receive federal funding through brownfield programs for cleanup (3).

There are also *state* Superfund lists. Each state determines this list in its own way, and some states do not even have one. Some of the state Superfund sites are the same as federal sites; others are different. These are sites that states consider high priority. Many states have modeled their state program after the federal law or have tried to improve upon the federal law. The state programs generally allow the state to:

1. Take emergency response or environmental remediation activity;
2. Finance staff, studies, and remediation;

3. Compel responsible parties to study sites or perform cleanup;
4. Develop its own state list and cleanup standards (4).

Many community officials and groups confuse the two because the brownfields program is covered under CERCLA – the Superfund law. The distinction, however, is important.

SARA

The first major act intended to help ease liability for innocent parties was the Superfund Amendment and Reauthorization Act (SARA). CERCLA was enacted in 1980 in response to an environmental crisis, but due to various political reasons, enforcement was dodgy and EPA administrators haphazardly managed the program. In the early 1980s however, environmentalism became a more mainstream cause, and there was an increase in the number of environmental lobbying organizations (5).

By 1985 the Superfund taxing authority was due to expire: much of SARA was drafted in response to the lax enforcement of CERCLA, the increase in public awareness of environmental concerns, and the effect of contamination on local communities. In addition, SARA added the innocent landowner defense, which sought to ease the liability on people who had inherited or purchased property without knowledge of potential contamination. Congress took a more direct role in SARA than it had in CERCLA. SARA mandated cleanup schedules of contaminated sites, gave provisions for faster settlements – including government assumption of some of the costs—and allowed for polluters to pay a fixed sum to the government in exchange for release from future liability. The overall Superfund funding was increased from its initial $1.6 billion to $8.5 billion.

Asset Conversion, Lender Liability, and Deposit Insurance Protection Act

In 1996 the Asset Conversion, Lender Liability, and Deposit Insurance Protection Act was signed into law to respond to some troubling court rulings. This act amended CERCLA so that lenders would be offered protection against liability as a result of providing loans to developers to purchase contaminated properties. In addition this act provided relief for lenders in the event of foreclosure on a contaminated property.

While this law provides significant protections for lenders against liabilities associated with contaminated properties, it does require that the lenders abide by certain guidelines. These guidelines basically allow lenders to enjoy the liability protections as long as they do not engage in management of the contaminated property or, in the event of foreclosure if they divest themselves from the property at the earliest possible occasion.

This law enables lenders to more comfortably provide loans for developers working with contaminated properties. While lenders will still be concerned with other issues surrounding such properties, this act provides a significant tool for developers seeking financing for contaminated properties.

Small Business Liability Relief and Brownfield Revitalization Act

The most recent addition to the array of federal brownfield acts is the Small Business Liability Relief and Brownfield Revitalization Act, which was signed into law in January 2002. In addition to providing relief for small businesses from liability under CERCLA it also amends CERCLA to further promote state voluntary response programs and encourages greater state responsibility in enforcement.

This new law also provides for federal financial assistance for key activities related to brownfield revitalization, including grants for assessment, cleanup, and job training. The law also limits the liability of certain contiguous property owners and prospective purchasers of brownfield properties, and helps innocent landowners in their cleanup and reuse of sites.

The law responds directly to the fear created by CERCLA regulations by reducing liability for new purchaser and adjacent property owners. The Brownfields Law further protects innocent landowners from liability. It exempts people who had no knowledge of contamination when purchasing the site and are not affiliated with the liable party. It also protects those owners whose property may be affected by contamination stemming from neighboring sites.

Because the Act is still recent, its full effect on the status of brownfields is not yet clear. While it does ease CERCLA liability and promote redevelopment of sites, the provisions are lengthy and will undoubtedly be modified as the EPA provides further guidance and new judicial decisions arise. This act works to limit "overfiling" by the EPA when a cleanup occurs through a state program (6). This can prove advantageous to participants in Voluntary Cleanup Programs or VCPs and other state programs. An addition to this act is the Prospective Purchaser Protection portion. Under this "bona fide purchasers" of contaminated sites will be protected from liability under Superfund even if that purchaser was aware of the contamination at the time of purchase. This law outlines the conditions for qualification under this protection and should provide a great deal of relief for individuals interested in the purchase and cleanup of contaminated properties. Due to the fact that this law is new, local officials and developers should consult with legal professionals before purchasing a site with possible contamination in order to ensure that they comply with the most recent additions to federal and state guidelines.

State Programs/Resources

Voluntary Clean Up Programs

Origin

Voluntary Cleanup Programs (VCPs) arose with the unspoken approval of EPA in part to offset some of the barriers to redevelopment that CERCLA and its amendment acts still posed. VCPs are *state-sponsored programs*. Individual states set eligibility requirements for participation, cleanup standards, and oversee activities in varying degrees (7). The

VCPs vary from state to state. In general they exist to help local governments and property owners' access technical assistance, encourage cleanup by private parties (often the owner or operator of a site) in the absence of state enforcement measures, and often offer tax or monetary incentives to facilitate the cleanup.

VCPs usually offer the following major incentives for participation: liability release, variable cleanup standards, and financial and/or technical assistance. Many states target specific areas for their cleanup programs, often geographic areas that receive funding from other redevelopment programs as well. However, sites that receive funding from other sources are not always eligible. The "voluntary" aspect differs from state to state as well. Most states require that contamination be reported and a cleanup plan enacted, but some programs do operate on a truly voluntary basis.

The popularity of VCPs and the increase in their use over the past 10 years could be attributed in part to a changing attitude towards infill projects, and the growing realization by city planners, development professionals and citizens that reuse projects are both economically practical and important for a high quality of both urban and rural life. The booming economy of the late 90s undoubtedly also contributed to the increase in development projects of all kinds.

Liability Release

VCPs go further than any of the CERCLA amendments in releasing operators, owners, and prospective purchasers from cleanup cost liability. Many states also have prospective purchaser agreements (PPAs), which allow individuals who buy contaminated property to negotiate a cleanup procedure with the state. The intended effect is to reduce the stigma surrounding brownfields and to encourage cleanup. By participating in a VCP, the state usually offers the owner a waiver of liability. By waiving liability, VCPs encourage site operators and owners to register and clean up their sites. Though EPA does not *guarantee* that it will not seek compensation or find operators liable for contamination after participation in a state VCP, it generally assumes additional remedial action is not required once a site has completed registration in the VCP (8).

Variable Cleanup Standards

Variable cleanup standards offer flexibility in redeveloping brownfields, because they permit cleanup levels based on the intended use rather than being held to the highest standard. The term risk-based corrective action (RBCA) is also used to describe this process, as the risk of contamination with a potential use decides the level to which it will be cleaned. While the standards will increase the economic benefit for developers of a great number of brownfields, these standards can be difficult to maintain given that some level of contamination is left behind. The standards imposed under these RBCAs foster redevelopment but could leave some parties involved with liability issues in the future.

Financial and Technical Assistance

While a certain level of funding is expected from the party that is "volunteering" to clean the site, there are state grants and low interest loans available to make the process more affordable for the involved parties. While under CERCLA an owner would be fully liable for the cost of cleanup, the new programs and laws now make liability limited and help provide funding for cleanup procedures.

Technical assistance is usually available both at the federal and state level. The level of technical assistance in individual states ranges from public officials who are trained and knowledgeable about issues relating to contaminated sites to a state endorsing a private engineer to provide the assistance to the participant. The EPA also provides assistance to local groups and state groups who are trying to set up a VCP or obtain funding to clean a site. More information on funding and other assistance can be found in the Appendices, which include web resources.

VCPs in Sum

VCPs play a variety of roles in the redevelopment of polluted properties. At the time of publication of this guide, 48 states (the exceptions being North and South Dakota) have adopted VCPs. In some states the VCP is also the state brownfield program. In others there is a separate state brownfield program, while still others have no state brownfield program. The distinction between state brownfield programs and VCPs – when there is a distinction – is that state brownfield programs focus exclusively on the redevelopment of brownfield sites, which are currently underused or idle, while VCPs accept properties that may or may not be considered brownfields and which may still be active. As mentioned previously, VCPs vary in their focus, with some emphasizing redevelopment of sites more heavily than others. The level of redevelopment incentives also depends upon which state organization oversees the state program. If it is an economic development department rather than an environmental department, the state brownfield program will be more likely to offer economic incentives to developers and to have variable cleanup standards, rather than adhering to more stringent cleanup standards.

Important to Note

Because brownfields programs and VCPs vary from state to state, a brief discussion of the two is warranted. In theory brownfields programs focus on sites in urban areas and VCPs focus on any site. The truth is that state programs often do not make such distinctions. The EPA brownfields web page states that "a voluntary program in one State may focus more heavily on cleanup of brownfields sites than a 'brownfields' program in another State. For this reason, it is important to look at both voluntary and brownfields programs to determine the brownfields redevelopment activities in any given state (9)."

EPA Federal Programs/Resources

Brownfield Programs

As of September 2004 the EPA had nearly two dozen programs directed at brownfields. These programs vary in applicability and scope; however, they are all useful in brownfield redevelopments.

Direct Financing

The EPA has a number of direct financing programs available for brownfield redevelopment. Included in these programs are as follows: Assessment Grants, Cleanup Grants, and Revolving (RLF) Loan Fund Grants. Assessment grants are awarded to eligible individuals for the purpose of pre-cleanup activities. These activities can include site assessments, inventory, community outreach, and similar activities. Cleanup grants are for the actual cleanup part of the brownfield redevelopment process. These grants provide up to $200,000 for cleanups conducted by local governments, non-profits, and other eligible entities. These grants generally require a 20% match from the receiving entity. The revolving loan fund grants are awarded to local governments, community redevelopment agencies, and other eligible individuals for the purpose of setting up a low-to-no interest loan program for brownfield redevelopment. These RLF grants can be awarded up to a million dollars.

Training, Outreach, and other Support Programs

The EPA possesses several programs that are not financing programs but are very useful to the brownfield redeveloper. These programs include: job training grants, targeted site assessments (TSA), and Environmental Enforcement Education Grants. The job training grants provide up to $200,000 to eligible entities to provide training and education to individuals in communities affected by brownfields. The TBA program provides either technical assistance or grants to eligible entities for Phase 1 or Phase 2 site assessments or for assessments of costs and cleanup methodologies at brownfields. The Environmental Enforcement Education grant program provides support for projects that, "…enhance the public's awareness, knowledge, and skills to make informed decisions that affect environmental quality" (11).

The EPA offers important and useful programs, as well as technical assistance to parties interested in remediation activities. More information on technical assistance and information sources can be found in Appendix B.

Case Studies

Although each project is unique, case studies offer examples of how site cleanup and redevelopment can occur, as well as examples of the types of reuse that occur with brownfields and contaminated properties.

Atlantic Steel Company: Atlanta, Georgia

History

The Atlantic Steel Company site occupied 138 acres in downtown Atlanta. Founded in 1901, the site had begun producing 50 tons of steel a day. During World War I production increased, and by World War II Atlantic Steel was the largest employer in Georgia. After World War II the plant was still producing 700,009 tons of steel a year. In the early 1950s an electric air furnace was installed in the plant. This led to even greater pollution than the steel production was causing, and in the early 1980s the dust waste caused by the furnace resulted in a RCRA closure. Furnace operations ended officially in 1991. In 1998 all manufacturing ended and Jacoby Development bought the property for $79 million.

The City of Atlanta was not the owner of the property, but in some ways this made their role in the redevelopment process even more complicated. At the time Atlanta was in violation of EPA air quality standards and was therefore forbidden from accessing federal funding for new transportation projects. Overall, Atlanta had a bad reputation environmentally, and it was important that the Atlantic Steel Project – located so centrally in the Atlanta metropolitan area – serve as an example of how to redevelop property in an environmentally sensitive way. With some of the worst traffic in the country and extremely high growth in its suburban areas, the time was right for the redevelopment of inner city properties in Atlanta.

Contamination and Cleanup Process

Before redevelopment could occur, however, developers and the City of Atlanta were facing 150 acres of contaminated property. There were a series of public meetings between the Georgia Environmental Protection Division (EPD), Atlanta city officials, neighborhood groups, the Development Company, realtors, and neighborhood groups. Cleanup of the Atlantic Steel site required both public and private financing, as well as a combination of new zoning and engineering controls. By completing the RCRA requirements for disposal of hazardous water, the development company eased most of the regulatory pressure coming from the EPA and Georgia EDP.

After detailed site investigations and assessments and the demolition of the structures on the site, most of the contamination was found to be in the soil and the groundwater of the site. The entire site needed a storm water infrastructure upgrade in order to prevent the escape of groundwater. Engineering controls were used to intercept the contaminated groundwater, treat it, and then release it into the Atlanta sewer system for further treatment and subsequent release.

The site was found to have one regulated unit of Hazardous Waste Flue Dusts, from the furnace. The contamination levels were reduced to background contamination (meaning to the level of contamination naturally present in any site) and the hazardous materials

were removed. These were disposed in accordance with Georgia's solid waste management program.

By the end of cleanup in Fall 2000, over 20,000 truckloads of contaminated soil had been removed from the site. The RCRA permit was terminated, certifying that the site no longer contained or would be producing hazardous materials. A conservation easement for storm water management, enabling regulation by the state, was enacted in 2001. Georgia's EPD issued a "No Further Action" letter, releasing the development company of all future liability and proclaiming the site clean, in December 2001. The total cost of remediation was $10 million.

Public and Private Partnerships

Throughout the process, the City of Atlanta helped the developers and real estate groups by negotiating with Georgia EPD, EPA, and local neighborhood groups. Developers tried to be sensitive to the concerns of existing neighborhood groups about the project complementing existing neighborhoods, the effects of new development of on traffic in their neighborhoods, and the environmental concerns the project raised. The City was also cooperative in changing zoning to allow for the proposed development.

City support was not limited to zoning changes. The Atlanta Development Authority (ADA) also helped finance the project by issuing $85 million worth of bonds for both site cleanup and new infrastructure such as new streets, as well as water and sewer systems. The bonds designated Atlantic Station, the name of the redevelopment, as a Tax Allocation District (TAD). This meant that the bonds would be backed by the assurance of the rising property values and increased sales the project will bring. The TAD funding was a first in Georgia, though this type of tax financing has been used for improvements in other major cities.

The Downtown Development Authority was also involved in the financing of the project, using additional bonds as security should any shortfall arise in the TAD. An agreement between ADA and Jacoby Development specifies that Jacoby has three years to complete infrastructure and make changes to the master development plan. The entire project is expected to be completed in 2013 (12).

Lessons

Atlantic Station was an environmentally thoughtful project from the beginning. All the concrete from the demolished buildings was recycled. The new development will be a mixed use of commercial, residential, and recreational development, complete with a mix of housing types and hotels. A variety of public transportation options will be available to residents and visitors to the development, and the entire development is pedestrian oriented. The EPA was so impressed with the project that it granted the developers an exemption from Atlanta's road building moratorium, allowing the developer to access federal funding to build a critical bridge linking the project to Midtown Atlanta.

Construction for Atlantic Station began in winter 2003 and is expected to be completed in 2008.

Thomas Construction Site: Charlotte, North Carolina (13)

History

Unlike the large size of the Atlantic Station site, the Thomas Construction site was a mere 1,920 square feet. The site was part of an EPA Brownfields Pilot program, which focused on one of the oldest industrial parts of the city. In 1996 the Pilot provided the City of Charlotte with $200,000 for the redevelopment costs including the site assessment and the cleanup. At the same time, the state of North Carolina enacted the Brownfields Property Reuse Act, which limited developer liability. Even with the protection of SARA, developers in state projects often sought assurance from both state and federal authorities that they would not be held liable for contamination. In other words, the more acts guaranteeing a waiver of liability for prospective developers, the better.

Public and Private Partnerships

The City of Charlotte was extremely involved with the Pilot programs from the beginning. In particular, city officials helped organize community meetings so that residents could express their concerns and desires about development and get to know the other involved parties. The City had a brownfields department which they used to provide technical assistance to developers and citizens. The City created a committee in order to determine which sites would receive funding, based on community meeting feedback. Representatives from neighborhood groups, the real estate industry, environmental groups, and banks were on the committee.

For the Thomas Construction Site, the Pilot provided $7,500 to conduct a site assessment, which showed evidence of lead contamination. Thomas Construction, a contractor, removed the contaminated soil, renovated the building, and moved their business to the site. The company did not pursue a brownfields agreement with the State (13).

The City of Charlotte worked cooperatively within its various departments and with outside groups as well. Charlotte's Economic Development Division is responsible for administering the Brownfields Pilot grant. Other involved parties included the Mecklenburg County Department of Environmental Protection, the North Carolina Department of Environment, Health, and Natural Resources, and the Division of Waste Management, which provided vital information on state brownfield laws.

Lessons

The Thomas Construction Site represents an example of a small site that was cleaned and put back to an active use fairly easily. Because the site was small, the intended use non-residential, and the project involved only a small number of stakeholders (the City, local residents, and the owner, as opposed the many involved parties in the Atlantic Station

project), the redevelopment process moved very quickly. While contamination was found on the Thomas Construction site, some sites do not turn out to have contamination. Stigma surrounding sites often prevents investment, when the reality is that the sites have no contamination or very low levels of contamination and are wonderful development opportunities.

This particular site moved very quickly and easily however other brownfield projects in the city have not moved quite as quickly, but all in all, the city has developed a smooth process for redevelopment. The City had good working relationships with neighborhood groups, realtors, developers, and the EPA – all necessary to complete successful redevelopment projects. In addition, North Carolina's law encourages redevelopment through release from liability. To receive this liability protection from the State, community members must provide letters of support for the redevelopment project. This encourages developers to work with the community and ensures that most projects will not proceed without community satisfaction.

Manchester Village: Rock Hill, South Carolina (14)

History

This particular site was bought by the city of Rock Hill on January 7, 1956. 1.24 Acres of the 150 acre site in question was leased to York County which operated an unlicensed garbage transfer station on the land. This transfer station was in operation from 1983 to 1993. In 1993 the transfer station was abandoned and remained idle for a few years. Due to the perception of contamination, developers were very hesitant to purchase this site. This site is located in an urban area of Rock Hill, only 1000 feet west of Interstate 77. The location provides the potential for large economic benefit if redeveloped. Upon investigation of the site, the following was discovered: elevated levels of volatile organic compounds, or VOC, oil contamination, and lead contamination. In the initial assessment 98 soil samples were taken. This site was cleaned using South Carolina's Voluntary Cleanup Program.

Public and Private Partnerships

The city of Rock Hill entered into a voluntary cleanup program as the Responsible Party in 1999. However, in an effective partnership, a local business, Manchester Cinemas, LLC entered into the voluntary cleanup program as a non-responsible party. Upon completion of the state voluntary cleanup program, the city of Rock Hill received a covenant not to sue and Manchester Cinemas received state superfund liability protection. This partnership between the city of Rock Hill and the private business enabled this previously contaminated site to be cleaned and redeveloped. In completing the cleanup the following activities were performed: 12 inches of soil were removed and 18 cubic yards of petroleum contaminated soil were appropriately disposed. The entire cleanup process took only three months and only cost $73,000, which covered the following: phases 1, 2, and 3, environmental site assessments, oversight costs for the state environmental health department, and city staff costs.

After the small area of contamination was cleaned up the entire site has been redeveloped and approximately $80 million in retail sales per year have been achieved with approximately $4 million going to taxes. Nearly 800 people are employed in the new development and approximately 500 multi family units have been constructed on the site with a housing potential of over 1,000 residents. In 2001 this site was awarded the prestigious Phoenix Award for being an excellent brownfields redevelopment.

Lessons

The Manchester Village Project is a good example of how private and public entities can work together to foster economic activity in an area. This particular site was in an urban area and was not being purchased due to the perceived contamination. Initial assessments showed that contamination levels existed but were not as serious as the stigma indicated. This demonstrates the importance of performing site assessments. As a result of the initial assessment, a local developer was interested in developing this site. This site also demonstrates how to effectively use a state voluntary cleanup program to ensure protection from liability issues. As a result of this partnership and the utilization of the Voluntary Cleanup Program, economic gain was realized for all parties and the community as a whole.

Conclusion

The information presented in this guide constitutes a primer on state and federal environmental laws and gives suggestions for how to assess contamination and begin redevelopment on contaminated properties. Case studies illustrate the reality of a redevelopment project, including securing funding and working with local, state, and federal organizations.

The case studies presented are very different, but each provides important lessons. The Atlantic Station project deals with a huge site, contaminated by years of pollution. It was both a brownfield site and a site that had a RCRA permit. It was what the EPA calls a RCRA brownfield, a site "where there is redevelopment potential, and where reuse or redevelopment of that site is slowed due to real or perceived concerns about actual or potential contamination, liability, and RCRA requirements (15)". The project required public and private partnerships and various funding sources. In contrast, the Thomas Construction project was small and required minimal remediation. The site was being used for a construction company, which required cleaning to a lower standard than parts of Atlantic Station, which included intended residential use. The Manchester Village site was an example of a very common situation: an excellent site left abandoned due to uncertainty and fear in the community. This case demonstrates clearly the benefits in performing a site assessment and participating in programs such as state voluntary cleanup programs. In an effective partnership, local business and the city were able to take an abandoned site and turn it into a profit-making, community enhancing business.

This guide contains information intended to quickly familiarize a newcomer to the contaminated property and brownfield arena, as well as remediation and redevelopment. Utilizing the vast resources available to redevelop these contaminated properties can have enormous benefits for both the participant and the community. It is important to recognize that the laws governing contaminated sites are broad and an individual site could be governed by more than one. It is also important to recognize that liability issues are moving away from the once strict CERCLA rules to a fairer, balanced, and redevelopment-oriented direction. For more detailed information on any of the topics discussed in the guide, a list of informative websites is provided in the Appendix.

Appendix A: Southeastern State Resources

Each state in the Southeast has adopted some form of a VCP. Because the history of brownfields is different in each state and the level of support for brownfield programs varies, each state program operates in a unique manner. Some states have been very proactive for over 20 years in brownfield remediation. Others have only recently put legislature in place that facilitates cleanup and redevelopment. The following is a profile of existing brownfield programs in each Southeastern state. For easy reference, tables showing basic components of VCP and state brownfield programs are included at the end of the guide.

Alabama

Alabama Department of Environmental Management: **http://www.adem.state.al.us**
This site explains state laws regarding contamination, cleanup, and brownfield redevelopment. The site also has links to other departments and funding sources.

Georgia

Georgia Environmental Protection Division: **http://www.state.ga.us/dnr/environ/**
This site contains information about hazardous waste permits and some technical assistance for dealing with pollution and other spills, including the Hazardous Site Response Program.

Kentucky

Kentucky Division of Waste Management: **http://www.waste.ky.gov/**
This department is within the Department for Environmental Protection, as part of the Natural Resources and Environmental Protection Cabinet.

Mississippi

Mississippi Department of Environmental Quality:
http://www.deq.state.ms.us/MDEQ.nsf/page/Main_Home?OpenDocument
Site contains general information about pollution sources, funding, and more specific programs.

Mississippi Brownfields Program: **http://www.welcome.to/brownfields**
Site includes laws, application materials to the program, and information for local governments.

North Carolina

North Carolina Department of Environment and Natural Resources: **http://www.enr.state.nc.us/**

This contains links to tax credits and financial assistance, brownfield programs, and technical assistance.

South Carolina

South Carolina Department of Health and Environmental Control, Division of Site Assessment and Remediation: **http://www.scdhec.net/lwm/**

Site includes information about solid waste and mining disposal, as well as site remediation information.

Tennessee

Tennessee Department of Environment and Conservation: **http://www.state.tn.us/environment/dsf/**

Contains links to the Voluntary Cleanup, Oversight and Assistance Program for brownfields, as well as information for other contaminated properties.

Appendix B: Additional Resources

Useful Websites

EPA Brownfields Page: **http://www.epa.gov/brownfields/**

A complete brownfields resource including links to funding, state programs, and case studies of successful pilot programs.

The Northeast Midwest Institute: **http://www.nemw.org**

A non-profit organization providing environmental and economic research. The site contains many useful reports on environmental pollution and specific information regarding state brownfield programs.

The Center for Brownfields Initiatives at the University of New Orleans: **http://www.brownfields.com**

Contains maps showing brownfields across the country, case studies, links to other sites, and a complete library of articles and guides on brownfield properties.

EPA Clu-In Technical Assistance Page: **http://clu-in.org/**

Contains new technologies and treatment for remediation and serves as a forum for all waste remediation stakeholders.

EPA Technology Innovation Program: offers searchable databases on technologies available to characterize and clean a contaminated site. http://www.epa.gov/tio/index.htm

EPA RCRA Corrective Action Page: contains RCRA success stories, information on hazardous waste disposal and RCRA permits, and the complete text of RCRA and its amendments. http://www.epa.gov/epaoswer/hazwaste/ca/index.htm

EPA Region 4 Environmental Finance Center: contains additional guides in pdf format on various brownfields topics. http://cepm.louisville.edu/publications/publications.htm

Useful Publications:

A sourcebook for borrowers
http://www.smartgrowth.org/library/finsbk.html

Financing Strategies for Brownfield Redevelopments
http://www.nemw.org/BFfinancingredev.pdf

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