

Introduction

Visitors driving along neighborhood roads in Houston in 2004 would not have noticed much activity at 3617 Baer Street. Amidst homes, vacant lots, a vinegar plant, an electric utility, and a community school, the 36-acre area remained fenced, enclosing debris piles, paved areas, and a few remnant structures.

The area had been a hub of industrial activity for decades; metal casting foundries had created specialty molded steel parts that served as the foundation for industrial, railroad, and mining operations across the country. A chemical recycling facility had left thousands of abandoned catalyst drums behind.

By 2004, the area had been idle for 13 years. Industrial operations had contaminated soils and ground water, and the U.S. Environmental Protection Agency (EPA) placed the area – the Many Diversified Interests, Inc. (MDI) Superfund site – on its National Priorities List (NPL) of contaminated sites in 1999.

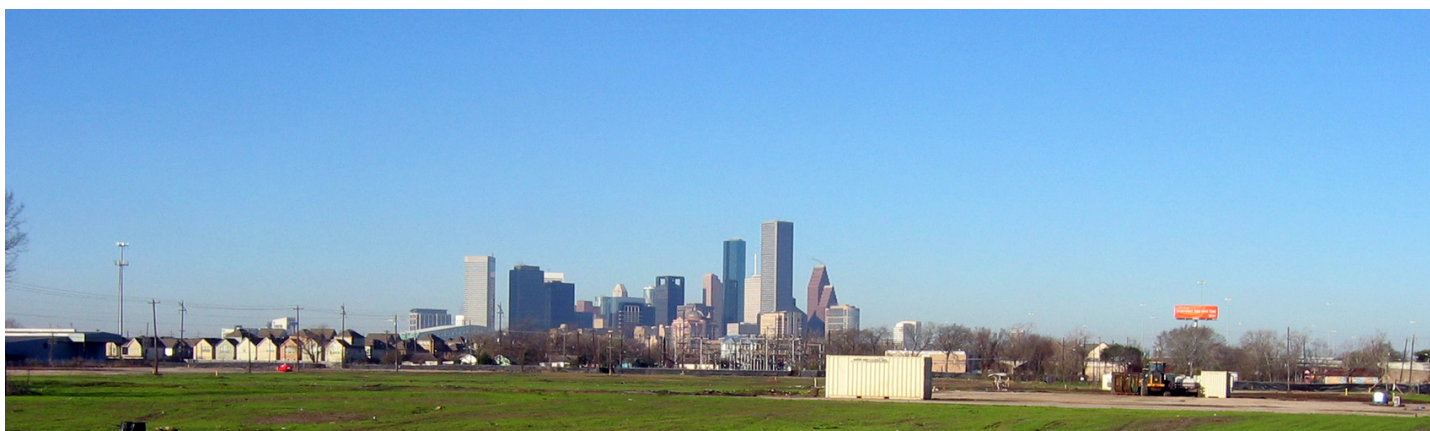
In 2004, it did not look like there would be much happening at the MDI site in the foreseeable future. While immediate threats to human health and the environment had been addressed, there were no viable responsible parties. With the site owned by a bankruptcy trustee and a lien placed on the site by EPA to recover past site costs, it appeared unlikely that any party would step in to purchase or clean up the site.

Today, the construction of the MDI site's \$6.6 million remedy is complete. The site's fencing now encloses a flat open field where new infrastructure will soon support a planned residential development with hundreds of homes. Once hidden behind rusting warehouses and storage vats, downtown Houston stands as the site's prominent backdrop. The site's redevelopment will provide jobs, build the city's tax base, and help sustain the ongoing revitalization of Houston's Fifth Ward.

This case study explores the working relationships and key dynamics that have led to the successful cleanup and planned reuse of the MDI Superfund site. In particular, the case study describes the Agreed Order on Consent and Covenant Not to Sue, the first-ever agreement between EPA and a non-labile party for the cleanup of a Superfund site, which was signed in September 2006. This agreement facilitated the acquisition and cleanup of the site by a private party.

The case study also explores the roles of the site's various stakeholders, including EPA, the Texas Commission on Environmental Quality (TCEQ), the site's bankruptcy trustee and prospective site owners, community residents, and local government officials. The cleanup and redevelopment planning process at the MDI site highlights how market forces and community interests can intersect with federal and state responsibilities to ensure the protection of human health and the environment. The end result: site reuses that support local economic development and protective site remedies that enhance and restore a community's quality of life.

In the following pages, the case study discusses the evolution of remediation and redevelopment efforts at the MDI site between its NPL listing in 1999 and the completed construction of the site's remedy in 2008. This case study is intended to provide relevant information and lessons learned from the MDI site to parties with a general interest in Superfund site reuse, as well as parties with a particular interest in an integrated, non-labile party approach to Superfund site acquisition, cleanup, and redevelopment.



View of the MDI Superfund site and the Houston skyline, 2008



MDI Superfund site (OU1), Houston, Texas

Site History, Contamination, and Remediation

From 1926 until the early 1990s, two metal casting foundries and a chemical recycling facility were located at the MDI site. As this photo illustrates, the site was covered by operations buildings, laboratories, warehouses, and other structures used to manufacture specialty molded steel parts like wheels, rail tracks, and mining equipment.

Site operations and waste materials resulted in the contamination of soil and ground water with lead and other metals. EPA listed the site on the National Priorities List, the Agency's list of top-priority Superfund sites, in January 1999. The site includes three operable units (OUs): soils and ground water at the central, 36-acre fenced site area (OU1), off-site residential yards (OU2), and off-site residential crawlspaces and additional yards (OU3).



Following a building demolition and salvage operation in 1996 and removal actions in 1998 and 1999 to address high-priority abandoned catalyst drums and contaminated soils and residential yards, EPA selected a remedy for OU1 in the site's 2004 Record of Decision. Components of the site's remedy for OU1 include:

- the excavation, treatment, and off-site disposal of contaminated site soils;
- the off-site disposal of site debris, asbestos materials, and an underground storage tank;
- source removal and monitored natural attenuation for the site's ground water; and
- institutional controls (ground water restrictions) to prevent exposure to site contaminants.

Throughout all site activities, EPA staff met regularly with the community to share site information and updates and to incorporate community feedback into the Superfund process. The selected remedy enabled the site to be reused for residential land uses, which EPA had determined to be the site's reasonably anticipated future land use. Cleanup activities at the site began in February 2007, and the construction of the site's remedy for OU1 was completed in 2008.

For OU2, no further remedial action was necessary following a 2006 removal action. Remedial plans for OU3 will be finalized in 2008.

Project History

January 1999 – December 2003

Awakening Reuse Possibilities

Interest in the cleanup and redevelopment of the MDI site sparked into life in September 1999, months after the site was listed on the NPL, when EPA’s Superfund Redevelopment Initiative (SRI) awarded a \$100,000 pilot grant to the City of Houston to develop a reuse plan for the site. A diverse group of local stakeholders developed a reuse plan that anticipated mixed residential and light commercial land uses at the site, based on the site’s neighborhood surroundings and the growth of new development projects throughout the Fifth Ward.

Community residents emphasized the importance of both the site’s cleanup and redevelopment for the community’s health and economic well-being, according to EPA project manager Rafael Casanova. “The site had been a fenced-off eyesore for a long time,” he said. “Residents were looking for a cleanup that would allow the community to relate to the site again.”

To support the community’s engagement at the site, EPA awarded a technical assistance grant in September 2001 to Mothers for Clean Air, a local nonprofit organization, and initiated a series of community meetings. “The MDI site was a top local concern,” recalled Jane Laping, executive director of Mothers for Clean Air, “and so our organization applied for the grant as a way to share information about the site with the community and include community feedback in the remedial decision-making process for EPA.” Site-related outreach and engagement efforts in the community included theater-based environmental and public health educational performances hosted by Mothers for Clean Air and the University of Texas Medical Branch.

Project GROW, a community-sponsored public art initiative led by the Museum of Cultural Arts Houston (MOCAH), resulted in the creation of 400 mural panels by neighborhood children that were placed along the site’s fences. According to Reginald Adams, MOCAH’s executive director and a neighborhood resident, the project made an immediate difference in the community. “The murals really succeeded in bringing the site back to the forefront of people’s consciousness,” he stated. “About half of the murals spoke to the site’s past and the contamination, and about half of them spoke to the future – the vision for what could be done with the site.” Jane Laping also recalled the project’s broader impact. “Above all else, the community tried to be an active participant at the site,” Laping stated, “and to do what it could to make the site look better.”

With immediate threats to human health and the environment having been addressed, EPA’s remedial investigations for the site’s long-term cleanup were also underway. According to

Timeline of Events

1926: Foundry operations begin at the site

1990: Many Diversified Interests, Inc. acquires the site

1992: MDI files for bankruptcy; foundry operations cease

Jan. 1999: Site listed on the NPL

Sept. 1999: SRI reuse planning grant provided to City of Houston

Sept. 2001: Technical assistance grant awarded to the community

Sept. 2002: Community’s site reuse plan completed

Oct. 2003: Bankruptcy trustee files site auction sale notice

2003-2004: Prospective purchaser education efforts by EPA and site trustee

June 2004: Draft Agreed Order circulated as part of purchaser education efforts

July 2004: EPA issues Record of Decision for the 36-acre site (OU1)

Mar. 2005: Site auction held; Clinton-Gregg Investments submits bid for site property

June 2005 – June 2006: Agreed Order negotiations

Sept. 2006: Agreed Order signed by EPA and Clinton-Gregg Investments

Feb. 2007: Site cleanup begins

2008: Construction of site remedy completed

2008+: Infrastructure installation and site redevelopment



Removal of concrete and site debris as part of cleanup activities, 2007

Rafael Casanova, the community’s reuse report for the site helped to inform EPA that the site’s reasonably anticipated future land use was residential, which in turn informed the selection of the site’s remedy.



Four of the 400 site murals created by neighborhood children as part of the Project GROW public art initiative

The reuse planning process also sparked broader interest in the future use of the site, with several developers contacting EPA, the City of Houston, and the site’s bankruptcy trustee, the court-appointed entity responsible for managing the MDI company’s assets. Given the interest in the site, the U.S. bankruptcy court determined in late 2003 that it would be sold at auction.

Despite the pending auction, the site’s redevelopment remained a distant dream. Without a responsible party to clean up the site, the conventional wisdom was that EPA would need to clean up the site before redevelopment could begin. As Chris Amades, an attorney for Clinton-Gregg Investments, the eventual buyer of the site, indicated, “My client saw an interesting opportunity, but because timeframes for the site’s cleanup had not yet been finalized, we had to go back to the drawing board.”

It looked like the site’s cleanup and redevelopment would be placed on hold indefinitely. But during EPA informational sessions with the City of Houston and other stakeholders, local developers identified another option, a possible way forward. A non-liaible party could acquire, clean up, and redevelop the site. It had never been done before. A lot of questions would need to be answered. But everyone agreed that it might work.

Community Profile (Part I)

The MDI Superfund site is located on Baer Street in Houston’s Fifth Ward, just east of downtown. Originally settled by former slaves after the Civil War, the Fifth Ward is a historically African-American district that has long been home to Houston’s minority and immigrant populations. In recent decades, the community has been in extended decline, wrestling with widespread poverty and social and economic challenges.

Today, due to Houston’s economic growth and the Fifth Ward’s proximity to downtown, much of the district is in the midst of rapid transition, with older homes, vacant areas, and former industrial facilities being replaced by new residential development. Areas located west of the MDI site now include hundreds of new townhouses and single-family residences, with more units under construction.

The district’s changing fortunes have created both opportunities and challenges for the community, with interest in new jobs and neighborhood infrastructure balanced by housing affordability concerns. The residential redevelopment of the MDI site takes place in this context.



January 2004 – March 2005

Learning a Different Language

In early 2004, as discussions moved forward, project stakeholders worked to understand each other's perspectives and priorities and build relationships. For EPA, key areas included defining the cleanup roles and responsibilities of a non-liable party, also known as a bona fide prospective purchaser (BFPP), at the site, how this approach might best work within the context of the Superfund program, and how to work with a BFPP to ensure the long-term protection of human health and the environment. For prospective purchasers, key areas included confirming the components, requirements, and timeframes for the site's cleanup, addressing liability concerns, and addressing financial issues.

"The process was a great learning experience," stated EPA site attorney Barbara Nann. "At first, EPA and the parties interested in the site's redevelopment were speaking different languages. We were coming at it from a Superfund program perspective and the developers were coming from a real estate perspective. The process helped EPA staff figure out how we could bridge this gap and provide information and tools that would ensure the site's cleanup and help support the site's reuse."

Attorney Chris Amandes agreed. "We worked with EPA and state staff [TCEQ] on a lot of different areas, and they were very responsive," he said. "Everyone was figuring this process out as they went along. No one had done this before. We were sharing ideas. EPA and other parties were sharing ideas. Everyone was very open to different options and ideas, and we kept building on this energy to find solutions that worked."

Based on these discussions, EPA Region 6 staff worked to develop a draft Agreed Order on Consent and Covenant Not to Sue document with input from the U.S. Department of Justice, TCEQ staff, and a team at EPA headquarters that ultimately served as the framework for the site's cleanup and redevelopment. A team of EPA headquarters and Department of Justice staff worked with EPA's regional site team to review Superfund guidance to create an agreement that enabled the cleanup of the site consistent with national EPA policy. Helen Keplinger, an attorney in EPA's Office of Enforcement and Compliance Assurance, recalled that "the Agreed Order was an effective and also less complicated route for the site. With an Agreed Order, EPA retained authority for the settlement, and it was an enforceable agreement that could be signed with a bona fide prospective purchaser."

The U.S. Department of Justice's regional and headquarters offices were involved throughout the process, representing EPA during the site's bankruptcy proceedings and advising on legal aspects of the Agreed Order. According to Assistant U.S. Attorney Judy Robbins, the development of the draft Agreed Order was the critically important step that enabled the site's

EPA and Reuse

Efforts to address future land use considerations at the MDI site fit well with emerging nationwide interest in the revitalization of contaminated areas, including Superfund sites. With the creation of EPA's Superfund Redevelopment Initiative in 1999 and its Land Revitalization Agenda in 2003, EPA's Office of Solid Waste and Emergency Response launched a new EPA focus on promoting land reuse and revitalization at contaminated sites. In 2001, Congress also passed the Brownfields Revitalization Act, which was designed to make the acquisition and redevelopment of contaminated properties like Superfund sites easier by addressing the liability concerns associated with these sites.

As a result of the new law and EPA priorities, EPA regional and headquarters staff were able to bring cutting-edge reuse tools to the negotiating table. When the MDI site was brought to EPA's attention, a headquarters team was already working on guidance for EPA to work with non-liable parties at removal action sites – sites requiring an immediate response to protect human health and the environment. National Priorities List Superfund sites had not been contemplated because of their complexity and stigma.

Scott Sherman, EPA Associate Assistant Administrator and former Associate General Counsel for Solid Waste and Emergency Response, described the mission for the legal team on the development of the novel agreement. "The Agency's policy approach was clear - we should no longer let Superfund sites linger unaddressed and underutilized," he said. "The challenge was to find a way to develop the legal mechanisms needed to move this project forward and then get everyone comfortable with the approach."

"We had a work group that was focusing on these issues," recalled EPA's Helen Keplinger, "and the MDI site presented itself as a real-world case study to work on at the same time." The Agreed Order for the MDI site became the model for BFPPs doing remedial work at Superfund sites. The headquarters team also applied lessons learned from the MDI site to their policy work and subsequently issued the 2006 BFPP Removal Action Model Agreement. Both agreements have helped EPA draft agreements with non-liable parties for the cleanup and redevelopment of several Superfund sites.

cleanup and redevelopment. “There was no mechanism in place to enable a non-liable party to work with EPA at a Superfund site at the time,” she stated. “EPA and the other parties came up with a wonderfully creative idea, and the Agreed Order provided a framework that all parties could work with.”

The resulting document was similar to a standard Agreed Order on Consent, with several important differences. The Agreed Order:

- was designed for a non-liable party;
- removed the site’s liens;
- provided a covenant not to sue for the purchaser; and
- addressed the site’s potential purchaser as a BFPP.

“We knew that the site would be auctioned, and that a buyer was likely, so the Region worked as proactively as possible to draft a document that the site’s bankruptcy trustee could share with potential buyers.” EPA’s Helen Keplinger said. “The Region thought that a summary of Superfund responsibilities and requirements attached to the site might be a helpful resource for potential buyers and attract interest.”

It worked.

In March 2005, several months after EPA provided the draft Agreed Order to the site’s bankruptcy trustee, the 36-acre MDI site property was sold at auction. Clinton-Gregg Investments acquired the site for a bid valued at \$7.8 million – an agreement to clean up the site at a cost estimated by EPA to be \$6.6 million and a cash payment of \$1.2 million for the bankruptcy trustee and administrative costs.



View of the MDI site looking north following cleanup, 2008

EPA Settlement Tools: An Overview

EPA negotiates cleanup-related activities at sites through two types of agreements: judicial consent decrees and administrative settlements. These agreements document the contribution that a party will make at a site, such as work, cash payments, or other types of assistance (e.g., site access). Because they are legally enforceable documents, the agreements provide EPA with an efficient mechanism to seek performance should a party fail to meet specified obligations.

A **consent decree** is a legal agreement entered into by the U.S. and a potentially responsible party (PRP) and lodged with a federal district court. Consent decrees are the only settlement type that EPA can use with a liable party for remedial action at a Superfund site. They may also be used for remedial investigations, removal actions, remedial designs, and to recover cash expended by the U.S. during cleanup-related activities at a site. The U.S. Department of Justice assists EPA in reaching settlement with PRPs and representing U.S. interests.

An **administrative agreement** is a legal agreement entered into by EPA and a PRP to reimburse EPA for costs already incurred or for costs to be incurred at a Superfund site. Unlike a consent decree, an administrative agreement does not require approval by a court. An **Administrative Order on Consent (AOC)** is a type of administrative settlement that EPA uses for removal activities, site investigations, remedy design work, and for cash settlements with PRPs that had a nominal role at a site (*de minimis* parties). The U.S. Department of Justice often assists EPA in negotiating AOC settlements.

At the MDI site, a special type of administrative agreement – an **Agreed Order on Consent** – was used. This legal agreement allowed Clinton-Gregg Investments, Ltd., the bona fide prospective purchaser at the site, to perform complex cleanup work beyond what is contemplated by law for a bona fide prospective purchaser so that the company could benefit from federal liability protections.

Community Profile (Part II)

Set within the context of recent rapid redevelopment in Houston's Fifth Ward, community residents express mixed feelings about the process that has led to the residential redevelopment of the MDI Superfund site.

The site reuse plan developed with community input by the City of Houston in 2002 informed the site's cleanup and the owner's future plans for the site. However, according to Jane Laping at Mothers for Clean Air, the community planning process also created expectations that have been difficult to meet. "The community spent a lot of time on the plan," Laping stated, "and there was interest in some public land uses that have not been included in the owner's plans for the site."

Once Clinton-Gregg Investments acquired the site in 2006, the company could develop its own redevelopment plans. According to Shannon Teasley, the City of Houston's brownfields manager, the City of Houston supports the reuse of the MDI site and has approached the site as it would any other property in the southern Fifth Ward – as a property located near downtown with significant value that should be returned to use to benefit and revitalize the community. The City of Houston also has limited land use planning tools – city ordinances and existing property deed restrictions – and no zoning with which to guide redevelopment activities in the Fifth Ward. For EPA and TCEQ, according to site project managers Rafael Casanova and Alan Etheredge, it has been challenging to help residents understand that the agencies' involvement in future land use considerations at the site is limited to ensuring the protection of human health and the environment.

As a result, the site owner's engagement with the community to discuss redevelopment plans for the site has been voluntary. Residents note that company owner Frank Liu has met several times with community members to discuss the site's redevelopment, and that these meetings have been positive and have helped to address concerns and uncertainty about the site owner's plans. According to MOCAH's Reginald Adams, "the bottom line is that the developer will accelerate the process of getting this property back on the tax rolls. You don't have to like the way it's happening, but at the end of the day it's good for the community."

Jane Laping takes a long-term perspective on the site's cleanup and redevelopment. "The site is perceived much more favorably in the community today than it was several years ago," she stated. "It looks so much better, and the community knows that something good can happen there. Residents are hoping that the community will be able to be a part of that."



The site's surroundings (from top to bottom): roadway east of the site; electric utility and former community school west of the site; view of downtown from nearby Swiney Park; and old and new housing adjacent to each other in the Fifth Ward

June 2005 – October 2006

Creating an Agreement

Once Clinton-Gregg Investments (CGI) submitted its bid for the MDI site property at auction, a new chapter in the cleanup and redevelopment of the MDI site began. CGI entered into a year of negotiations with EPA and TCEQ to finalize the Agreed Order; the negotiations were extended by several months while EPA staff assisted with the aftermath of Hurricane Katrina in fall 2005.

The negotiations resulted in the Agreed Order's finalization in September 2006. The process, according to TCEQ project manager Alan Etheredge, worked very smoothly. "It was an open, forthright negotiation," he recalled. "There was a lot of incentive for a win-win here. It was in everyone's interest."

In addition to the general components described above, EPA and CGI addressed a series of key requirements and areas of shared interest in the Agreed Order.

Site responsibilities. The Agreed Order confirmed that CGI assumed responsibility for the cleanup of the central, 36-acre fenced MDI site, also known as Operable Unit 1 (OU1). EPA retained responsibility for the cleanup of OU2 and OU3, which encompass off-site residential yards and crawlspaces.

Remedy confirmation and clarification. The parties agreed to a Statement of Work and General Work Provisions that confirmed that CGI would perform the remedy selected by EPA in the site's Record of Decision. The documents also clarified cleanup components and timeframes, with CGI prioritizing the cleanup of site soils so that the site's redevelopment could move forward in the shorter-term. These documents were provided as appendices to the Agreed Order.

Ground water monitoring: site access and transferable covenants not to sue. The site's ground water remedy – monitored natural attenuation – will take place over the long-term. CGI requested the flexibility to be able to redevelop the site property while monitored natural attenuation was ongoing, which posed potential liability challenges for future property subdivision sales at the site. EPA needed to maintain access to the site and ensure that monitoring wells would be located at the site for the duration of the site's ground water remedy.

Two breakthroughs in the Agreed Order negotiations addressed these priorities. The Agreed Order would provide protection from liability – a covenant not to sue – for future property purchasers at the site. And the Agreed Order would stipulate the location of monitoring wells in a public right-of-way or designated area to which EPA will maintain a right of access. For CGI attorney Chris Amandes, this was one of the most significant and unique parts of the agreement. "The covenant not to sue provision for future purchasers enabled the site's redevelopment to be able to

occur while remediation is ongoing," he said. "This had never been addressed before, and the agreement at the MDI site was the first place where this need was addressed."

EPA oversight costs. CGI agreed to reimburse EPA for the agency's oversight costs associated with the site's cleanup, to a maximum of \$210,000.

Financial assurance. The Agreed Order included flexible financial assurance requirements that enabled the company to reduce the amount of financial security provided for the site's remedy as cleanup progressed. In turn, these additional funds could then be made available for site infrastructure and the site's redevelopment.

Contribution protection. In addition to addressing CGI as a non-liable party and a BFPP, the Agreed Order also provided CGI with liability protection from past parties that had completed cleanup activities at the MDI site.

Community relations. CGI agreed to participate in a series of public meetings with EPA to share information with the community regarding the site's cleanup and redevelopment.

Noncompliance penalties and work takeover. The Agreed Order includes financial penalties if CGI does not meet cleanup milestones, and stipulates that EPA may assume responsibility for the site's cleanup if CGI is unable to complete the cleanup. EPA could also hold a future site owner responsible for the site's cleanup if CGI were to transfer ownership of the entire 36-acre site property to another entity.

One key issue – addressing potential liability for past TCEQ cleanup costs – could not be addressed through the federal Agreed Order. Because there were no BFPP provisions in Texas and TCEQ had spent \$1.5 million as part of earlier site cleanup activities, CGI could have been liable for these costs when it acquired the MDI site property. TCEQ worked closely with EPA and decided not to pursue CGI for past costs. TCEQ issued a letter addressing its past site costs in early September 2006, stating in part that "the agreement that you [EPA] have worked out ... seems to be in the best interests of the surrounding community and will allow the site to be cleaned up without significant additional expenditures by EPA or TCEQ." According to TCEQ project manager Alan Etheredge, TCEQ fully supported the Agreed Order. "We recognized the value of the process," he stated, "and we recognized that an unusual range of factors had come together to help make the site's cleanup possible."

With the Agreed Order and TCEQ's letter finalized, CGI closed on the MDI site property with the site's bankruptcy trustee in October 2006. The negotiations were complete, and attention turned to planning for the site's cleanup and redevelopment.

October 2006 – 2008+ *Turning Plans into Reality*

The cleanup of the 36-acre portion of the MDI Superfund site began in February 2007, following several months of cleanup planning and design. EPA project manager Rafael Casanova was pleased with the cleanup's rapid onset and pace. "Going from the negotiations to cleanup so quickly made a big difference in the community," he stated. "People were able to see positive changes in a short amount of time."

Remaining site debris was cleared and disposed of off-site. Contaminated soils were excavated to depths of up to two feet. Remaining concrete pads were crushed for use as recycled roadbed material. Ken Haltom, construction manager for CGI's cleanup contractor, estimated that more than 60,000 square feet of concrete were removed from the site. "It just kept coming out of the ground," he said. "Some of the footers extended down more than 14 feet."

By early 2008, the construction of the site's remedy was complete. CGI owner Frank Liu continued to meet with the community to discuss his company's evolving plans for the site's residential reuse, indicating that the installation of new infrastructure would be the next step at the site. In four years, the MDI Superfund site had evolved from a contaminated, stigmatized site into a 36-acre property poised for redevelopment.

Today, the site's journey and story continues, facing new challenges and opportunities. Coming months and years will reveal how the site's residential reuse may both benefit and pose challenges for surrounding neighborhoods, and how site reuses can mesh with and reflect the history and culture of Houston's Fifth Ward.

Site Reuse Plans: An Overview

With the site's remedy in place, the redevelopment of the MDI Superfund site can move forward. Site owner Clinton-Gregg Investments is in discussions with several residential and commercial developers to plan for the site's future. The project is called Seventh at 5th, referring to a sustainable development approach that considers long-term, seventh generation impacts as well as the site's location in the Fifth Ward.

Clinton-Gregg Investments views the site's redevelopment as a long-term investment, according to company owner Frank Liu. Site reuses will include approximately 600-700 homes in a grid pattern, as well as a lake and linked park areas. "We are aiming to create a project that is pedestrian-friendly, environmentally friendly, and mixed-income," Liu states, "a development with a real sense of place."

Liu indicated that the 2002 reuse plan developed by the community and the City of Houston helped establish the foundation for the site's reuse, with the document's focus on mixed residential and commercial land uses helping EPA to identify that the site's reasonably anticipated future land use would require a residential cleanup standard.

At the same time, Liu indicates that the site's cleanup costs and the project's profitability will require that the project focus on higher-density residential land uses. Liu has met multiple times with the community to share his company's redevelopment plans for the site. Some potential preliminary site designs provided by new urbanist land use planning firm Duany Plater-Zyberk & Company (DPZ) outline opportunities for multiple neighborhoods at the site, with linkages to surrounding areas and a proposed neighborhood commercial center south of the site.

Thinking back over his company's experience at the MDI site, Liu reflects that "I would like to work on more redevelopment projects at Superfund sites in the future. EPA and the community have been great to work with, and my hope is that the site's cleanup and redevelopment will be a benefit not just for the Fifth Ward, but for the entire City of Houston."

Next steps for the site's redevelopment include the installation of infrastructure in 2008, with residential construction likely to begin in 2009, according to Liu.



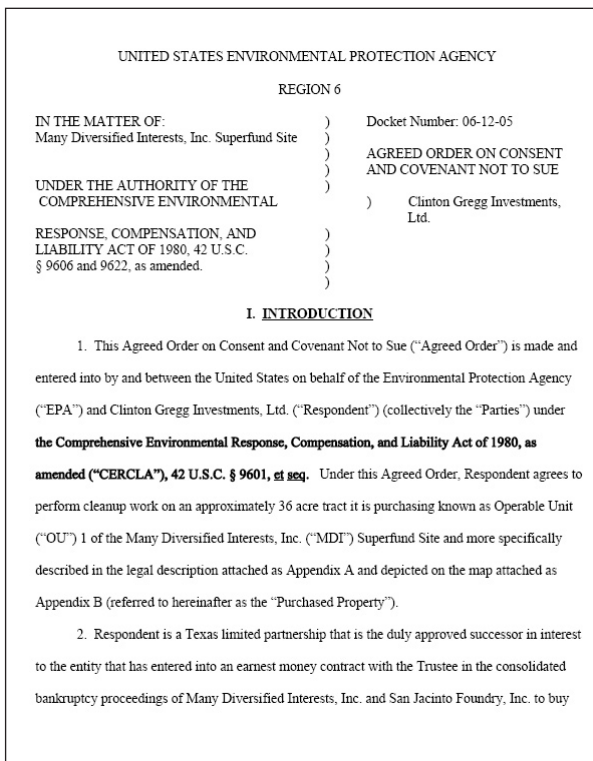
DPZ's conceptual residential reuse plans for the site

Lessons Learned

Site Specifics

Participants involved at the MDI site agree that a combination of significant factors contributed to the site’s successful cleanup and planned redevelopment.

- The property’s large size and central location, as well as the strength of Houston’s real estate market, meant that the site had significant value, which in turn provided a way to fund the site’s cleanup;
- With the site in bankruptcy and a long-term Superfund cleanup on the horizon, conditions were optimal for a private-sector, non-liable party to take the lead;
- The site’s status as an NPL Superfund site meant that EPA had extensively documented the site’s characteristics, conditions, and contamination, which provided critically important information for parties interested in the site’s potential reuse; and
- EPA had selected a remedy for the site that would be consistent with the property’s reasonably anticipated future land use.



The Agreed Order for the MDI site

The Bigger Picture

While these conditions created an ideal climate for the cleanup and planned redevelopment of the MDI site, there are also a range of broader lessons learned that can help guide similar projects at contaminated sites across the country.

Think of pieces as well as the greater whole.

If a contaminated site does not benefit from location or market advantages like the MDI site, local government and community stakeholders can still play an important role in positioning a site for cleanup and redevelopment. Common strategies focus on tackling site cleanup and redevelopment one step at a time, rather than addressing an entire site at once. For example, parties may acquire smaller, high-value portions of a site, phase a site’s reuse over time in coordination with its remediation, form partnerships, and access incentives designed to attract investment.

Engage communities and local governments.

Community-based reuse planning processes can be most effective when they engage diverse stakeholders, including site owners and prospective purchasers, are based on detailed site and community information, and lead to implementable strategies and next steps. As organizations responsible for their communities’ general welfare, local governments are particularly well-positioned to host these projects and use planning tools and incentives to foster positive site outcomes.

Build on past experience.

Parties at the MDI site were charting new territory in addressing stigma and liability issues. Today, thanks to the BFPP provisions of the 2001 Brownfields Revitalization Act, environmental insurance, and EPA tools like Ready for Reuse Determinations, established resources are available. Prospective purchasers can contact EPA site teams to learn more, or see the *Resources* section on page 11 for additional information.

Consider state and federal site issues.

State-level issues at the MDI site were addressed through a TCEQ past costs letter. At contaminated sites in bankruptcy in some states, it may be possible to address past costs and potential site liabilities as part of the bankruptcy’s original language, simplifying the process.

Contact and work with site owners, PRPs, and trustees.

Contaminated sites like the MDI site that are owned by a bankruptcy trustee can provide an opportunity for outside non-liable parties to take the lead on a site’s cleanup. At sites

with a solvent owner or potentially responsible party, these entities may be able to take the lead on a site's cleanup and redevelopment.

Develop partnerships to tackle uncertainties and share expertise.

Each party involved at the MDI site had valuable expertise to bring to the table, but no one had ever created an agreement that would enable a non-labile party to clean up and redevelop a Superfund site. Everyone shared ideas and relevant expertise, identified possible options and next steps, and addressed challenges flexibly and creatively. The process enabled uncertainties to be addressed and led to new approaches that met the needs of all parties.

Recognize opportunities provided by the Superfund program.

As illustrated by the timing of events at the MDI site, prospective purchaser interest in a site may expand once contamination and cleanup information is available. Superfund sites are among the most comprehensively documented and evaluated areas of land in the United States. At most sites, a completed remedial investigation/feasibility study or draft proposed plan will provide prospective purchasers with extensive site information.

Develop an integrated approach to the cleanup and redevelopment of contaminated sites.

Consideration of future land use opportunities can help inform both cleanup plans and the implementation of site remedies. At the MDI site, EPA developed a remedy that recognized that the site would likely be used for residential land uses in the future. Once the site's remedy was underway, reuse considerations informed the future location of ground water monitoring wells and the need to remove buried concrete and debris that, while not contaminated, would hinder redevelopment efforts. At other sites, detailed site reuse plans have provided additional benefits that save time and reduce redevelopment costs. For example, future infrastructure corridors or building footers can be installed in coordination with site cleanup activities.



Conclusions

Today, the MDI site stands as an example of how redevelopment interest can fund the cleanup of Superfund sites, saving millions of taxpayer dollars. Over the next few years at the site, new neighborhoods will be built, replacing vacant buildings, debris piles, and chain link fences that once stigmatized the community. A group of site stakeholders with complementary interests came together and created an innovative agreement that has led to a new future for the site and addressed the site's contamination, protecting human health and the environment.

At the same time, the project also illustrates the challenges of integrating broad community priorities with private-sector development plans, and the importance of community, local government, and site owner involvement to help address these challenges. Looking to the future, all parties are hopeful that the site's cleanup and reuse will benefit future site residents and the surrounding community and contribute to the long-term social, economic, and environmental health and vitality of the Fifth Ward district and the City of Houston.

Sources

Images and maps for this case study were obtained from EPA Region 6, the City of Houston's Planning and Development Department, Clinton-Gregg Investments, and a February 2008 site visit.

Resources

2008 EPA MDI site status update:
www.epa.gov/region6/6sf/pdffiles/0605008.pdf

Superfund Redevelopment Initiative:
www.epa.gov/superfund/programs/recycle/index.html

2001 Brownfields Revitalization Act and BFPP information:
www.epa.gov/brownfields/html-doc/2869sum.htm

Environmental insurance information:
www.epa.gov/brownfields/insurebf.htm

Seventh at Fifth – site redevelopment information:
www.dpz.com/projects.aspx

MOCAL Project GROW Initiative:
www.mocah.org/projects/project-grow/index.html

Mothers for Clean Air:
www.mothersforcleanair.org

Linking Cleanup and Reuse

THE MDI SUPERFUND SITE AND HOUSTON'S FIFTH WARD



Office of Solid Waste and Emergency Response
Superfund Redevelopment Initiative

Washington, DC

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