

General Information

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Web site: <http://www.dnrec.state.de.us/dnrec2000/Divisions/AWM/sirb/brownfield.asp>

Program Description (VCP, brownfields, or related)

Brownfield definition: Delaware defines brownfields as “any vacant, abandoned or underutilized real property the development or redevelopment of which is hindered by the reasonably held belief that the real property may be environmentally contaminated.” 7 Del. C. §9102(3).

Program titles:

- Brownfields Development Program (BDP) (2004) – The BDP codifies the prospective purchaser concept and provides liability waivers and financial assistance to brownfield developers.
Brownfield Voluntary Cleanup Program (BFVCP) – The site owners and/or responsible parties who purchased the property and can show they did not cause or contribute to the contamination of the property are eligible for this program.
- Voluntary Cleanup Program (VCP) (1995) – The VCP provides programmatic and liability assistance to current owners or potentially responsible parties (PRPs).

Liability relief provisions: The BDP offers complete liability protection for existing contamination to qualified brownfield developers provided that they enter into a Brownfields Development Agreement (BDA), and agree to clean up the contamination as specified in the Final Plan of Remedial Action approved by the Department prior to development of the site. Once the remedy is in place, the developer may request and receive a Certificate of Completion of Remedy (COCR) which provides liability protection as long as the requirements of the COCR are followed. The BDP offers liability protection for geographic or environmental media specific operable units identified within the site.

- The BFVCP offers protection similar to the BDP once a remedy is complete and a COCR has been issued for a site.
- The VCP offers No Further Action (NFA) letters; prospective purchasers may sign a consent decree for contribution protection; and new owners of remediated sites may receive a Covenant Not to Sue (CNTS), and can receive a COCR for remedies, which provide liability protection waivers.
- The Hazardous Substance Cleanup Act (HSCA) establishes strict, joint and several liabilities and authorizes cost recovery.
- DNREC must attempt a settlement prior to initiating an enforcement action, unless an emergency exists. The state has injunctive action and administrative order authority. Civil penalties of up to \$10,000 per day per violation are available. The state may recover punitive damages, treble the state’s cleanup costs.

Financial incentives (grants, loans, tax provisions, etc.):

DNREC has allocated \$5,000,000 a year for Brownfields Grants. The grants are up to \$225,000 for private parties and up to \$1 millions for nonprofit and government entities.

- The Delaware Economic Development Office (DEDO) has a \$1,000,000 matching grant fund for certified brownfields. These grants are a maximum of \$100,000 per grant.
- DNREC also has a Revolving Loan Fund and a Hazardous Substance Cleanup Loan program. The Revolving Loan Fund provides loan of \$10,000 to \$400,000 and the Hazardous Substance Cleanup loans provide up to \$250,000 or 90% of the cleanup costs, whichever is lower, per site.
- The Tanks Management Branch has additional monies that may be used on brownfield sites, including the FIRST Program (Fund for the Inability to Rehabilitate Storage Tanks), and the PLUS Program (Program Loans for Underground Storage Tank Systems).

Legislative or program site eligibility

requirements: To enter into the BDP, the site must be a certified brownfield and the developer must not have any contractual or familial relationship with any PRP. Anyone may enter into the VCP provided they make reasonable progress towards investigations and cleanups at the site.

All cleanups must comply with the Delaware Regulations Governing Hazardous Substance Cleanup. Participants receive a COCR and subsequent purchasers receive a release from liability for existing contamination.

Delaware

Financial Elements

Assessment and cleanup funding (source, amount, relationship to VCP/brownfields programs, application process, eligibility requirements, dedication to special types of sites such as petroleum, dry cleaners, abandoned drug labs, etc.): The Hazardous Substance Cleanup Act Fund (HSCAF) had a balance of \$12,000,000 at the end of FY07. The HSCAF receives petroleum products tax receipts, penalties, cost recovery, and interest. The fund is available for program administration, site investigation, studies and design, removals, remedial actions, emergency response, natural resource restoration, Comprehensive Environmental Response Compensation and Liability Act (CERCLA) match, and operations and maintenance.

The Brownfields Grant allocation is for the private sector and municipal, county and state governments, nonprofit organizations, and redevelopment authorities. Eligible entities receive funding based on the type of organization. The amount of grant funds available ranges from \$225,000 for the private sector up to \$1,000,000 for nonprofits, governmental entities and redevelopment authorities in any fiscal year. The eligible entity must not have caused or contributed to the contamination.

The DEDO matching grant awards up to \$100,000 per project. Qualified parties must be from the private sector. The project must result in the hiring of five full time employees.

Tax incentives (abatements, credits, etc.): Tax credits of \$650/year per new job created related to cleanup and redevelopment (\$900/year in poverty areas).

Participants receive tax credits based on the size of investment and number of new employees brought to the site. Grants of up to \$25,000 are available for site investigation and cleanup. In addition, low interest loans up to \$250,000 are also available for brownfield sites. About 700 sites have been identified for inclusion in the program, with cleanup underway at 96.

Other forms of support (environmental insurance, brownfields redevelopment authorities, etc.): There are several redevelopment authorities that are engaged in redeveloping brownfields. They include the Riverfront Development Corporation, the Downtown Dover Development Corporation, the Blades Economic Development Corporation, and others.

Program Elements

Technical Elements

Methods/standards/controls: Risk-based cleanup standards of 1.0×10^{-5} for carcinogenic risk and a Hazard Index of 1.0 for non-carcinogenic risks are used. DNREC provides guidance on the investigation and remediation of sites.

Contaminants covered/excluded: Hazardous substances as defined in HSCA are covered. In addition, petroleum contamination is covered on brownfield sites; asbestos and lead paint contamination are covered if found in the soil.

Use of long-term stewardship and institutional controls: Institutional controls/land-use controls are allowed, including Uniform Environmental Covenants, operation and maintenance plans, and Ground Water Management Zones (GMZ). GMZs prevent the use of ground water and encourage development by allowing low levels of contamination to remain in the ground water while preventing exposure.

- **IC Tracking:** DNREC uses a database to track sites with ICs. This database is in the process of being improved.
- **IC Oversight:** DNREC performs inspections on a regular basis of the sites that have O&M requirements.
- **IC Monitoring:** DNREC reviews O&M reports for sites with O&M controls.

The following Web address is a direct link to the state's public database that maintains an inventory of sites, maps sites, and/or tracks institutional controls. This link also provides additional information regarding contaminated sites in the state.

http://www.dnrec.state.de.us/dnrec2000/Divisions/AWM/sirb/ssd_map.asp

Management & Implementation Elements

Voluntary Cleanup Program MOA with EPA: August 1997

Costs to enter program or fees for service: There is no cost to enter into the BDP and the BFVCP. There are oversight costs for investigative or remedial activities for DNREC staff time. The developer will also be responsible for the cost of publishing public notices. These costs are often included in the allowable costs for a Brownfields Grant.

To fund the state's VCP oversight, participants are required to remit an initial deposit up to a maximum of \$5,000. Additional deposits will be requested based on the oversight cost estimate as the site cleanup progresses. Any deposit funds not expended by the state are returned to the participant.

Funding source for administrative costs and staff:

The DNREC, Division of Air and Waste Management, Site Investigation and Restoration Branch (SIRB) have 36 full-time equivalent (FTE) staff, with 36 FTE staff authorized. Legal support is provided by the Department of Justice (Attorney General's office) with two attorneys assigned to both state and CERCLA work. The majority of funding for administrative and staff costs come from the federal grants (35%) and the HSCAF (49%). Oversight cost reimbursements (10%) and state general fund (6%), comprise the balance.

Delaware

Cleanup Activities

Sites currently in VCP: 281 sites have entered the VCP, and 195 sites currently are in the program. There are 96 sites in the BDP.

Sites completed under VCP: 78 sites have been completed under the VCP and the BDP.

Benefits (incentives to participate in the VCP, covenants not to sue, etc.): The state has identified a number of economic benefits attributable to the BDP and the VCP: more than 3,000 jobs and 50 businesses created; increased tax revenues; over 1,000 apartment/housing units for University of Delaware students; three school sites in process; and several parks, open space and recreational uses.

Public Participation

Public participation requirements (notice, comment periods, etc.): The HSCA provides for public notice and opportunity for public comment on proposed consent decrees, settlement revisions, proposed and final remedial action plans; public hearings and meetings; and document availability. Additionally, there are public notices when DNREC enters into negotiations for a BDP or VCP applicant, and a notice once DNREC has entered into a BDA.

Public participation activities (hearing, meetings, etc.): Delaware's first statewide Brownfields Development Conference was held on October 14, 2004.

Statutory Authorities

- The Hazardous Substance Cleanup Act (HSCA), Title 7, §§9101–9126 (1990, as amended 1995, 2001, 2003, and 2004), establishes the HSCF and authorizes DNREC to clean up sites contaminated by hazardous substances. The law provides for enforcement; strict, joint and several liability; cost recovery; public participation; natural resource damage assessment and recovery; property transfer provisions; water replacement; the BDP (2004) and the VCP (1995). The 2004 amendments creating the BDP created a subsection to HSCA.
- The Delaware Regulations Governing Hazardous Substance Cleanup (1993, revised 1995 and 1996), prohibit site cleanup at a property contemplated for redevelopment or development without prior approval from DNREC.

The passage of the BDP in 2004 has required that the HSCA regulations be amended to reflect the new program. The Department is currently in the process of revising the *Delaware Regulations Governing Hazardous Substance Cleanup*. The current schedule calls for a draft for public review to be available in early 2009.

District of Columbia

General Information

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Program Description (VCP, brownfields, or related)

On June 15, 2001, the *Brownfield Revitalization Amendment Act of 2000*, became effective. The Act established the Voluntary Cleanup Program (VCP), a brownfields program, and provides for long-term stewardship of sites that have been cleaned up under these programs. The Act also authorized tax and other incentives for development of contaminated property, and amended provisions of the *Tax Increment Financing Authorization Act of 1998*, *National Capital Revitalization Corporation Act of 1998*, and the *District of Columbia Community Development Act of 1975* to incorporate and support the cleanup and redevelopment of contaminated property.

Brownfield definition: Abandoned, idled property or industrial property where expansion or redevelopment is complicated by actual or perceived environmental contamination.

Program titles:

- Voluntary Cleanup Program
- Brownfields Program
- Underground Storage Tank (UST) Program
- Leaking UST (LUST) Program

Liability relief provisions: The Brownfield Revitalization Amendment Act of 2000 authorizes a civil penalty of up to \$50,000 and strict, joint, and several liability for the unlawful release of any hazardous substance. It does not authorize punitive damages or retroactive liability.

Financial incentives (grants, loans, tax provisions, etc.): Participants may receive grants (subject to the availability of funds in the Clean Land Fund), loans, and tax credits to offset real property taxes and business franchise taxes.

Legislative or program site eligibility requirements:

- Under the VCP, non-responsible parties are eligible to participate.
- Any brownfields or site contaminated by hazardous substances that is not listed on EPA's National Priorities List (NPL), and is not the subject of a current cleanup action by EPA or EHA.

Financial Elements

Assessment and cleanup funding (source, amount, relationship to VCP/brownfields programs, application process, eligibility requirements, dedication to special types of sites such as petroleum, dry cleaners, abandoned drug labs, etc.):

- Participants entered in the program may receive grants and loans subject to the availability of funds in the Clean Land Fund.
- The Clean Land Fund provides for the administration, improvement, and maintenance of the brownfields and VCP, loans and grants made for contaminated property cleanup assistance, and any other brownfields revitalization incentives established by the Brownfields Revitalization Amendment Act. Authorized sources of the Clean Land Fund include funds from appropriations, income from operations, grants, revenues, and fees.

Tax incentives (abatements, credits, etc.):

Participants may receive tax credits to offset real property taxes and business franchise taxes.

Other forms of support (environmental insurance, brownfields redevelopment authorities, etc.):

Participants may contact the Office of the Chief Financial Officer and the Office of the Deputy Mayor for Economic Development regarding specific tax incentive financing support such as bonds.

Program Elements

Technical Elements

Methods/standards/controls: The District is developing hazardous substance cleanup standards. EHA must publish cleanup standards for contaminated properties under the VCP that include ground water, surface water, and soil standards. Until these cleanup standards are published, the VCP will use the Safe Drinking Water Act ground water standards, prior EHA standards, and the District's LUST program standards.

Use of long-term stewardship and institutional controls (IC):

The Brownfield Revitalization Amendment Act of 2000 authorizes EHA to create, maintain, and disseminate records, informational systems, and educational materials that are necessary to protect public health and the environment at contaminated properties cleaned up under the Act. EHA may also issue instruments for cleaned up properties and properties adversely affected by residual hazardous substances from the cleaned up properties, which will include a notice of residual risk, residual risk restrictions, hazardous substance easements, and orders that run with the land.

- **IC Tracking:** The Brownfield Revitalization Amendment Act of 2000 authorizes EHA to create an institutional control tracking process.

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- **IC Oversight:** The Brownfield Revitalization Amendment Act of 2000 authorizes EHA to create an institutional control oversight process.
- **IC Monitoring:** The Brownfield Revitalization Amendment Act of 2000 authorizes EHA to create an institutional control monitoring process.

The following Web address is a direct link to the state's public database that maintains an inventory of sites, maps sites, and/or tracks institutional controls. This link also provides additional information regarding contaminated sites in the state.

http://app.doh.dc.gov/services/administration_offices/environmental/services2/vcp/fact_sheets.shtm

Management & Implementation Elements

Voluntary Cleanup Program MOA with EPA: No

Costs to enter program or fees for service: The application fee to enter the District's VCP is \$10,000.

Funding source for administrative costs and staff: Currently, a combination of appropriated funds and federal brownfields grants provides for the administration costs.

Cleanup Activities

Sites currently in VCP: 4 (since 2003)

Sites completed under VCP: Anticipate completion of two sites in 2005.

Benefits (incentives to participate in the VCP, covenants not to sue, etc.): Participants released from further liability for the cleanup of the eligible property and for any contamination identified in the environmental assessment of the property, and not subject to a contribution action instituted by a responsible person. Transferable Certificate of Completion (COC). Right to withdraw from the program.

Public Participation

Public participation requirements (notice, comment periods, etc.): The Brownfield Revitalization Amendment Act of 2000 provides for 14-day public notice and comment period before approval of an application, cleanup plan and the issuance of a COC under the VCP.

Public participation activities (hearing, meetings, etc.):

The law also authorizes EHA to develop public involvement plans for response or cleanup actions. Any person may bring an action to compel the Mayor to perform non-discretionary duties under the Brownfields Revitalization Amendment Act of 2000 or to bring a civil action on his or her own behalf against any person who is in violation of any standards, regulations, requirements, or orders pursuant to the act.

Statutory Authorities

- The Brownfields Revitalization Amendment Act of 2000, D.C. Code §101 et seq., authorizes a regulatory cleanup program, a voluntary cleanup program, a brownfields program, and provides for long-term stewardship of sites that have been cleaned up under these programs. Regulations to implement these programs have been drafted but are not yet finalized.
- The Hazardous Waste Management Act of 1978, D.C. Code §§6–701 et seq., (as amended in 1984, 1989, and 1991), establishes the District's hazardous waste management program. The law authorizes the Mayor to revoke or suspend a permit and, if a responsible party fails to comply with an administrative order, directs the Mayor to take corrective action necessary to alleviate or terminate a violation of the law, a threat to health or the environment, or a release of hazardous waste. The law also authorizes the Mayor to recover costs of the corrective action from the responsible person and provides for injunctions and civil and criminal penalties.

Maryland

General Information

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Program Description (VCP, brownfields, or related)

Brownfields definition: No information available

Program titles:

- Voluntary Cleanup Program (VCP) (1997)
- Brownfields Revitalization Incentive Program (administered by the Department of Business and Economic Development)

Liability relief provisions:

- VCP offers Certification of Completion (COC) or No Further Requirements Determination; sites contaminated after October 1, 1997, listed on the National Priorities List (NPL), or under active enforcement are not eligible.
- Maryland has strict, joint, and several liability, but provides for apportionment where there is a reasonable basis for determining a party's contribution. Under state law, the state program may impose liability for cleanup of substances disposed of before the date program was enacted. State has civil penalty authority up to \$25,000 per violation. Punitive damages are not available.
- Through the VCP, certain purchasers who did not cause or contribute to contamination may limit their retroactive liability upon purchase of the property. Amendments effective October 1, 2004, clarify that a person who is not a "responsible person" because he meets one of the statutory exclusions is entitled to "inculpable person" status. The new law also ensures liability protection.

Financial incentives (grants, loans, tax provisions, etc.):

- The Maryland Department of Business and Economic Development administers the Brownfields Revitalization Incentive Program, which provides financial incentives for the redevelopment of brownfields. Eligible brownfield sites are either those that qualify for the VCP or those contaminated by oil. Properties must generally be industrial or commercial sites that are located in densely

populated urban centers and generally underutilized to qualify for the program. Financial incentives include:

- Low interest loans or grants for Phase I and Phase II environmental assessments;
 - Property tax credits in jurisdictions that have enacted enabling legislation for the difference on the assessed property value after pre- and post-cleanup and/or redevelopment; and
 - Low interest loans or grants for site remediation; these incentives are designed to stimulate redevelopment in areas where cleanup will have significant environmental, economic development and urban revitalization benefits.
 - The Brownfields Site Assessment Initiative, funded by EPA grants, is intended to help eligible property owners or prospective property owners determine the type and extent of possible contamination on a property. These assessments are conducted by MDE free of charge and both property owners and prospective property owners are eligible to participate. Applicants to the VCP may also apply for a brownfields assessment, which will reduce the investigation costs associated with a VCP application. The property should meet the following conditions: have perceived or known contamination; be vacant or underutilized; be located in a commercial or industrial area; create jobs; and improve the local tax base following redevelopment. Eligible properties also include sites on the EPA Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) and state Master List. Properties under active enforcement by MDE are not eligible to participate. This initiative is administered on a first-come, first-serve basis beginning July 1 of each calendar year and is open to both the public and private sector.
 - The Clean Water State Revolving Loan Fund provides low-interest loans for cleanup costs to complete approved cleanup plans for sites on the state Master List (commonly referred to as state Superfund sites or CERCLIS No Further Response Action Planned Sites (NFRAP) sites) or in the VCP where water quality is an issue. This funding is provided to parties legally responsible for cleanup of sites or parties who have been accepted into VCP.
- ### Legislative or program site eligibility requirements:
- Under the state Superfund program, MDE applies water quality criteria, ground water standards, Maximum Contamination Level/Maximum Contaminant Level Goals (MCLs/MCLGs), risk-based assessments, background levels, and EPA guidelines, as appropriate. Site-based risk assessments are used in conjunction with any applicable regulatory criteria and are based on EPA published standards and Region 3 guidance as appropriate and available. The state's voluntary cleanup law requires participants to select one or more of the following criteria that protect public health and the environment: uniform numeric risk-based standards; measurable standards

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based on site-specific risk assessment; background levels; federal or state soil standards or water quality standards; federal or state MCLs; or any other federal or state standards.

- MDE has developed uniform numeric risk-based cleanup standards, based on industrial and residential uses. In cases where MDE approves a voluntary cleanup based on land use assumptions, the agency requires deed restrictions.
- The Brownfields Revitalization Incentives Program is open to sites that are not on the NPL list, not Treatment, Storage, and/or Disposal (TSD) facilities, and not subject to active enforcement, provided those sites are owned or operated by an inculpable person. The state brownfields law lists several factors to be considered in determining eligibility for financial assistance, including location, type of site, and economic development potential.
- In the VCP, any site that is contaminated or perceived to be contaminated is eligible for participation, other than NPL sites, sites under active enforcement, or TSD facilities. Eligible applicants include responsible persons who have not knowingly or willingly violated any hazardous substance law, as well as inculpable persons, defined as purchasers with no previous connection to the property.

Financial Elements

Assessment and cleanup funding (source, amount, relationship to VCP/brownfields programs, application process, eligibility requirements, dedication to special types of sites such as petroleum, dry cleaners, abandoned drug labs, etc.):

- Pursuant to state law, MDE is required to seek cost recovery for any state response costs funded by the Hazardous Substance Control Fund (HSCF). The HSCF includes monies used for activities outside the state Superfund program, and information specific to state Superfund activities is not available. The Voluntary Cleanup Fund currently consists of user fees. In the first year of the program, 23 applications were submitted, and \$138,000 in fees were placed in the Fund. If the state does not use the entire \$6,000 fee paid by a participant in its oversight role, it will refund the balance; conversely, if state oversight costs more than \$6,000, the balance will be collected from the participant.
- The Brownfields Revitalization Incentives Fund received \$500,000 in appropriations in the first year. The Fund may be used to make low interest loans and grants for site remediation.

Tax incentives (abatements, credits, etc.): Tax credits may be extended to 10 years in designated Enterprise Zones (EZs); incentive available in jurisdictions which agree to contribute 30% of the increase to the state's Brownfields Revitalization Incentive Fund.

Other forms of support (environmental insurance, brownfields redevelopment authorities, etc.): No information available

Program Elements

Technical Elements

Methods/standards/controls: VCP provides a menu of cleanup options: uniform risk-based standards; site-specific risk assessment; federal/state soil standards or water quality standards; federal/state MCLs; and other federal/state standards. Site-specific risk assessments follow a Risk-Based Corrective Action (RBCA)-like process.

Contaminants covered/excluded: Polychlorinated biphenyls (PCBs) and oil (as of October 1, 2004) are OK; other contaminants accepted conditionally—petroleum (not exclusively, but along with other contaminants); paint and asbestos (as long as they comply with all other applicable laws and regulations).

Use of long-term stewardship and institutional controls (IC): Institutional controls are allowed and are included in the No Further Requirements Determination (NFRD) or COC. The state notes that institutional controls “probably have resulted in more cleanups and more properties reused. Institutional Controls also have probably lowered the cost of cleanups.”

- **IC Tracking:** Institutional Controls/Land Use Controls (IC/LUC) are tracked by the Maryland Department of the Environment's Land Restoration Program. These documents are also recorded in the land records and sent to Miss Utility. Both programs are currently engaged in updating the GIS-based Web site to ensure that sites with IC/LUCs are readily available to the general public.
- **IC Oversight:** When the Voluntary Cleanup Program (VCP) issues NFRDs or COCs with LUCs, the enforcement of the IC/LUCs falls to the VCP through follow-up inspections.
- **IC Monitoring:** Other IC/LUCs associated with No Further Action (NFA) letters issued by the Controlled Hazardous Substance Enforcement Division are enforced by the Department and recorded with the land records.

The following Web address is a direct link to the state's public database that maintains an inventory of sites, maps sites, and/or tracks institutional controls. This link also provides additional information regarding contaminated sites in the state.

http://textonly.mde.state.md.us/Programs/LandPrograms/ERRP_Brownfields/mapping/index.asp

Maryland

Management & Implementation Elements

Voluntary Cleanup Program MOA with EPA: February 1997

Costs to enter program or fees for service: An initial fee of \$6,000 is collected from each participant, although the fee is ultimately based on the actual cost of state oversight. Additional fees include:

- Application fee for subsequent application for the same property or contiguous or adjacent property in the same development: \$2,000.
- Fee for expedited determination as an inculpable person: \$2,000.
- Fee for issuance of NFRD or COC conditioned on certain uses or maintaining certain conditions: \$2,000.
- Fee for altering the record of determination in land records: \$2,000.

Program incentives include a streamlined process, determination of no further requirements and issuance of a COC, which releases the participant from state enforcement action and further liability for remediation approved by state.

Funding source for administrative costs and staff

MDE, Waste Management Administration, Environmental Restoration and Redevelopment Program (ERRP) has three divisions involved in the state Superfund process: the Site and Brownfields Assessment/State Superfund Division, with approximately nine full-time equivalent (FTEs); the Voluntary Cleanup Program, with 13 FTEs; and the Federal Facilities and NPL Division, with 13 FTEs (approximately 7.5 of whom work on non-NPL sites). The core function falls under the Waste Management Administration's Planning and Resource Management Program, and has approximately eight FTEs. The Attorney General's office has two attorneys located at MDE who work on hazardous substance cleanup. Funding for the state's Superfund program comes from the state general fund (10%), the state cleanup fund (10%), and from federal grants (80%).

Cleanup Activities

Sites currently in VCP: 432 sites have been accepted into the VCP.

Sites completed under VCP: 205 sites totaling approximately 3,028 acres have been completed.

Benefits (incentives to participate in the VCP, covenants not to sue, etc.): An estimated 100 businesses and more than 5,700 jobs have been created on brownfields sites; another 160 businesses have been located on, created and/or retained on brownfield sites.

Public Participation

Public participation requirements (notice, comment periods, etc.): There are statutory requirements for public meetings, document availability, as well as requirements for notice and public comment. Community involvement is encouraged if there is interest. The voluntary cleanup law provides for notice and comment, as well as an opportunity for a public informational meeting to discuss proposed cleanup plans. Amendments effective October 1, 2004, require MDE to post on its Web site notice of VCP applications and the opportunity for public comment. Persons receiving an NFRD or COC that includes any institutional controls must send this information to "Miss Utility" for recordation.

Public participation activities (hearing, meetings, etc.): Amendments effective October 1, 2004, require VCP applicants to hold a public informational meeting for all proposed response action plans.

Statutory Authorities

- The Annotated Code of Maryland, Environment Art., Title 7—Hazardous Material and Hazardous Substances, Subtitle 2—Controlled Hazardous Substances, §§7–201 through 7–268 (1982, as amended 1984, 1985, 1986, 1987, 1989, 1991, 1992, and 1993), establishes the HSCF and authorizes MDE to cleanup sites contaminated by hazardous substances. The law provides for enforcement; strict, joint and several, and proportional liability; cost recovery; public participation; and natural resources damages assessment and recovery.
- The Annotated Code of Maryland, Environment Art., Title 7—Hazardous Material and Hazardous Substances, Subtitle 5—Voluntary Cleanup Program, §§7–501 through 7–516 (1997), establishes the state's VCP (amended April 2004).
- The Annotated Code of Maryland, Art. 83A, Subtitle 9, Brownfields Revitalization Incentive Program, §§3–901 through 905 (1997), establishes the state's Brownfields Financial Incentives Program.

General Information

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Web site: <http://www.depweb.state.pa.us/ocrlgs/cwp/view.asp?a=1459&q=518353&ocrlgsNav=1> or
<http://www.depweb.state.pa.us> keyword "Brownfields"

Program Description (VCP, brownfields, or related)

Brownfields definition: Pennsylvania defines brownfields as abandoned, idle, or under-used industrial or commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.

Program titles:

- Land Recycling Program (1995)
- Voluntary Cleanup Program (VCP)
- Brownfields Program
- Brownfield Action Team
- One Cleanup Program

Liability relief provisions: Program offers release from liability for approved cleanups and potentially responsible parties (PRPs) may participate. The program identifies risk-based standards for cleanup, simplifies the approval process, and limits future liability when standards are attained.

Pennsylvania signed a Memorandum of Agreement (MOA) with EPA in April 2004 that clarifies that sites remediated under the state Land Recycling Program (LRP) may also satisfy requirements under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), Resource Conservation Recovery Act (RCRA), or Toxic Substances Control Act (TSCA). This is the first One Cleanup Program MOA negotiated with EPA.

Financial incentives (grants, loans, tax provisions, etc.):

- Industrial Sites Reuse Program
- Infrastructure Development Program

- Hazardous Sites Cleanup Fund (HSCF)
- Keystone Opportunity Zones/Keystone Opportunity Expansion Zones (KOZ/KOEZ)
- Job Creation Tax Credit Program
- Key Sites Initiative
- Business in Our Sites
- Building PA
- Tax Increment Financing (TIF) Guarantee Program
- Infrastructure Facilities Improvement Program
- Section 108 Department of Housing and Urban Development (HUD) Loan Pool
- New PA Venture Guarantee Program
- New PA Venture Capital Investment Program
- 2nd Stage Loan Program
- Pennsylvania Infrastructure and Investment Authority (PENNVEST) Brownfields Loans

Legislative or program site eligibility requirements:

- The LRP, along with its implementing regulations adopted in 1997, establishes statewide cleanup standards. The party undertaking cleanup must select one or a combination of the standards set out in the law and regulations. The three general remediation standards are: background; generic statewide health standards (concentrations of regulated substances associated with a specific environmental medium, which take into account land use factors); and site-specific risk assessment. The levels used for risk assessments are 10–4 to 10–6 for carcinogens and a Hazard Index of 1 for non-carcinogens.
- The regulations implementing LRP also provide a remediation standard for Special Industrial Areas (SIAs). The requirements include a remediation plan that provides for: 1) addressing "all immediate, direct, or imminent threats to public health and the environment which would prevent the property from being occupied for its intended purpose" and compliance monitoring; and 2) preventing access to contaminated areas not required to be remediated. For sites cleaned up to standards based on a specific land use, deed notice is the primary mechanism used by the state to maintain future land use restrictions. In some cases, deed restrictions are used.
- The *Hazardous Sites Cleanup Act* (HSCA) provides for comprehensive order and injunctive authorities; orders for information and access; criminal and civil penalties; and punitive damages equal to treble the state's costs. Civil penalties are a minimum of \$5,000 per day and a maximum of \$25,000 per day. Liability is strict, joint, and several, and retroactive. HSCA also provides for Nonbinding Allocation

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of Responsibility (NBARs), de minimis settlements, legal presumptions of culpability for contamination, and whistleblower protection. There is a 120-day notice period before a site may be placed on the state list to encourage responsible party cleanup prior to listing. There is also a 120-day moratorium on enforcement at multi-party sites if responsible parties (RPs) seek to negotiate shares. For remedial actions extending beyond interim actions, HSCA §1301 requires DEP to initiate action against owners or operators under other state laws (e.g., Clean Streams Law and the Solid Waste Management Act) before taking HSCA enforcement or cost recovery actions.

Financial Elements

Assessment and cleanup funding (source, amount, relationship to VCP/brownfields programs, application process, eligibility requirements, dedication to special types of sites such as petroleum, dry cleaners, abandoned drug labs, etc.):

- Industrial Sites Reuse Program provides loans and grants to municipalities and private entities for site assessment and remediation; maximum of \$200,000 for site assessment, or \$1,000,000 for remediation per year; all require a 25% match; loans carry a 2% rate for terms up to five years (for assessments) or 15 years (for remediation).
- Infrastructure Development Program provides public and private developers with grants and loans for site remediation, clearance, and new construction, up to \$1,250,000 per project at 3% interest for 15 years.
- Key Sites Initiative for municipalities and economic development agencies uses state-funded contractors to conduct site assessments and prepare cost estimates and remediation plans to promote reuse of abandoned industrial properties.
- Governor Edward G. Rendell on March 31, 2004 announced the bipartisan approval of several major pieces of Pennsylvania's Economic Stimulus Package which will fuel a major new investment in communities across the commonwealth. This initiative invests nearly \$2,000,000,000 for the revitalization of Pennsylvania's communities. Programs include Business in Our Sites, Building PA, the New PA Venture Guarantee Program, the New PA Venture Capital Investment Program, the 2nd Stage Loan Program, the Tax Increment Financing Guarantee Program, and the Infrastructure and Facilities Improvement Program.
- Business in Our Sites will offer flexible loans and grants for local municipalities and their economic development partners to create future business growth and attract opportunities through the acquisition and preparation of key sites for development. A total of \$300,000,000 is allotted for FY04 for this program.
- Building PA will provide funding for the development of real estate assets within the commonwealth. Funds will

be loaned to private investors and foundations looking to match funds to facilitate projects. \$150,000,000 has been set aside for this program.

- New PA Venture Guarantee Program will allow the commonwealth to more actively partner with the investment community by structuring a program that provides guarantees to venture capital companies interested in Pennsylvania businesses. These guarantees will provide increased capital for Pennsylvania businesses to grow and create jobs. In FY04, \$250,000,000 was set aside for this program.
- New PA Venture Capital Investment Program will provide capital to Pennsylvania-focused venture capital companies that agree to match those funds and make investments in Pennsylvania businesses. The Stimulus Package assigns \$60,000,000 to accomplish this piece of the initiative.
- 2nd Stage Loan Program will provide guarantees for bank loans to second stage manufacturers and technology companies for working capital and other financing needs. Targeted toward manufacturing, advanced technology and biotechnology, these funds will support growth in these vital sectors. The Stimulus Package sets aside \$50,000,000 in loan guarantees for this program.
- Infrastructure and Facilities Improvement Program is a multi-year grant program that will provide grants to certain issuers of debt in order to assist with the payment of debt service.
- PENNVEST manages a Clean Water State Revolving Loan Fund (CWSRF) to administer both state and federal funds available for certain infrastructure projects, including the construction of wastewater collection and treatment projects and endeavors that control non-point sources of pollution. In 2004, PENNVEST decided to extend the use of its funds to include the remediation of brownfields that pose a threat to local ground water or surface water sources. PENNVEST is setting aside 30% of its yearly CWSRF funding capacity to address brownfields—\$48,000,000 in 2004. Loans to one municipality may total up to \$11,000,000 per project. The amount is increased to \$20,000,000 for projects that serve two or three municipalities. Any requests over \$20,000,000 or projects that serve all or parts of four or more municipalities require a special vote by the PENNVEST Board of Directors.

Tax incentives (abatements, credits, etc.):

- KOZ/KOEZ—in designated KOZ/KOEZs, all taxes maybe forgiven until 2010 or 2013, respectively.
- Job Creation Tax Credit Program created a tax credit of \$1,000 per new job for firms that increase employment by 25 jobs or 20% within three years from start date (with program).
- The TIF Guarantee Program has been a significant financing tool for the commonwealth for many years. Through TIF, communities can borrow funds for projects

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that will develop blighted areas and then repay those borrowed monies through the new tax revenues that will be generated as a result of the development. While this method of financing has been used extensively by the state's largest cities, smaller communities have not tapped into the potential of TIF. In order to solve this disparity, a combination of technical assistance and loan guarantee assistance is proposed to encourage small communities to utilize this effective program. The amount of loan guarantees for FY04 is \$100,000,000.

Other forms of support (environmental insurance, brownfields redevelopment authorities, etc.): PA SiteFinder—Web site for marketing previously-used commercial and industrial properties available for redevelopment in Pennsylvania. A person can list a site for sale or lease and also search for one to purchase or lease. PA SiteFinder can be searched by property location, acreage, building square foot, or cost. Once a potential site is identified, additional information can be retrieved including county, municipality, property size, zoning, buildings and conditions, and utility access.

Environmental Insurance—Pennsylvania has pending legislation that would establish an environmental insurance program and a subsidies pool to help alleviate the premium costs for purchasing a Pennsylvania-specific policy.

Program Elements

Technical Elements

Methods/standards/controls:

By site—One property may have more than one site.

By media—Ground water and soil can use different standards, even for the same substance.

By substance—Can apply any one of the standards to each substance.

Contaminants covered/excluded: See list on LRP Web site.

Use of long-term stewardship and institutional controls (IC): Reopeners include: fraud in the attainment demonstration; newly identified areas of contamination; remedy failure; and increased risk due to substantial changes in exposure or new toxicology information.

Pennsylvania passed model Uniform Environmental Covenants Act (UECA) legislation (H.B. 43) that ensures that use restrictions and institutional and engineering controls at a brownfield site with residual contamination remain valid and enforceable even after the property changes hands through a sale or other ownership transfer.

- **IC Tracking:** Environmental covenants created under the law will be recorded in county land records and in a state registry to be created by DEP.
- **IC Oversight and Monitoring:** The environmental covenants will be binding and enforceable on successive owners over time.

The following Web address is a direct link to the state's public database that maintains an inventory of sites, maps sites, and/or tracks institutional controls. This link also provides additional information regarding contaminated sites in the state.

<http://www.pasitefinder.state.pa.us/>

Management & Implementation Elements

Voluntary Cleanup Program MOA with EPA: April 2004

Costs to enter program or fees for service:

- \$250 for statewide health final report, background final report, and site-specific reports except final.
- \$500 for site-specific final report.
- No fee for SIA reports.
- Not required for regulated tank cleanups.
- If combined reports are submitted, multiple fees apply.

Funding source for administrative costs and staff: LRP in DEP handles hazardous substance cleanup and has 175 full-time equivalent (FTE) staff. Legal support is provided by the DEP Office of Chief Counsel with approximately 12 FTE attorneys. The state cleanup fund provides 100% of administrative costs.

Recent Program Enhancements (2004):

- **Establishment of Office of Community Revitalization and Local Government Support**—This new office is charged with coordinating economic development and brownfields redevelopment activities.
- **Brownfields Action Team (BAT)**—This program has been established to provide redevelopment projects with an enhanced management process specifically designed to facilitate both environmental protection and economic development. Each BAT will be assembled based on the needs of that specific project and will provide a coordinated single point-of-contact to facilitate project advancement and eliminate avoidable delays. This includes site assessment, remediation activities, permit coordination, and priority funding opportunities.
- **Best Management Practices for Low-Risk Sites**—A series of criteria and reporting requirements have been established that allow low-risk sites to receive the full liability protection afforded by Act 2 without DEP review. Low-risk site submittals are not subject to more than an administrative verification for completeness. The burden of compliance is on the submitting licensed professional.
- **Mothball Properties**—DEP is working with local governments to identify properties critical to community revitalization efforts that have been

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“mothballed” by owners reluctant to offer for sale or initiate the remediation of these properties. In consultation with local officials, DEP staff will initiate enforcement action to require assessment and remediation work on these properties with potential environmental liabilities. At any point in the process, owner may choose to enter LRP.

- Grayfields—Abandoned mine lands (AMLs) historically have not been eligible for funding under Act 2 or for related tax incentives available at the federal level. DEP will initiate a program to apply land recycling procedures to AMLs. DEP hopes to identify a subset of AMLs that are well positioned (close to resources and infrastructure) for redevelopment. Monies may be leveraged for AML reuse from the federal Office of Surface Mining under the Surface Mining Control and Reclamation Act (SMCRA), and the Industrial Sites Reuse Fund administered by Department of Community and Economic Development (DCED). Legislation is being drafted to promote an AML reuse program, and to ensure the protection of water rights by reusers relying upon mining-affected waters for their operational needs.

Cleanup Activities

Sites currently in VCP: 1,744 as of January 1, 2008.

Sites completed under VCP: 2,723 as of January 1, 2008.

Benefits (incentives to participate in the VCP, covenants not to sue, etc.): Liability relief, improved quality of life, and community/urban revitalization.

Public Participation

Public participation requirements (notice, comment periods, etc.):

- HSCA establishes requirements relating to public notice, public comment, hearings and meetings, document availability, and grants to citizen groups. The state provides public notice of the analysis of a selected response action and alternatives. The public notice is followed by a 90-day comment period. A public hearing is held within the 90-day comment period. HSCA also has a citizen suit provision.
- The LRP and its regulations contain public participation requirements for parties proposing remediation under one of the law’s cleanup standards. These include public notice and comment, as well as the development of public involvement plans where the site-specific standard is used and the affected municipality requests to be involved. Community Relations Coordinators perform additional public participation functions on an ad hoc basis.

Public participation activities (hearing, meetings, etc.):

As required by Pennsylvania statute and MOA.

Statutory Authorities

- The Hazardous Sites Cleanup Act (HSCA) (Act 1988–108), 35 PS §6020.101 et seq., establishes the HSCF and authorizes the DEP to clean up sites contaminated by hazardous substances. The law provides for enforcement, strict, joint and several liability, cost recovery, public participation, natural resource damage assessment and recovery, water replacement, and environmental disclosure upon property transfer.
- The Land Recycling and Environmental Remediation Standards Act, (LR&ERSA) (Act 1995–2), 35 PS §6026.101 et seq., establishes statewide cleanup standards and a voluntary cleanup program, and addresses brownfield sites.

General Information

Contact: Kevin Greene

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Richmond, VA 23240-0009

Phone: 804 698 4236

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Email: klgreene@deq.state.va.us

Web site: <http://www.deq.state.va.us/brownfieldweb/>

Program Description (VCP, brownfields, or related)

Since 1997, Virginia has had a program for voluntary cleanups of contaminated sites. Regulations provide a framework for selecting cleanup standards under the Voluntary Cleanup Program (VCP). Eligibility is limited to sites where remediation is not mandated pursuant to a federal or state regulatory program. Incentives for participation in the program include the issuance of a certification of satisfactory completion of remediation, which constitutes immunity to a state enforcement action.

On March 12, 2004, Virginia issued an Interim Brownfields Manual. DEQ's goal in implementing the brownfields program is to make its innovative and business oriented provisions substantive, user friendly, and timely. The manual presents definitions, frequently asked questions, and flowcharts to help the user quickly and easily self assess the applicability of the amnesty and limited liability provisions for project. The program covers sites with a local government interest and a potential for redevelopment. The state provides the site assessment service as an incentive for the reuse or redevelopment of brownfields.

Brownfields definition: Idled, underutilized, or abandoned industrial or commercial properties where expansion or redevelopment is complicated by real or perceived environmental contamination.

Program titles:

- Brownfields Program
- Voluntary Remediation Program (VRP)

Liability relief provisions: Virginia's brownfields law protects bona fide prospective purchasers and innocent landowners from having to conduct containment or cleanup under Virginia's air, water, and waste laws at a brownfield site

if they meet the statutory definitions and the additional requirements in the statute.

Financial incentives (grants, loans, tax provisions, etc.): Local governments are authorized to provide tax incentives.

Legislative or program site eligibility requirements: No information available

Financial Elements

Assessment and cleanup funding (source, amount, relationship to VCP/brownfields programs, application process, eligibility requirements, dedication to special types of sites such as petroleum, dry cleaners, abandoned drug labs, etc.): Voluntary Response Action (VRA) provides funding for brownfields remediation projects for localities and governmental authorities across the commonwealth, both through the Virginia Pooled Financing Program (VPFP) and through the Virginia Water Facilities Revolving Fund (VWFRF).

Tax incentives (abatements, credits, etc.): Defines environmental restoration sites holding Certificates of Completion (COCs) as a separate class of property and allows local governments to adopt an ordinance partially or fully exempting that class from taxation.

Other forms of support (environmental insurance, Brownfields redevelopment, etc.): No information available

Program Elements

Technical Elements

Methods/standards/controls: Risk-Based Corrective Action (RBCA)-like process in place; applicants have a choice of remediation standards—Tier I (background), Tier II (look-up values adopted/modified from EPA standards), or Tier III (risk-based, including institutional controls).

Contaminants covered/excluded: Petroleum, asbestos, lead paint, and polychlorinated biphenyls (PCBs) all OK, if not regulated under another program.

Use of long-term stewardship and institutional controls (IC): Institutional controls are allowed; however, Virginia does not have a long-term stewardship program for its state cleanup program or for its voluntary cleanup program.

- **IC Tracking:** Virginia does not have a long-term stewardship program for its state cleanup program or for its voluntary cleanup program.
- **IC Oversight:** Virginia does not have a long-term stewardship program for its state cleanup program or for its voluntary cleanup program.

Virginia

- **IC Monitoring:** Virginia does not have a long-term stewardship program for its state cleanup program or for its voluntary cleanup program.

The following Web address is a direct link to the state's public database that maintains an inventory of sites, maps sites, and/or tracks institutional controls. This link also provides additional information regarding contaminated sites in the state.

<http://www.deq.virginia.gov/brownfieldweb/brnsites.html>

<http://www.deq.state.va.us/vrp/public.html>

Management & Implementation Elements

Voluntary Cleanup Program MOA with EPA: January 2002

Costs to enter program or fees for service: \$5,000 or 1% of the cost of remediation, whichever is less.

Funding source for administrative costs and staff: State oversight is funded in part by a fee of \$5,000 or 1% of the cost of remediation, whichever is less.

Cleanup Activities

Sites currently in VCP: 142 enrolled in VRP as of January 1, 2008.

Sites completed under VCP: 140 No Further Action (NFA) certificates issued as of January 1, 2008.

Benefits (incentives to participate in the VCP, covenants not to sue, etc.): COCs provide assurance that the remediated site will not later become the subject of a DEQ enforcement action unless new issues are discovered.

Public Participation

Public participation requirements (notice, comment periods, etc.): State regulations establish public notice and comment requirements for the VRP.

Public participation activities (hearing, meetings, etc.): State regulations establish public notice and comment requirements for the VRP.

Statutory Authorities

- Brownfields Restoration and Land Renewal Act, Va. Code §§10.1-1230 through 10.1-1237.
- The Waste Management Act, Va. Code §§10.1-1400—10.1-1457 (1986, as amended 1987, 1988, 1990, 1993, 1994, 1995 and 1996), authorizes DEQ to contain or clean up sites where hazardous wastes have been improperly managed. The law provides for enforcement, strict liability, and cost recovery.
- The 1995 amendments created a voluntary remediation program. The Virginia Environmental Emergency Response Fund Act, Va. Code §§10.1-2500—10.1-2502 (1992) establishes the state fund.

General Information

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Division of Land Restoration
601 57th Street, SE
Charleston, WV 25304-2345

Phone: 304 926 0455 ext. 1263

Fax: 304 926 0457

Web site: <http://www.wvdep.org>

Program Description (VCP, brownfields, or related)

The Voluntary Remediation and Redevelopment Act (VRRRA) encourages voluntary remediation and redevelopment through an administrative program set out in the West Virginia Code of State Regulations, Title 60, Series 3 entitled the Voluntary Remediation and Redevelopment Rule (the Rule), which became effective on July 1, 1997. The VRRRA limits enforcement actions by DEP, provides financial incentives to entice investment in brownfield sites, and limits liability under environmental laws and rules for those who remediate sites under the standards provided in the Rule.

Brownfields definition: "Brownfield" means any industrial or commercial property which is abandoned or not being actively used by the owner as of the effective date of state law, but shall not include any site subject to a unilateral enforcement order under §104 through §106 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or which has been listed or proposed to be listed by EPA on the National Priorities List (NPL), or subject to a unilateral enforcement order under the Resource Conservation Recovery Act (RCRA) or any unilateral enforcement order for corrective action under this law.

If public funds are used, a much higher degree of public involvement is required for brownfields cleanups.

Program titles:

- Voluntary Remediation Program (VRP)

Liability relief provisions: The VRP offers Certificates of Completion (COC) that provide liability relief.

Any person demonstrating compliance with the applicable standards whether by remediation or where the site assessment shows that the contamination at the site meets applicable standards, shall be relieved of further liability for the remediation of the site. Contamination identified in the remediation agreement submitted to and approved by the DEP shall not be subject to citizen suits or contribution

actions. The protection from further remediation liability provided by the state law applies to the following persons:

- The current or future owner or operation of the site, including development authorities and fiduciaries who participated in the remediation of the site;
- A person who develops or otherwise occupies the site;
- A successor or assign of any person to whom the liability protection applies;
- A public utility, as defined in section two, the West Virginia Code (§24-1-2), and for the purpose of the VRRRA, a utility engaged in the storage and transportation of natural gas, to the extent the public utility performs activities on the site;
- A remediation contractor;
- A licensed remediation specialist; or
- A lender or developer who engages in the routine practices of commercial lending, including, but not limited to, providing financial services, holding of security interests, workout practices, foreclosure or the recovery of funds from the sale of a site.

A person shall not be considered a person responsible for a release or a threatened release of contaminants simply by virtue of conducting or having a site assessment conducted. Nothing relieves a person of any liability for failure to exercise due diligence in performing a site assessment.

Financial incentives (grants, loans, tax provisions, etc.): Brownfields Revolving Loan Fund (RLF) targeted for remediation currently funded by an EPA RLF grant.

Legislative or program site eligibility requirements: See brownfields definition.

Financial Elements

Assessment and cleanup funding (source, amount, relationship to VCP/brownfields programs, application process, eligibility requirements, dedication to special types of sites such as petroleum, dry cleaners, abandoned drug labs, etc.): RLF targeted for remediation currently funded by an EPA RLF grant.

Tax incentives (abatement, credits, etc.): No information available

Other forms of support (environmental insurance, brownfields redevelopment authorities, etc.):

- West Virginia Brownfields Assistance Centers (<http://www.wvbrownfields.org/wvbrownfieldsProgram/about/default0.htm>)
- A Memorandum of Agreement (MOA) with the state Development Office exists to promote the redevelopment of remediated brownfields sites.

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Program Elements

Technical Elements

Methods/standards/controls: Risk-based standards

- The VRP has standards that are used to decide whether a site represents an unacceptable risk. The detailed exposure and toxicity equations used to evaluate risk under these standards can be found in the VRP Guidance Manual. The Guidance Manual describes three standards: de minimis standards, uniform standards and site-specific standards.
- De minimis and uniform standards are similar to each other and differ mainly in the assumptions used to create them. Both the de minimis and uniform standards represent the amount (concentration) of a contaminant that could be present at a site without causing an unacceptable risk. These concentrations are calculated for individual contaminants in the various media (e.g., soil, water, or air) where they may occur. The de minimis and uniform standards are derived by running the basic risk equation in reverse. This is, starting with an acceptable risk level (for example, 10⁻⁶ for carcinogens or a Hazard Quotient of 1 for non-carcinogens) and the known toxicity of a chemical, risk assessors calculate an exposure concentration for that chemical that corresponds to the acceptable risk. This exposure concentration is the standard. If the concentration of a chemical at a site is below its standard, then its risk is acceptable. Having the de minimis and uniform standards expressed as concentrations allows for a quick comparison of measured levels of contamination at a site with the standards to determine whether the site represents a risk.
- Site-specific standards are calculated by running the basic risk equation in the traditional way. This is, measured amounts of chemicals at the site are used to produce an exposure value. The exposure value for each chemical at the site, along with its known toxicity value, is used to calculate a level of risk for each chemical everywhere that it is found (e.g., soil, water, or air). The resulting level of risk is then compared to the acceptable risk levels. As stated above, the acceptable risk level for carcinogens is 10⁻⁶ or less. Cancer risk levels above 10⁻⁴ require remediation. Cancer risk levels between 10⁻⁶ and 10⁻⁴ are evaluated for acceptability on a case-by-case basis. The acceptable risk level for non-carcinogens is a Hazard Quotient of 1 or less.

Contaminants covered/excluded: There are no exclusions.

Use of long-term stewardship and institutional controls

(IC): The DEP established by rule the criteria for deed recordation of land-use covenants and contains all necessary deed restrictions. The DEP causes all land-use covenants to appear in the chain of title by deed to be properly recorded in the office of the county clerk where the site is located. If institutional and engineering controls are used, in whole or in

part, to achieve a remediation standard, the DEP directs that a land-use covenant be applied. The covenant shall include whether residential or nonresidential exposure factors were used to comply with the site-specific standard. The covenant contains a provision relieving the person who undertook the remediation and subsequent successors and assigns from all civil liability to the state as provided under the VRRRA and remains effective as long as the property complies with the applicable standards in effect at the time the covenant was issued.

The West Virginia Legislature passed the Uniform Covenants Act (§22-22B-1) during the regular 2005 session, and during the Spring 2008 Session, the VRRRA Rule was amended to incorporate the provisions of the act which provides additional specific requirements pertaining to environmental covenants.

- **IC Tracking:** USEPA CDX, ICTS and WVDEP, OER staff. The Office of Environmental Remediation is continuing to work with the IT and GIS sections of DEP to compliment the Voluntary Remediation sites on the agency's interactive mapper, <http://gis.wvdep.org/imap/index.html>, with the development of links to the recorded LUCs so that they may be reviewed online or downloaded by interested parties.
- **IC Oversight:** Property owners, VRRRA applicants and WVDEP, OER staff. Effective January, 2008 WVDEP implemented a policy requiring an inspection and reporting paragraph be inserted in all future recorded land use covenants, requiring self-inspection of the restrictions contained in the LUC, and submittal of the inspection report to the agency by the property owner. The frequency of the inspection is dependent upon the restrictions imposed by the LUC, but in no case less frequent than once per year.
- **IC Monitoring:** WVDEP, DLR staff and MISS Utility of West Virginia. WVDEP is a member of the MISS Utility of West Virginia, the one-call system for notification regarding excavation activities as potentially related to recorded LUCs. For the period of October 1, 2007 through March 31, 2008, WVDEP received 218 notifications of excavation activities for sites within the MISS Utility grid network. Each notification received is forwarded to the respective project manager for their review and follow-up as appropriate. Project managers also conduct routine inspections of VRRRA sites with LUCs.

The following Web address is a direct link to the state's public database that maintains an inventory of sites, maps sites, and/or tracks institutional controls. This link also provides additional information regarding contaminated sites in the state.

<http://www.wvbrownfield.org/index.cfm?page=bFind.cfm>

Management & Implementation Elements

Voluntary Cleanup Program MOA with EPA: No

Costs to enter program or fees for service: Yes, fee is calculated according to the size of the property.

Funding source for administrative costs and staff: Costs are reimbursed by the applicant.

Cleanup Activities

Sites currently in VCP: 173 sites have entered the VCP.

Sites completed under VCP: 81 COCs have been issued.

Benefits (incentives to participate in the VCP, covenants not to sue, etc.): DEP issues COCs.

Public Participation

Public participation requirements (notice, comment periods, etc.): Under the VCP, public notice and provisions for public comment are required by the statute.

Public participation activities (hearing, meetings, etc.): Under the VCP, public hearings and meetings are required by the statute.

Statutory Authorities

The Voluntary Remediation and Redevelopment Act, WVa Code §§22-22-1 through 22-22-21 (1996), establishes the state's voluntary cleanup and brownfields programs, as well as long-term stewardship authority.