Denver Law Review

Volume 78 | Issue 1 Article 3

January 2000

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REMEDIATION OF BROWNFIELDS UNDER THE COLORADO VOLUNTARY CLEANUP AND REDEVELOPMENT ACT

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The cleanup and subsequent reuse of "brownfields" has been touted as a key component of economic redevelopment.[1] Brownfields are

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1. In January 1995, Carol Browner, the U.S. Environmental Protection Agency (EPA) Administrator, announced the Brownfields Action Agenda to help states and municipalities clean up and reuse contaminated sites. U.S. EPA, #500-K-95-001, THE BROWNFIELDS AGENDA (1995) [hereinafter BROWNFIELDS AGENDA].

> The U.S. Environmental Protection Agency (EPA) firmly believes that environmental cleanup is a building block to economic development, not a stumbling block—that revitalizing contaminated property must go hand in hand with bringing life and economic vitality back to the community. EPA's Brownfields Economic Redevelopment Initiative will empower States, localities, and other agents of economic redevelopment to work together in a timely manner to prevent, assess, safely clean up, and sustainably reuse brownfields . . . . Benefits of the Brownfields Initiative will be realized in affected communities through a cleaner environment, new jobs, an enhanced tax base, and a sense of optimism about the future . . . .
>
> Implementation of the Brownfields Action Agenda will help reverse the spiral of unaddressed contamination, declining property values, and increased unemployment often found in inner city industrial areas, while maintaining deterrents to future contamination and EPA's focus on assessing and cleaning up "worst sites first."

Id. at 1.

The first EPA grant for a brownfields remediation was a $200,000 grant to Cuyahoga County, Ohio, in November 1993. *See id.* at 3. The EPA reported that this grant leveraged $1.6 million in private cleanup dollars, generated over $625,000 in new tax dollars, and resulted in the creation of nearly 100 new jobs. *See id.* In 1999, EPA brownfields grants were announced for communities across the nation, including Aurora and Westminster in Colorado. OFFICE OF THE VICE PRESIDENT, THE WHITE HOUSE, VICE PRESIDENT GORE ANNOUNCES GRANTS TO 23 COMMUNITIES TO EXPAND EFFORTS TO CLEAN UP AND REDEVELOP "BROWNFIELDS" (March 12, 1999) (announcing brownfields grant for Aurora, CO); OFFICE OF THE VICE PRESIDENT, THE WHITE HOUSE, VICE PRESIDENT GORE ANNOUNCES $11 MILLION TO CLEANUP AND REDEVELOP DISTRESSED AREAS (June 21,

"abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination."[2] Currently, forty-four states have voluntary cleanup programs to facilitate clean up and reuse of brownfields.[3]

In 1994, Colorado passed the "Voluntary Cleanup and Redevelopment Act" (VCRA) to encourage property owners to clean up brownfields.[4] The intent of the VCRA was to "foster the transfer, redevelopment, and reuse of facilities and sites that have been previously contaminated with hazardous substances or petroleum products."[5] The VCRA gives property owners "a method of determining what the clean-up responsibilities will be when they plan the reuse of existing sites."[6] The Colorado Department of Public Health and Environment (CDPHE) is responsible for administering the VCRA.[7]

The VCRA recognized that brownfields remediation would not progress unless landowners had assurances that future state *and federal* remediation requirements would not be imposed.[8] The federal Comprehensive

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1999) (announcing brownfields grant for Westminster, CO). The cities of Denver, Englewood, Lakewood, and Loveland, in coalition with the Colorado Department of Public Health and Environment, also received an EPA brownfields grant in 1999. OFFICE OF THE VICE PRESIDENT, THE WHITE HOUSE, VICE PRESIDENT GORE ANNOUNCES OVER $30 MILLION TO HELP COMMUNITIES CLEAN UP AND REDEVELOP BROWNFIELDS (May 25, 1999). As of August 4, 1999, the EPA had awarded 307 brownfield pilot grants to states, municipalities, and tribes. *Legislation to Improve the Comprehensive Environmental Response, Compensation, and Liability Act: Hearings Before the Subcomm. On Finance & Hazardous Materials of the House Comm. on Commerce*, 106th Cong. 22 (1999) [hereinafter *Hearings*] (statement of Mr. Tim Fields, U.S. EPA).

2. BROWNFIELDS AGENDA, *supra* note 1, at 1.

3. *Hearings*, *supra* note 1, at 24.

4. COLO. REV. STAT. §§ 25-16-301 to -310 (2000).

5. COLO. REV. STAT. § 25-16-302 (2000) (Legislative Declaration).

6. *Id.*

7. COLO. REV. STAT. § 25-16-102(2) (2000). The Colorado Department of Public Health and Environment (CDPHE) did not promulgate regulations implementing the VCRA. Instead, the CDPHE issued a guidance document on VCRA cleanups. *See* HAZARDOUS MATERIALS & WASTE MGMT. DIV., COLO. DEP'T OF PUB. HEALTH & ENV'T, VOLUNTARY CLEANUP ROADMAP (1997) [hereinafter VOLUNTARY CLEANUP ROADMAP]. The rationale for not promulgating VCRA regulations was to allow the VCRA program "to operate quickly and with a minimum of administrative processes and costs." *Id.* at 9.

The CDPHE guidance above includes an appendix entitled "Voluntary Clean-up Program Application Guidance Document and VCRA Checklist." *See* HAZARDOUS MATERIALS & WASTE MGMT. DIV., COLO. DEP'T OF PUB. HEALTH & ENV'T, VOLUNTARY CLEANUP ROADMAP APP. (1997) [hereinafter VCRA APPLICATION GUIDANCE].

8. Under the VCRA, the CDPHE was directed to seek a determination by the U.S. Environmental Protection Agency ("EPA") that future remediation would not be required for a site cleaned up under the VCRA. COLO. REV. STAT. § 25-16-309(2) (2000). Specifically, the VCRA states:

> If the United States [E]nvironmental [P]rotection [A]gency indicates that it is investigating a site which is the subject of an approved voluntary

Environmental Response, Compensation, and Liability Act (also called the "Superfund" law) authorizes the EPA to require remediation of contaminated sites.[9] By 1996, the CDPHE had approved only twenty- seven companies for approval to clean up brownfields under the VCRA.[10] Landowners remained wary of VCRA cleanups, due to fear of additional federal remediation requirements.[11]

One of the biggest challenges is obtaining a lender's backing to develop a brownfield. Even after a landowner has cleaned up a mess, banks still fear that the EPA will impose costly additional Superfund requirements. As a result, landowners want state and federal environmental officials to certify that their land is safe enough to be developed.[12]

In April 1996, the CDPHE and the U.S. Environmental Protection Agency, Region VIII, signed a Memorandum of Agreement on EPA's support for VCRA remediation of brownfields.[13]

> clean-up plan or no action petition, the [CDPHE] shall actively pursue a determination by the United States [E]nvironmental [P]rotection [A]gency that the property not be addressed under the federal [Comprehensive Environmental Response, Compensation, and Liability A]ct or, in the case of property being addressed through a voluntary clean-up plan, that no further federal action be taken with respect to the property at least until the voluntary clean-up plan is completely implemented.

Id.

9. *See* 42 U.S.C. §§ 9601-9675 (1994 & Supp. III 1997). The 1980 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) authorized the President to take enforcement action against responsible persons, to require remediation of contaminated sites. 42 U.S.C. §§ 9604, 9606, 9607 (1994). The President delegated this authority to the U.S. EPA in 1987. Exec. Order No. 12,580, 3 C.F.R. 193 (1987), *reprinted as amended in* 42 U.S.C. § 9615 (1994). The EPA has promulgated regulations for CERCLA cleanups at 40 C.F.R. Part 300, known as the "National Contingency Plan."

10. Mark Obmascik, *Waste sites rescued. State, feds OK reuse proposal*, DENVER POST, April 12, 1996, at B-01. One of these sites was a Home Depot development of the old Robinson Brickyards property in Denver, Colorado.

> Decades of mine-smelting operations turned the old Robinson Brickyards into a toxic stew of lead, zinc, cyanide, and radium. But decades of surrounding urban growth also turned the same tract into a prime retail development site. When executives from Home Depot tried to transform the polluted land into a profitable new store in south Denver, they ran into a heap of bureaucratic trouble . . . The Home Depot site already was cleaned up under a $20 million EPA project, but some toxic heavy metal remained. After a year of negotiations, state and federal officials agreed to allow a new store to be built at the site after some extra cleanup work.

Id.

11. *See id.*

12. *Id.*

13. MEMORANDUM OF AGREEMENT BETWEEN THE COLO. DEP'T OF PUB. HEALTH & THE ENV'T & THE U.S. EPA, REGION VIII (undated) [hereinafter MEMORANDUM OF AGREEMENT]. The Denver Post reported the CDPHE-EPA Memorandum of Agreement was signed on April 11, 1996,

This article will examine the VCRA cleanup process. The first section will describe what sites are eligible for remediation under the VCRA. The second section will explain what the property owner must do to apply for a VCRA cleanup. The last section will discuss the CDPHE review process and the conditions EPA has imposed for EPA "forbearance" of further cleanup requirements. The last section also spells out the conditions under which the CDPHE or EPA may impose future cleanup requirements on the VCRA site.

I. IS THE SITE ELIGIBLE FOR VCRA REMEDIATION?

The VCRA excludes contaminated sites covered by other environmental programs.[14] Specifically, VCRA excludes five categories of sites from its voluntary cleanup regime: (1) a site that is listed or proposed for listing on the National Priorities List of Superfund sites, established under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA);[15] (2) a release from a facility that treated, stored, or disposed of hazardous waste which has or *should have* a Resource Conservation and Recovery Act (RCRA) permit;[16] (3) a site covered by a RCRA corrective action order or agreement;[17] (4) a site which is *subject to* a Water Quality Division enforcement action;[18] or (5) a site covered by the state Underground Storage Tank (UST) program.[19]

The first exclusion is for sites that the U.S. EPA has listed or proposed for listing on the National Priorities List (NPL),[20] under its CERCLA remediation authority.[21] The EPA identifies contaminated sites

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and noted the purpose of the agreement was to allay fears of landowners and financial lenders about future cleanup requirements. Mark Obmascik, *Waste sites rescued. State, feds OK reuse proposal*, DENVER POST, April 12, 1996, at B-01.

14. COLO. REV. STAT. § 25-16-303(3)(b) (2000).

15. COLO. REV. STAT. § 25-16-303(3)(b)(I) (2000).

16. COLO. REV. STAT. § 25-16-303(3)(b)(IV) (2000) (emphasis added).

17. COLO. REV. STAT. § 25-16-303(3)(b)(II) (2000).

18. COLO. REV. STAT. § 25-16-303(3)(b)(III) (2000) (emphasis added).

19. COLO. REV. STAT. § 25-16-303(3)(b)(V) (2000).

20. COLO. REV. STAT. § 25-16-303(3)(b)(I) (2000). The federal CERCLA law authorizes the President to take actions to remediate contaminated sites. 42 U.S.C. §§ 9601-9675 (1994 & Supp. III 1997).

21. *See supra* note 9, on EPA's delegated CERCLA authority. Pursuant to CERCLA section 104, the EPA is authorized to remediate contamination

> [w]henever (A) any hazardous substance is released or there is a substantial threat of such a release into the environment, or (B) there is a release or substantial threat of release into the environment of any pollutant or contaminant which may present an imminent and substantial danger to the public health or welfare . . . .

that have priority for remediation by adding those sites to the NPL.[22] The EPA proposes a site for listing on the NPL through a public notice in the Federal Register.[23] The Federal Register publishes as a final rule the EPA's decision to list a site on the NPL.[24] A site under an EPA CERCLA investigation would be eligible for VCRA cleanup if EPA has not taken the formal step of proposing the site for inclusion on the NPL.[25]

The next two VCRA exclusions involve contaminated sites addressed under RCRA.[26] The federal RCRA statute authorized the EPA to regulate hazardous waste from the point of generation to ultimate disposal.[27]

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42 U.S.C. § 9604(a)(1) (1994). The EPA is also authorized to issue enforcement orders to persons responsible for causing the contamination. 42 U.S.C. §§ 9604, 9606, 9607 (1994 & Supp. III 1997).

22. 42 U.S.C. § 9605(a)(8) (1994). The "National Priorities List" (NPL) is "the list, compiled by EPA pursuant to CERCLA section 105 [42 U.S.C. § 9605], of uncontrolled hazardous substance releases in the United States that are priorities for long-term remedial evaluation and response." 40 C.F.R. § 300.5 (2000).
The EPA has promulgated regulations on the procedure and criteria for adding or nominating a site to the NPL. 40 C.F.R. § 300.425 (2000). A contaminated site is eligible for the NPL in the following three situations:

> (1) The release scores sufficiently high pursuant to the Hazard Ranking System described in appendix A to this part [300];
>
> (2) A state (not including Indian tribes) has designated a release as its highest priority. States may make only one such designation; or
>
> (3) The release satisfies all of the following criteria:
>
> > (i) The Agency for Toxic Substances and Disease Registry has issued a health advisory that recommends dissociation of individuals from the release;
> >
> > (ii) EPA determines that the release poses a significant threat to public health; and
> >
> > (iii) EPA anticipates that it will be more cost-effective to use its remedial authority than to use removal authority to respond to the release.

40 C.F.R. § 300.425(c) (2000). The NPL sites are a subset of the contaminated sites that are covered by EPA remedial authority under CERCLA.

23. 40 C.F.R. § 300.425(d)(5)(i) (2000).

24. 40 C.F.R. § 300.425(d)(5)(ii) (2000). When the EPA publishes the final rule adding sites to the NPL, the EPA must also "make available a response to each significant comment and any significant new data submitted during the comment period." *Id.* The NPL is published in the Code of Federal Regulations, where the sites are listed by state. *See* 40 C.F.R. pt. 300, app. B (2000).

25. VOLUNTARY CLEANUP ROADMAP, *supra* note 7, at 9.

26. Colo. Rev. Stat. § 25-16-303(b)(II), (IV) (2000).

27. 42 U.S.C. §§ 6901-6987 (1994 & Supp. III 1997). The House Interstate and Foreign Commerce Committee report described the scope of federal hazardous waste regulation under RCRA, as follows:

> Pursuant to the regulatory authority . . . [under RCRA], EPA will administer the federal hazardous waste provisions of this legislation. They require the Administrator to develop criteria for determining what is a hazardous waste, and then to list those wastes determined to be hazard-

States may administer the RCRA hazardous waste program as long as their programs are equivalent to the EPA's federal hazardous waste program.[28] The EPA's comprehensive hazardous waste regulations cover the generation, treatment, storage, and disposal of hazardous waste.[29] All facilities that treat, store (over 90 days), or dispose of hazardous waste must have an RCRA permit.[30] The RCRA corrective action program may require remediation of hazardous waste releases.[31] Since 1984, Colorado has administered the RCRA hazardous waste program.[32]

The VCRA excludes contamination at facilities that treat, store, or dispose of hazardous waste under the RCRA permit program,[33] and excludes contaminated sites covered by the RCRA corrective action program.[34] The owner/operator of a facility that has or *should have* a RCRA permit is barred from using the VCRA remediation process.[35] Since November 1980, a RCRA permit has been required for facilities that treat,

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ous. From point of generation, through transportation, storage, treatment and disposal, those wastes listed as hazardous are federally regulated.

H.R. REP. NO. 94-1491, at 3 (1976), *reprinted in* 1976 U.S.C.C.A.N. 6238, 6242.

28. 42 U.S.C. § 6926 (1994) (Authorized State Hazardous Waste Programs). The EPA regulations specify minimum requirements for delegated state hazardous waste programs. *See* 40 C.F.R. pt. 271 (2000). The EPA must approve a state hazardous waste program, before the state may administer the RCRA hazardous waste program. 40 C.F.R. § 271.1 (2000). The states may impose hazardous waste regulations that are more stringent than federal RCRA regulations. 40 C.F.R. § 271.1(i) (2000).

29. 40 C.F.R. pts. 261 (Identification and Listing of Hazardous Waste), 262 (Standards Applicable to Generators of Hazardous Waste), 263 (Standards Applicable to Transporters of Hazardous Waste), 264 (Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities), 265 (Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities), 266 (Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities), 268 (Land Disposal Restrictions), and 270 (EPA Administered Permit Programs) (2000).

30. *See* 40 C.F.R. § 270.1(c) (2000). This permitting requirement must also be part of the delegated state hazardous waste program. 40 C.F.R. § 271.13(a) (2000). Facilities which generate hazardous waste may qualify for a permit exemption. Hazardous waste generators who store hazardous waste on-site for 90 days or less are exempt from the RCRA permit requirement. 40 C.F.R. §§ 262.34(b), 270.1(c)(2)(i) (2000). Another permitting exemption covers generators of more than 100 kilograms but less then 1000 kilograms of hazardous waste per month who store hazardous waste for 180 days or less. 40 C.F.R. §§ 262.34(d), 270.1(c)(2)(i) (2000).

31. 42 U.S.C. § 6928(h) (1994). For regulations on remediation of hazardous waste releases from permitted facilities, *see* 40 C.F.R. pt. 264, subpts. F and S (2000). For monitoring requirements and possible RCRA remediation at interim status facilities, *see* 40 C.F.R. §§ 265.1(b), 265.4, 265.90-.94 (2000). An "interim status" facility is a facility that has applied for a RCRA permit within the required time period, but has not yet received the permit. 40 C.F.R. pt. 265 (2000). Remediation is also authorized under RCRA if the hazardous waste release might present "an imminent and substantial endangerment to health or the environment." 42 U.S.C. § 6973 (1994).

32. COLO. REV. STAT. §§ 25-15-301 to 316 (2000). *See also* VOLUNTARY CLEANUP ROADMAP, *supra* note 7, at 19.

33. COLO. REV. STAT. § 25-16-303(3)(b)(IV) (2000).

34. COLO. REV. STAT. § 25-16-303(3)(b)(II) (2000).

35. COLO. REV. STAT. § 25-16-303(3)(b)(IV) (2000) (emphasis added).

store (over 90 days), or dispose of hazardous waste.[36] This exclusion includes any "interim status" facility that has applied for a RCRA permit, but the CDPHE has not issued a permit.[37] The CDPHE Compliance Program must address a release from a facility with either a RCRA permit or interim status, and the facility is not eligible for a VCRA cleanup.[38]

This RCRA permitted facility exclusion also includes facilities that failed to apply for a RCRA permit, in violation of RCRA regulations.[39] The CDPHE's view is "any facility with a release of a RCRA hazardous waste after 1980 is deemed to have illegally disposed of hazardous waste without a [RCRA] permit . . . ."[40] In other words, the contamination occurred at a facility that *should have* had a RCRA permit. However, despite the apparent exclusion of these facilities from VCRA remediation, the CDPHE may defer these "illegal disposal sites" to the VCRA program if the sites meet certain criteria.[41]

First, the amount of contaminated soil must be "relatively small and contained on the property."[42] Any groundwater contamination must "not exceed state standards at the site boundary."[43] There are no adverse impacts to surface water, and a "non-aqueous phase is not present."[44] Finally, CDPHE believes the contamination can be successfully remediated within 24 months,[45] and no long-term monitoring will be required.[46] The CDPHE does not mandate that the facility meet all the above criteria to qualify for deferral to a VCRA remediation.[47] The CDPHE will look at whether site-specific conditions "diminish the severity of the release, and threats to human health and the environment are minimal."[48]

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36. 40 C.F.R. § 270.10 (2000). Under the EPA regulations, "hazardous waste management facilities," i.e., facilities that treat, store, or dispose of hazardous waste, must have a RCRA permit. 40 C.F.R. §§ 270.2, 270.10 (2000). Hazardous waste management facilities constructed after November 1980 were required to have a RCRA permit prior to construction. 40 C.F.R. §§ 270.2, 270.10(f) (2000). Hazardous waste management facilities in operation or under construction on or before November 1980 were required to apply for a RCRA permit within a certain time period, in order to qualify for interim status. 40 C.F.R. §§ 270.2, 270.10(e) (2000).

37. VOLUNTARY CLEANUP ROADMAP, *supra* note 7, at 9.

38. *See id.* at 9, 19.

39. *See id.*

40. *Id.* at 9.

41. *See id.* at 10.

42. *Id.*

43. *Id.* The CDPHE will also evaluate "[m]obility and potential biodegradation of the contaminants," in its decision to defer to a VCRA cleanup. *Id.*

44. *Id.*

45. An approved VCRA cleanup must be completed within 24 months or it lapses. COLO. REV. STAT. § 25-16-306(4)(a) (2000).

46. VOLUNTARY CLEANUP ROADMAP, *supra* note 7, at 10.

47. *See id.*

48. *Id.*

The VCRA excludes contaminated sites covered by the RCRA corrective action program.[49] Specifically, contaminated sites that are under an RCRA corrective action order or agreement are not eligible for cleanup under the VCRA.[50] The CDPHE has already taken RCRA enforcement action on these sites and the administrative order or settlement agreement controls the cleanup.[51]

A contaminated site *subject to* a Colorado Water Quality Control Division compliance order or agreement is excluded from VCRA remediation.[52] The CDPHE views a site as "subject to" a Water Quality Control Division order or agreement if there is groundwater contamination present *and* the current property owner (the VCRA applicant) is responsible for that contamination.[53] If the site meets these two conditions, the VCRA usually cannot clean up the site, even though no order has been issued and no agreement has been made regarding the contamination.[54] However, the CDPHE's Water Quality Control Division (WQCD) has the discretion to defer these (otherwise ineligible) sites to a VCRA

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49. COLO. REV. STAT. § 25-16-303(3)(b)(II) (2000). "Corrective action may be required for permitted TSD facilities (CHWR, Section 264.101) and at interim status TSD facilities seeking permits (CHWR, Section 265.5), or at generator facilities where a release of hazardous constituents to the environment has occurred." HAZARDOUS MATERIALS & WASTE MGMT. DIV., COLO. DEP'T OF PUB. HEALTH & ENV'T, INTERIM FINAL POLICY AND GUIDANCE ON RISK ASSESSMENTS FOR CORRECTIVE ACTION AT RCRA FACILITIES 3 (1994). "CHWR" stands for "Colorado Hazardous Waste Regulations." *See id.* at 2. A "TSD facility" is a facility that treats, stores, or disposes of hazardous waste, and therefore requires a RCRA permit. Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, 40 C.F.R. pt. 264 (2000); Interim Status Standards For Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, 40 C.F.R. pt. 265 (2000). A TSD facility is also known as a hazardous waste management facility. *See supra* note 36.

50. A property owner of contaminated property cannot use the VCRA remediation process if the property is covered by a corrective action order or agreement under either the EPA hazardous waste program or the Colorado hazardous waste program. COLO. REV. STAT. § 25-16-303(3)(b)(II) (2000); *See also* VOLUNTARY CLEANUP ROADMAP, *supra* note 7, at 10. Colorado has administered the hazardous waste program since 1984. *See id.* at 19. Specifically, the CDPHE may issue orders for violations of state hazardous waste requirements section (including illegal disposal of hazardous waste). COLO. REV. STAT. § 25-15-308(2) (2000). The CDPHE may also enter into settlement agreements concerning RCRA violations. COLO. REV. STAT. § 25-15-309(4) (2000).

51. For an overview of the Colorado RCRA Corrective Action program, *see* VOLUNTARY CLEANUP ROADMAP, *supra* note 7, at 19-25.

52. COLO. REV. STAT. § 25-16-303(3)(b)(III) (2000) (emphasis added). The CDPHE "may issue orders to any person to clean up any material which he, his employee, or his agent has accidentally or purposely dumped, spilled, or otherwise deposited in or near state waters which may pollute them." COLO. REV. STAT. § 25-8-606 (2000).

53. VOLUNTARY CLEANUP ROADMAP, *supra* note 7, at 10. With regards to the second requirement, a site would be eligible for a VCRA cleanup if the contaminated groundwater were caused by the previous owner or an adjacent property owner. *See id.* Since the current property owner/applicant is not responsible for the contamination, the site would not be "subject to" a Water Quality Control compliance order. *See id.*

54. Contrast this exclusion from the VCRA with the RCRA corrective action exclusion that requires the site be covered by an administrative order or consent agreement. *See supra* notes 50-51 and accompanying text.

cleanup "if the contamination does not present an imminent threat to human health (i.e., low concentrations confined to the applicant's property)."[55] In addition, contaminated sites that require Water Quality Control permits for continuous discharges can still qualify for VCRA cleanup.[56]

Finally, the VCRA excludes contamination covered by the Underground Storage Tank (UST) program.[57] However, the CDPHE interprets this exclusion broadly to include registered underground and aboveground storage tanks that contain petroleum products or "regulated substances."[58] A VCRA cleanup would be available for residual contamination from a UST pulled before December 22, 1988,[59] if the residual contamination did not affect surface water or drinking water.[60]

The CDPHE has put together a flow chart to assist the property owner in determining eligibility for VCRA cleanup.[61] This flow chart appears at Appendix A.

II. THE VCRA REMEDIATION PROCESS - WHAT MUST THE PROPERTY OWNER DO?

A. *Environmental Assessment*

Initially, the applicant (usually the owner of the contaminated industrial property) must determine the extent of contamination. The VCRA requires an environmental assessment of the property.[62] The environ-

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55. VOLUNTARY CLEANUP ROADMAP, *supra* note 7, at 10.

56. *See id.* The example cited by the CDPHE is a site that has drainage from mining adits to surface waters. *See id.* Obviously, the property owner must still get the necessary permits, even if the CDPHE defers to a VCRA cleanup. *See id.*

57. COLO. REV. STAT. § 25-16-303(3)(b)(V) (2000). The Underground Storage Tank (UST) program is authorized by Colorado Revised Statutes sections 8-20.5-201 to 8.20.5-209. This is Title 8, Article 20.5, Part 2, referred to in the VCRA exclusion. *See id.* When a release occurs at an UST site, the owner or operator is required to submit a corrective action plan to clean up subsurface soil, groundwater, and surface water. COLO. REV. STAT. § 8-20.5-209 (2000). The UST program is administered by the Colorado Department of Labor and Employment. VOLUNTARY CLEANUP ROADMAP, *supra* note 7, at 10.

58. VOLUNTARY CLEANUP ROADMAP, *supra* note 7, at 10. "A regulated substance is any substance defined in Section 101 of CERCLA, but not including any substance regulated as a hazardous waste under RCRA." *Id.* at 10-11.

59. This is the effective date of federal UST regulations. *See* Technical Standards and Corrective Action Requirements For Owners and Operators of Underground Storage Tanks (UST), 40 C.F.R. pt. 280 (2000).

60. VOLUNTARY CLEANUP ROADMAP, *supra* note 7, at 11.

61. *See id.* at 5.

62. COLO. REV. STAT. § 25-16-304(2)(a) (2000). An environmental assessment must include the following information:

> (a) The legal description of the site and a map identifying the location and size of the property;

mental assessment includes the site history and characterization of the contamination.[63] A "qualified environmental professional" must prepare the environmental assessment.[64]

The applicant begins with a detailed site history, to determine whether there are any sources of contamination on the property.[65] "An evaluation of past land uses and waste-handling practices should be conducted for at least 50 years into the historical record."[66] The applicant should also determine if the site had prior environmental assessments.[67]

> (b) The physical characteristics of the site and areas contiguous to the site, including the location of any surface water bodies and ground water aquifers;
>
> (c) The location of any wells located on the site or on areas within a one-half mile radius of the site and a description of the use of those wells;
>
> (d) The current and proposed use of on-site groundwater;
>
> (e) The operational history of the site and the current use of areas contiguous to the site;
>
> (f) The present and proposed uses of the site;
>
> (g) Information concerning the nature and extent of any contamination and releases of hazardous substances or petroleum products which have occurred at the site including any impacts on areas contiguous to the site;
>
> (h) Any sampling results or other data which characterizes the soil, groundwater, or surface water on the site; and
>
> (i) A description of the human and environmental exposure to contamination at the site based upon the property's current use and any future use proposed by the property owner.

COLO. REV. STAT. § 25-16-308(2) (2000). The City of Englewood, Colorado, used its EPA brownfields grant to set up a low-interest loan revolving fund, to help businesses and property owners finance environmental assessments of their properties. *Brownfields may blossom. Englewood uses loans to reclaim property*, DENVER POST, May 8, 1998, at C-01.

63. Colo. Rev. Stat. § 25-16-308(2) (2000).

64. Colo. Rev. Stat. § 25-16-308(1) (2000). A "qualified environmental professional" is a person "with education, training, and experience in preparing environmental studies and assessments." *Id.* In addition, the CDPHE requires that a qualified environmental professional have at least 5 years experience in the preparation of environmental studies and assessments. VCRA Application Guidance, *supra* note 7, at 2.

65. Voluntary Cleanup Roadmap, *supra* note 7, at 11. The CDPHE "strongly considers the agreement between historical uses and characterization efforts in reviewing the [VCRA] application. . . . [T]his historical knowledge is needed in order to identify all potential contaminant sources." VCRA Application Guidance, *supra* note 7, at 2. The inclusion of an "operational history of the site" is a statutory requirement. *See* Colo. Rev. Stat. § 25-16-308(2)(e) (2000). If the property owner finds that all sources of contamination are off-site, i.e., the contamination source is on adjacent property, the property owner files a petition for a "no action" determination. *See infra* pp. 13-16.

66. VCRA Application Guidance, *supra* note 7, at 2. "It may be appropriate to review facility records going further back in cases where wastes of a more persistent nature were handled on-site. If records do not go back that far, it should be stated as such with the reference noted." *Id.*

67. *See id.* Prior assessments can assist the property owner in putting together a detailed site history. The prior environmental assessment should include the following:

If so, the applicant should include the prior environmental assessments in the VCRA submittal to CDPHE.[68]

After completing the site history, the applicant must do a site characterization.[69] The purpose of the site characterization is to define the full extent of contamination in all environmental media.[70] For example, if soil contamination has the potential to migrate to groundwater or surface water, then these media should also be assessed.[71] The CDPHE advises that site characterization efforts should be "tied" to the site history information, to show that the applicant was "looking for the right contaminants in the right places."[72] Usually, the applicant must do sampling as part of site characterization.[73]

In the sample plan, the applicant draws on site history information to determine sampling locations.[74] The sample plan should "explain the reasoning behind each sample location as well as any justification for eliminating assessment of any source areas."[75] If there is insufficient historical data on which to base sampling, then random sampling may be

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> [O]perational history of the property, description of all businesses/activities on [the] property, history of releases of petroleum products or hazardous substances on the property, history of management activities of hazardous substances at the property, notifications to county emergency response personnel pursuant to Emergency Planning and Community Right to Know statutes, notifications made to state and/or federal agencies as reporting spills/accidental releases, list of all permits obtained from state and federal agencies related to activities at [the] property and [a] brief description of current land uses, zoning, and zoning restrictions of all areas contiguous to the property.

Id.

68. *See id.*

69. *See id.*

70. *See id.* A complete delineation of the contamination is not required if the contamination is derived solely from an upgradient, off-site source. See id. However, the applicant must still investigate potential sources on his property. See id. The applicant must also document that his property "could not serve as a source of contamination." Id. The CDPHE advises that an applicant can get a letter absolving him of liability for cleaning up contamination caused by an upgradient source, without characterizing the site. See id. However, the applicant can only obtain a "clean bill of health," i.e., a "no action" determination, if the site characterization is done. See id. For a discussion of "no action" determinations, see infra at pp. 13-16.

71. VCRA APPLICATION GUIDANCE, *supra* note 7, at 2.

72. *Id.*

73. *See id.* at 3. One instance where sampling might not be required is if the site history showed no possible source of contamination, and other data confirmed the contamination resulted from an upgradient source. Telephone Interview with Dan Scheppers, Superfund and Voluntary Cleanup Unit Leader, Colorado Department of Public Health and Environment (April 12, 2000).

74. VCRA APPLICATION GUIDANCE, *supra* note 7, at 3.

75. *Id.*

appropriate.[76] The applicant should also include sampling to evaluate conditions at upgradient and downgradient property boundaries.[77]

Since the CDPHE approval of a VCRA cleanup covers only current site conditions,[78] recent sampling data is usually required.[79] Groundwater data should be less than a year old.[80] However, older data on groundwater and soil contamination may be acceptable, where the sole contamination source is on upgradient property.[81]

For water sampling, the wells should indicate the direction of the water flow.[82] The applicant may use pre-existing wells and existing data if it will assist in understanding site conditions.[83] If the applicant reaches groundwater during soil excavation, the groundwater should be sampled.[84] Concerning soil contamination, the applicant must take a minimum of three samples to establish background levels.[85] The sample plan should also include a description of the soil sample method used.[86]

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76. *See id.*

77. *See id.*

78. *See infra* p. 20 and note 171.

79. VCRA APPLICATION GUIDANCE, *supra* note 7, at 3.

80. *See id.* "Ground water data which is older than one year at the time of receipt of the application normally will not be considered as indicative of current conditions." *Id.*

81. *See id.*

> [D]ata which is older than one year should be submitted if it is coupled with more recent data in order to indicate conditions with the passage of time. Exceptions may be made for soil data or in cases where the applicant only desires absolution from the responsibility of dealing with contamination from an upgradient source, as in a contaminated aquifer determination.

Id. (emphasis in the original).

82. *See id.* The applicant needs data on the direction of the groundwater flow "to verify that water quality downgradient of any sources is being monitored. The wells should also have a screened interval appropriate for the contaminant." *Id.*

83. *See id.*

84. *See id.* at 4. In addition, the applicant should sample groundwater if the groundwater "is anticipated to be in close vertical proximity to the bottom of an excavation . . . ." *Id.*

85. *See id.* at 3. "[A] minimum of three samples should be collected to account for natural constituent occurrences and inherent variability. Sample locations for background should be in areas which have not been impacted by the release of concern or any on-site activities." *Id.*

86. *See id.*

> One should sample for contaminants, which tend to group heterogeneously in the subsurface in the following manner: in fines and silts, sample the interfaces with larger grains; in clays, sample the sand lenses; in medium sands or larger grains, sample the sidewalls near the excavation floor. Lithologies containing precipitates or excess organic carbon should be sampled. To characterize a site where contaminants have been deposited in a homogeneous manner, such as air deposition, one should use a simple random sampling method to collect a suitable number of samples.

The sampling data must be attached to the environmental assessment.[87] The applicant should also include site maps (drawn to scale), boring logs, and well construction diagrams.[88]

The site assessment must analyze current and proposed future uses of the site, to determine impacts to public health and the environment.[89] "Assessment activities should determine if future activities might promote movement of a contaminant plume or pose threats to future users of the site, others downgradient, and surface and ground water quality in the future."[90] The site assessment should also discuss measures to ensure the contamination (e.g., volatile soil contamination) does not pose a hazard to future users of the property.[91] If the contamination has migrated off-site, the site assessment should address the potential impact to off-site wells, utility corridors, or other targets.[92]

B. *Is Remediation Required?*

Once the site assessment is completed, the applicant must determine whether site contamination exceeds the state standards.[93] Specifically, the applicant must identify "applicable promulgated state standards establishing acceptable concentrations of constituents in soils, surface water, or groundwater . . . ."[94] If state standards do not exist for certain constituents in soils, surface water, or groundwater, then the applicant may propose risk-based standards for those constituents, based on the applicant's current or proposed use(s) of the site.[95] Thus, risk-based cleanup standards are only available to fill in the gaps.

Colorado has state standards for protection of surface water and groundwater quality.[96] However, Colorado currently has no cleanup

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> To characterize a site with numerous discrete sources, such as mine waste piles, submission of a composite sample from each pile would be appropriate.

Id.

87. *See id.* at 4.

88. *See id.*

89. *See id.* at 7. The environmental assessment must include a "description of the human and environmental exposure to contamination at the site based upon the property's current use and any future use proposed by the property owner." COLO. REV. STAT. § 25-16-308(2)(i) (2000).

90. VCRA APPLICATION GUIDANCE, *supra* note 7, at 7.

91. *See id.*

92. *See id.*

93. *See id.* at 5.

94. COLO. REV. STAT. § 25-16-304(2)(c) (2000).

95. *See id.*

96. VOLUNTARY CLEANUP ROADMAP, *supra* note 7, at 12. See Basic Standards and Methodologies for Surface Water, 5 COLO. CODE REGS. § 1002-31 (2000); Basic Standards for Groundwater, 5 COLO. CODE REGS. § 1002-41 (2000).

standards for soil contamination.[97] Therefore, VCRA cleanups can utilize risk-based cleanup standards for soil contamination.[98] The CDPHE encourages a "simplified approach" to developing risk-based standards.[99] "For most sites, a narrative description of the exposure pathways (and lack of completed pathways) is sufficient."[100] In addition, a risk calcula-

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97. VOLUNTARY CLEANUP ROADMAP, *supra* note 7, at 12.

98. *See id.*

99. *See id.*

100. *Id.* "For example, if the land use (a paved parking lot) will interrupt exposure to contaminated soil, then as long as that soil is not a source of ground water contamination[,] an acceptable level of risk has been demonstrated." Id. The narrative description would include a summary of all site-specific information, contaminant levels, and the likelihood of impacting targets or completing exposure pathways. VCRA APPLICATION GUIDANCE, supra note 7, at 5-6. The CDPHE lists the following factors which the applicant should consider, as part of the risk assessment:

> 1. **Ground [W]ater & Surface Water Usage**—A water well search listing the locations of any wells located on the site or on areas within a one-half mile radius of the site and a description of the use of those wells should always be provided. An explanation is needed for the current and proposed use of on-site ground water. A similar summary of local usage of surface water should be prepared.
>
> 2. **Vapor Migration**—If the contaminant is of a volatile and/or flammable nature[,] the application should indicate how the proposed land use will not present a hazardous situation or promote the migration of already existing contamination. Examples of exposure might be construction of a building basement where a volatile contaminant exists in close vertical proximity and may infiltrate the foundation.
>
> 3. **Geology & Hydrogeology**—An evaluation of the ability of the site's geology and hydrogeology to immobilize contaminants or minimize migration may be warranted to determine the extent of the overall cleanup efforts. . . . If actions of the applicant might promote migration of existing contamination along preferred pathways (such as newly-installed utilities)[,] measures to prevent this occurrence should be mentioned in the overall evaluation of risk.
>
> 4. **Ground Water Monitoring**—A proposal to monitor the ground water might be utilized as a means to ensure that the proposed actions do not present an unacceptable risk. The intent of any ground water monitoring program, where the site is the source of the contamination, should be to verify that the plume has stabilized and will diminish with time or that the current state does not pose a risk to human health and the environment. . . .
>
> 5. **Other Exposure Pathways**—Assessment of other exposure pathways may be appropriate on a site-specific basis.
>
> 6. **Proposed Land Use**—Declaration of a proposed land use is necessary in all applications as the applicant's evaluation of the risk is contingent upon this parameter . . . .

Id.

tion (such as one in one million or 10^{-6}) is only needed when there is a completed pathway.[101]

The applicant may be able to leave the contamination on-site if it is not a threat to public health or the environment, given the proposed land use.[102] For example, the applicant might propose "breaking the completed pathways (i.e., capping the contamination)"[103] as part of the VCRA submittal.[104]

The applicant does not have to take remedial action if the contamination on-site is below applicable state standards or risk-based standards, or if the contamination originates from nearby property, for which another party is responsible.[105] In these two cases, the applicant files a written petition with CDPHE requesting a "no action" determination.[106]

C. *Petition for a "No Action" Determination*

Under the VCRA provisions, the CDPHE must approve a petition for a "no action" determination ("no action" petition) under the following conditions:

> (I) The environmental assessment . . . indicates the existence of contamination which does not exceed applicable promulgated state standards or contamination which does not pose an unacceptable risk to human health and the environment; or
>
> (II) The department finds that contamination or a release or threatened release of a hazardous substance or petroleum product originates from a source on adjacent or nearby real property if a person or entity responsible for such a source of contamination is or will be taking necessary action, if any, to address the contamination.[107]

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101. VOLUNTARY CLEANUP ROADMAP, *supra* note 7, at 12. Under the VCRA, the goal is to approach a 1 in 1,000,000 (10^{-6}) additional risk, "based on the actual exposure scenario for the anticipated land use. Potential exposure or potential land uses are not considered." *Id.* A full baseline risk assessment is only required for complex sites. *See id.* A site-specific risk assessment may be required "if there are receptors (completed pathways) and the applicant is proposing less than complete removal of the contamination." VCRA APPLICATION GUIDANCE, *supra* note 7, at 5.

102. VCRA APPLICATION GUIDANCE, *supra* note 7, at 6.

103. *Id.*

104. *See id.* at 6-7.

105. These are the two situations where the CDPHE will approve a "no action" determination. COLO. REV. STAT. § 25-16-307(2)(a) (2000).

106. COLO. REV. STAT. § 25-16-307 (2000).

107. COLO. REV. STAT. § 25-16-307(2)(a) (2000).

When the contamination source is on-site, the CDPHE must determine if the environmental assessment supports a finding that "no action is necessary to protect public health and the environment, given the proposed land use."[108]

The situation is more complicated when an off-site upgradient source causes the contamination. If the "no action" petition only documents that an upgradient source impacts the site (but does not include a full site assessment), the CDPHE cannot approve a "no action" determination.[109] However, the CDPHE could write a letter absolving the applicant from cleanup liability related to the upgradient source.[110] A full site assessment is required to support a "no action" determination, since the CDPHE approval must include a finding that the site itself does not pose a risk to public health or the environment.[111] When contaminated groundwater has migrated onto the site, the site assessment must include information about groundwater direction flow and contaminant levels.[112] The likelihood of a change in groundwater direction flow must also be addressed.[113] Finally, the site assessment should discuss whether the current or proposed future uses of the site "promote movement of the plume or cause a threat to future users of the site or others in downgradient locations."[114]

A "no action" determination is a conditional finding by CDPHE that no further remediation is required.[115] In its written notification to the applicant, the CDPHE must provide the basis for its "no action" determi-

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108. VCRA APPLICATION GUIDANCE, *supra* note 7, at 7.

109. *See id.* at 8.

110. *See id.* In this event, the site assessment could be more limited, "requiring only a demonstration that the applicant's site is within the current hydrologic bounds of the other's contamination." *Id.*

111. *See id.*

> The applicant must demonstrate that they are being impacted by an off-site source and must fully characterize their property, to insure that there are no additional contaminant sources. This is necessary because the statutory language included in the State's approval letter says that the site in question does not pose a risk. Without a site characterization[,] the state cannot make that conclusion.

Id. For the required statutory language used in a "no action" determination, *see infra* note 116.

112. VCRA APPLICATION GUIDANCE, *supra* note 7, at 8.

> [T]he assessment should [also] . . . document a contaminant concentration gradient. If possible, document usage of the contaminant found on the site in a near upgradient location. Include groundwater samples as well as soil samples taken from the same or multiple borings which verifies that the contaminant has been transported via the ground water and that the on-site soil is not a source.

Id.

113. *See id.*

114. *Id.*

115. COLO. REV. STAT. § 25-16-307(2) (2000).

nation.[116] If the CDPHE disapproves the "no action" petition, the CDPHE notifies the applicant in writing of the reasons for the disapproval.[117] If the applicant failed to provide required information, the CDPHE's written notification must identify the specific information omitted.[118]

D. *Voluntary Cleanup Plan*

When the contamination on-site exceeds applicable state standards or risk-based criteria, the applicant prepares a voluntary cleanup plan (VCP).[119] The VCP consists of three parts: (1) the environmental assessment; (2) the proposal for remediation; and (3) a description of cleanup standards for the hazardous constituents found at the site.[120] The environmental assessment requirements and cleanup standards have been previously discussed.[121]

The proposal for remediation addresses "any contamination or condition which has or could lead to a release which poses an unacceptable risk to human health or the environment, considering the present and any differing proposed future use of the property . . . ."[122] Under the VCRA, all remediation proposals must be based on *actual risk* to human health and the environment *currently posed* by contaminants on-site.[123] The remediation proposal must take into account the following factors: (1) present and proposed uses of the site;[124] (2) ability of contaminants to migrate which might result in violation of state standards or risk-based criteria;[125] (3) economic and technical feasibility;[126] and (4) reliability.[127]

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116. COLO. REV. STAT. § 25-16-307(2)(b) (2000). The written notification must also include the following statement:

> Based upon the information provided by [insert name(s) of property owner(s)] concerning property located at [insert address], it is the opinion of the Colorado [D]epartment of [P]ublic [H]ealth and [E]nvironment that no further action is required to assure that this property, when used for the purposes identified in the no action petition, is protective of existing and proposed uses and does not pose an unacceptable risk to human health or the environment at the site.

Id.

117. COLO. REV. STAT. § 25-16-307(4) (2000).

118. *See id.*

119. VCRA APPLICATION GUIDANCE, *supra* note 7, at 7. The CDPHE guidance document refers to the VCP as the remediation plan. *See id.*

120. COLO. REV. STAT. § 25-16-304(2) (2000).

121. *See supra* pp. 11-15.

122. COLO. REV. STAT. § 25-16-304(2)(b) (2000).

123. COLO. REV. STAT. § 25-16-305(1) (2000) (emphasis added).

124. COLO. REV. STAT. § 25-16-305(1)(a) (2000).

125. COLO. REV. STAT. § 25-16-305(1)(b) (2000).

126. COLO. REV. STAT. § 25-16-305(1)(c) (2000).

127. *See id.*

The remediation proposal should also include a schedule for cleaning up and monitoring the site.[128]

The CDPHE will approve the VCP if the following criteria are met:

> (I) [The VCP a]ttain[s] a degree of clean-up and control of hazardous substances or petroleum products, or both, that complies with all promulgated applicable state requirements, regulations, criteria, or standards; [or]
>
> (II) For constituents not governed by subparagraph (I) . . . [the VCP] reduce[s] concentrations such that the property does not present an unacceptable risk to human health or the environment based upon the property's current use and any future uses proposed by the property owner.[129]

The CDPHE must state the basis for its VCP approval in writing to the applicant.[130] If the CDPHE disapproves the VCP application, the CDPHE's notification includes the reasons for the denial and specifies what information, if any, is missing from the application.[131]

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128. COLO. REV. STAT. § 25-16-304(2)(b) (2000). Note that a VCP remediation does not exempt the property owner from other regulatory obligations "including any requirement to obtain permits or approvals for work performed under a voluntary clean-up plan." COLO. REV. STAT. § 25-16-309(1) (2000).

129. COLO. REV. STAT. § 25-16-306(1)(b) (2000).

130. COLO. REV. STAT. § 25-16-306(2) (2000). The CDPHE's written notification must also include the following statement:

> Based upon the information provided by [insert name(s) of property owner(s)] concerning property located at [insert address], it is the opinion of the Colorado Department of Public Health and Environment that upon completion of the voluntary clean-up plan no further action is required to assure that this property, when used for the purposes identified in the voluntary clean-up plan, is protective of existing and proposed uses and does not pose an unacceptable risk to human health or the environment at the site.

Id.

131. COLO. REV. STAT. § 25-16-306(1)(c) (2000).

III. CDPHE REVIEW OF VCRA SUBMITTALS AND RELIEF FROM FUTURE REMEDIATION REQUIREMENTS.

A. *Time and Cost of Review*

The CDPHE must act on a VCRA submittal (either a VCP or "no action" petition) within forty-five days or it is deemed approved.[132] The CDPHE conducts its review based on the documents submitted by the applicant, and other information readily available to the department.[133] In addition, the CDPHE staff has a right to access the contaminated property upon reasonable notice to the property owner.[134]

The applicant must pay a filing fee to cover all direct and indirect costs associated with CDPHE review of VCRA submittals.[135] The CDPHE will determine the amount of the filing fee, which by statute cannot exceed $2,000.[136] Within 30 days of approving or disapproving the VCRA submittal, the CDPHE must send a bill to the applicant indicating the total review cost (based on published hourly rates).[137] In any event, the review cost cannot exceed the maximum filing fee amount of $2,000.[138] All monies paid under the VCRA program go to the state hazardous substance trust fund.[139]

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132. COLO. REV. STAT. § 25-16-307(1) (2000) ("no action" petition); COLO. REV. STAT. § 25-16-306(1)(a) (2000) (VCP). However, if the CDPHE has already received eight VCRA submittals in the calendar month, the CDPHE may start the 45-day review period for the next VCRA submittal on the first day of the following month. COLO. REV. STAT. § 25-16-306(1)(a) (2000). The CDPHE must notify the applicant of the delay in the review period. See id. The property owner and the CDPHE can also agree to an extension beyond the 45-day period. COLO. REV. STAT. § 25-16-307(1) (2000) ("no action" petitions); COLO. REV. STAT. § 25-16-306(1)(a) (2000) (VCP).

133. COLO. REV. STAT. § 25-16-307(1) (2000) ("no action" petitions); COLO. REV. STAT. § 25-16-306(1)(a) (2000) (VCP).

134. COLO. REV. STAT. § 25-16-303(5) (2000).

135. COLO. REV. STAT. § 25-16-303(4)(a) (2000).

136. *See id.*

137. COLO. REV. STAT. § 25-16-303(4)(b) (2000). "The department shall establish and publish hourly rates for review charges performed by the department in connection with applications for approval of voluntary clean-up plans and petitions for no action . . . ." *Id.* If the review cost is lower than the initial filing fee, the CDPHE will refund the difference. *See id.* "The department's charges shall be billed against the [initial] application fee . . . ." *Id.*

138. *See id.*

139. COLO. REV. STAT. § 25-16-303(4)(c) (2000). This is the hazardous substance trust fund created under Colorado Revised Statutes section 25-16-104.6(1). *See id.* "Moneys collected . . . shall be subject to annual appropriation by the general assembly only to defray the direct and indirect costs of the department in processing voluntary clean-up plans and petitions for no action determination . . . ." *Id.*

B. *CDPHE Review Process*

Upon receipt of a "no action" petition or a VCP, the CDPHE conducts a two-part screening process.[140] The CDPHE first determines if another environmental program already covers the site.[141] If so, the site is not eligible for VCRA cleanup.[142] If the site is eligible for VCRA cleanup, then CDPHE must determine EPA's interest in the site.[143]

First, the CDPHE will check the EPA's CERCLIS database.[144] If all or a portion of the site is listed in the CERCLIS database, the CDPHE will request that the EPA suspend additional CERCLA cleanup actions[145] and allow the VCRA to remediate the site.[146] If the site is already subject to an EPA CERCLA Administrative Order,[147] the EPA will not suspend its actions regarding site remediation.[148]

For a site on the EPA CERCLIS database that is not subject to an EPA CERCLA Administrative Order, the EPA decides whether to accept

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140. VOLUNTARY CLEANUP ROADMAP: MEMORANDUM OF AGREEMENT BETWEEN THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND THE ENVIRONMENT AND THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION VIII APP. 2 (undated) [hereinafter MEMORANDUM OF AGREEMENT APPENDIX].

141. *See id.* For an extensive discussion of VCRA exclusions, *see supra* pp. 3-8.

142. COLO. REV. STAT. § 25-16-303(3)(b) (2000). *See also* MEMORANDUM OF AGREEMENT APPENDIX, *supra* note 140, at 3.

143. Memorandum of Agreement Appendix, *supra* note 140, at 3.

144. *See id.*

> CERCLIS is . . . EPA's comprehensive database and data management system that inventories and tracks releases addressed or needing to be addressed by the Superfund program. CERCLIS contains the official inventory of CERCLA sites and supports EPA's site planning and tracking functions. . . . Inclusion of a specific site or area in the CERCLIS data base does not represent a determination of any party's liability, nor does it represent a finding that any response action is necessary.

40 C.F.R. § 300.5 (2000).

145. For a description of EPA's CERCLA authority, see *supra* p. 4 and notes 20-21.

146. MEMORANDUM OF AGREEMENT APPENDIX, *supra* note 140, at 4; Telephone Interview with Dan Scheppers, Superfund and Voluntary Cleanup Unit Leader, Colorado Department of Public Health and Environment (April 12, 2000) (As of April 2000, the EPA had supported all VCRA cleanups submitted under this procedure).

147. These EPA Administrative Orders are commonly known as "Section 106 Administrative Orders," based on section 106 of CERCLA. 42 U.S.C. § 9606 (1994). *See also,* Exec. Order No. 12,580, 3 C.F.R. 193 (1987), *reprinted as amended in* 42 U.S.C. § 9615 (1995). In 1987, President Reagan issued Executive Order 12580 which delegated authority under CERCLA Section 106 to the EPA Administrator and the U.S. Coast Guard. Executive Order 12580 authorized the EPA to issue orders or seek judicial relief to require clean up of hazardous substance releases under section 106 of CERCLA. In 1996, President Clinton expanded this delegation of authority, so that other federal agencies may issue section 106 orders under CERCLA. *See* Exec. Order No. 13,016, 3 C.F.R. 214 (1996), *reprinted in* 42 U.S.C. § 9615 (1995).

148. MEMORANDUM OF AGREEMENT APPENDIX, *supra* note 140, at 3.

VCRA cleanup in lieu of further EPA CERCLA actions.[149] The CDPHE may approve the VCP or "no action" petition, even if the EPA refuses to defer to the VCRA process.[150] However, the applicant has less incentive to proceed with the VCRA cleanup if the EPA retains the option of imposing additional remediation requirements on the site. If the EPA suspends further action, the CDPHE agrees to keep the EPA informed of progress on the site.[151]

If the site is not on the EPA CERCLIS database, the CDPHE must determine if the site is of "NPL caliber."[152] A site of "NPL caliber" is a site "where significant human exposure to hazardous substances has been documented or where sensitive environments have become contaminated."[153] If the CDPHE determines the site is of "NPL caliber," the

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149. *See id.* at 4.

150. *See id.* at 4-5.

151. *See id.* ("The CDPHE will notify EPA of the owner's completion or failure to complete the remedial action." Field conditions or new information may trigger a modification of the approved VCP. The property owner must inform the CDPHE of any proposed deviations from the approved VCP and the CDPHE determines if a plan modification is required or if the property owner must submit a revised application based on the new site information). *See id.* at 7.

152. *See id.* at 4-5.

153. *Id.* (The following non-exclusive list of site characteristics may indicate an "NPL caliber" site:

> [1] Public drinking water supplies or private wells are contaminated with a hazardous substance above the concentration listed in the Risk-Based Concentration Table for tap water, January 1995;
>
> [2] Soils on school, day care center, or residential properties are contaminated by a hazardous substance significantly above background levels and are above concentrations for soil ingestion (residential) listed in the Risk-Based Concentration Table, January 1995;
>
> [3] Soils on school, day care center, or residential properties are contaminated by lead concentrations significantly above background levels and the lead soil concentration is above 400 ppm;
>
> [4] A hazardous substance is detected in an off-site air release in a populated area and the release is above the concentration listed in the Risk-Based Concentration Table for ambient air;
>
> [5] A highly toxic hazardous substance known to persist and bioaccumulate in the environment (e.g., PCB[s], mercury, dioxin, PAHs), is discharged into surface waters;
>
> [6] A highly toxic hazardous substance known to be mobile in the subsurface (e.g., vinyl chloride; trichloroethylene, acetone, phenol, cadmium, mercury), is discharged to significant useable aquifers; [and]
>
> [7] Sensitive environments are contaminated with a hazardous substance significantly above background levels and water quality standards where appropriate.

Id. If releases from the applicant's property have contributed to off-site contamination, the EPA considers the sources of hazardous substance contamination and the areas where contamination has migrated, to be part of the "NPL caliber" site). *See id.*

CDPHE notifies the applicant of this determination.[154] The EPA will only be notified regarding the site if both the CDPHE and applicant agree to do so.[155] In that event, the VCP is sent to EPA for its review and concurrence.[156] The EPA will provide its comments on the VCP expeditiously.[157]

If the CDPHE and the applicant jointly decide not to submit the VCP to the EPA, the EPA's pledge of forbearance does not apply.[158] The CDPHE may still approve the VCP pursuant to the VCRA.[159] In addition, the applicant is not protected from EPA CERCLA actions regarding the property in the future.

Within 30 days of CDPHE approval, the applicant must provide "adequate public notice" of the VCP or the "no action" determination.[160] While the VCRA contains no public participation requirements, the EPA included this public notice requirement as a condition of their deferral to VCRA cleanups.[161] "Adequate public notice" depends on the specific site.[162] However, public notice "should include publication of the availability of the cleanup plan in a local newspaper or posting of any public notice plan required by [a] building permit or zoning ordinance procedures."[163] The CDPHE may request the applicant hold a public meeting on the VCRA cleanup, if the site is large or there is public interest in the site cleanup.[164]

The VCP cleanup process is complete when the applicant sends the CDPHE a certification by a qualified environmental professional that the

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154. *See id.*

155. *See id.*; Telephone Interview with Dan Scheppers, Superfund and Voluntary Cleanup Unit Leader, Colorado Department of Public Health and Environment (April 12, 2000) (As of April 2000, there have been very few VCRA sites which have been of "NPL caliber." However, in those few instances, the applicant wanted EPA participation to obtain EPA assurances of no future remediation requirements).

156. MEMORANDUM OF AGREEMENT APPENDIX, *supra* note 140, at 5.

157. *See id.*

158. *See id.*

159. *See id.*

160. *See id.* at 6.

161. *See id.* (All VCRA files are public records, and are available for public review upon request. The CDPHE notifies local health departments "to see if there is any knowledge of or interest in the site, and will make a copy of the application available for local review if requested." The Memorandum of Agreement recognizes that local governments may have additional public review procedures for redevelopment actions that might be applicable to these sites).

162. *See id.*

163. *Id.*

164. *See id.* The Memorandum of Agreement assumes there is public interest in a site if the site has received publicity or is in close proximity to a Superfund site.

VCP has been fully implemented.[165] However, after submitting this certification, the applicant must take one more step to obtain continued EPA forbearance. The applicant must file a "no action" petition accompanied by a completion report, to the CDPHE.[166] The completion report "describes how the applicant has complied with the initial or modified cleanup plan as approved by CDPHE."[167] The EPA will remove the site from its CERCLIS database,[168] following a CDPHE "no action" determination.[169]

C. *Relief from Future State and Federal Cleanup Requirements*

Once the VCRA process is complete, no further remediation action is required.[170] However, this is contingent on no change in (1) property conditions,[171] (2) state standards,[172] or (3) proposed property uses[173] from the time of the VCRA submittal.[174] The property owner must understand the limits to CDPHE forbearance under the VCRA. While the CDPHE

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165. COLO. REV. STAT. § 25-16-306(5) (2000). The property owner must submit this certification within 45 days of completing the VCP remediation.

166. MEMORANDUM OF AGREEMENT APPENDIX, *supra* note 140, at 7.

167. *Id.* If the VCP involved excavation of soil contamination, the following sampling results should be included in the completion report: "One confirmation sample per 500 ft^2 as measured at the base of the excavation OR two confirmatory samples; whichever method results in the collection of the most samples. In addition, one composite sample from each wall of the excavation is necessary." *Id.* at 8 (emphasis in the original). Other types of sampling may be required, based on the size or configuration of the excavation. *See id.* The completion report must also include an explanation of sampling method(s) and the depth of samples collected. *See id.* If the VCP called for in-situ soil remediation, soil borings should be taken, and the results included in the completion report. *See id.* at 9. At a minimum, two soil borings should be taken, and larger sites may require a boring per 10,000 ft^2. *See id.* ("The soil sample submitted for laboratory analysis (from each boring) would be that sample with the highest field screening reading or if the field screening is non-detect[,] then submit the soil sample located at the ground water interface"). With regards to ground water remediation, the completion report must describe the monitoring system. *See id.* The monitoring must provide information on two key questions: "1. Has the ground water which was most severely impacted by the source had a chance to flow past the POC [Point Of Compliance] during the monitoring period? [and] 2. If there is contamination remaining, is it mobile at levels that it may present a risk in the future?" *Id.* he completion report should verify that the specific goals set forth in the VCP have been met. *See id.*

168. MEMORANDUM OF AGREEMENT APPENDIX, *supra* note 140, at 2.

169. *See id.* The EPA's forbearance is conditioned upon actual CDPHE review of the "no action" petition. In other words, the EPA will not defer to the CDPHE decision if the "no action" petition is deemed approved after 45 days due to CDPHE inaction. *See id.*

170. COLO. REV. STAT. § 25-16-306(2) (2000) (VCP); COLO. REV. STAT. § 25-16-307(2)(b) (2000) ("no action" determination). *See supra* notes 116 and 130 for the CDPHE written certifications indicating no further remediation required upon issuance of a "no action" determination or VCP completion, respectively.

171. COLO. REV. STAT. § 25-16-307(2)(c)(2000).

172. *See id.*

173. COLO. REV. STAT. § 25-16-307(2)(b)(2000).

174. COLO. REV. STAT. § 25-16-307(2)(c) (2000) ("no action" determination); COLO. REV. STAT. § 25-16-306(1)(d) (2000) (VCP).

cannot enforce the VCP against the property owner,[175] the state can still take enforcement action under other environmental regulations.[176] If the CDPHE assesses a penalty against the property owner as part of an enforcement action, the state cannot use information provided by the property owner during the VCRA process in the penalty assessment.[177] The VCRA requires the state to consider the voluntary disclosure of information as a mitigating factor in reducing or eliminating the penalty.[178]

The EPA's deference to VCRA cleanups is defined not by the VCRA, but by the terms of the CDPHE-EPA Region VIII Memorandum of Agreement.[179] Under the Memorandum of Agreement, the EPA agrees not to plan or otherwise conduct any CERCLA remediation actions regarding a site, once a VCRA application to clean up the site is filed with the CDPHE.[180] The EPA's forbearance in initiating CERCLA actions depends on actual CDPHE review and approval of the VCP application or "no action" petition.[181] The EPA reserves the right to take CERCLA actions regarding a site if the VCP application or "no action" petition is deemed approved due to CDPHE's failure to act within 45 days.[182] In addition, the EPA reserves the right to take CERCLA actions if the property owner and the CDPHE jointly decide not to obtain an EPA review of the VCP application for a "NPL caliber" site.[183]

Even if the procedural requirements for EPA's deferral to VCRA are met, the EPA retains the right to take CERCLA actions against VCRA sites, in the following situations: (1) "the site is an NPL caliber site or the site poses an imminent and substantial endangerment to public health, welfare, or the environment and exceptional circumstances warrant EPA [CERCLA] action";[184] (2) the CDPHE's approval of the cleanup plan becomes void;[185] or (3) the applicant fails to complete or materially comply with the cleanup plan as approved by the CDPHE.[186] In addition, if

175. COLO. REV. STAT. § 25-16-310(1) (2000).
176. *See id.*
177. COLO. REV. STAT. § 25-16-310(2) (2000).
178. *See id.*
179. MEMORANDUM OF AGREEMENT, *supra* note 13.
180. *See id.* at 1.
181. *See id.* at 2.
182. *See id.*
183. MEMORANDUM OF AGREEMENT APPENDIX, *supra* note 140, at 5. *See also supra* p. 18, for a discussion on CDPHE's options with regards to a "NPL caliber" site.
184. MEMORANDUM OF AGREEMENT, *supra* note 13, at 1.
185. *See id.*
186. *See id.*

the site is already subject to an EPA CERCLA Administrative Order, the EPA will not concur in the VCRA cleanup.[187]

Several situations will void the CDPHE approval. The applicant's failure to complete or materially comply with the VCP will void the CDPHE approval.[188] The applicant's submission of materially misleading information in the VCP application or the "no action" petition will void the CDPHE approval.[189] Discovery of significantly new information about the site will void the CDPHE approval.[190] The CDPHE approval of the VCP will "lapse" if the applicant fails to timely remediate the contaminated property.[191] Specifically, remediation must begin within 12 months of the CDPHE approval, and reach completion within 24 months of the CDPHE approval.[192] If the CDPHE's approval is voided for any reason, the EPA's agreement to defer to the VCRA cleanup is nullified.[193]

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187. MEMORANDUM OF AGREEMENT APPENDIX, *supra* note 140, at 3. The Memorandum of Agreement also recognizes EPA's statutory duty under CERCLA to perform a preliminary assessment on a site involving a suspected release of hazardous substances, when requested by a citizen's petition. *See also id.* at 2. Section 105(d) of CERCLA states:

> Any person who is, or may be affected by a release or threatened release of a hazardous substance . . . may petition the President to conduct a preliminary assessment of the hazards to public health and the environment which are associated with such release or threatened release. If the President has not previously conducted a preliminary assessment of such release, the President shall, with 12 months after the receipt of any such petition, complete such assessment or provide an explanation of why the assessment is not appropriate.

42 U.S.C. § 9605(d) (1999). This duty was delegated to EPA in 1987. Exec. Order No. 12,580, 3 C.F.R. 193 (1987), *reprinted as amended in* 42 U.S.C. § 9615 (1995). *See also supra* note 147. If the release or threatened release poses a threat to human health and the environment, EPA must evaluate the contaminated site under the hazard ranking system that is used to determine listing on the National Priorities List (NPL). 42 U.S.C. § 9605(d) (1994). *See supra* pp. 4-5 and notes 20-25, on the process for placing a site on the NPL. Contaminated sites that are proposed for listing or are listed on the NPL are not eligible for VCRA cleanups. *See supra* p. 4 and note 15. The EPA must respond within 12 months to a citizen's petition alleging a release or threatened release of a hazardous substance, by either conducting a preliminary assessment of the suspected release or providing an explanation of why an assessment is not appropriate. 42 U.S.C. § 9605(d) (1994).

188. MEMORANDUM OF AGREEMENT, *supra* note 13, at 2.

189. *See id.*

190. *See id.*

191. COLO. REV. STAT. § 25-16-306(4)(a) (2000).

192. *See id.* The CDPHE may grant an extension of the deadline for completion of VCP remediation. *See id.* If the property owner fails to complete remediation within a 24-month period and does not get an extension, the property owner can file a petition for reapplication to the CDPHE. COLO. REV. STAT. § 25-16-306(4)(b) (2000). The reapplication petition must include a written certification by a qualified environmental professional "that the conditions on the subject real property are substantially similar to those that existed at the time of the original approval." *Id.* The CDPHE must complete its review of the reapplication petition within 30 days. COLO. REV. STAT. § 25-16-306(4)(c) (2000). However, if the condition on the site has substantially changed since the initial VCP approval, then the reapplication petition will be treated as a new application. *See id.*

193. MEMORANDUM OF AGREEMENT, *supra* note 13, at 1.

IV. CONCLUSION –THE FUTURE OF BROWNFIELDS REMEDIATION IN COLORADO

In 1999, Colorado reaffirmed its commitment to brownfields remediation by extending the VCRA indefinitely.[194] Over 200 VCRA applications have been filed with the CDPHE since the program's inception in 1994.[195] The CDPHE has issued over 90 "no action" determinations, which is the "go-ahead" for redevelopment.[196] Colorado is also encouraging brownfields remediation through the Colorado Brownfields Revolving Loan Fund pilot program, which provides low interest loans to private businesses in the Denver area.[197] Only sites with VCRA cleanup plans are eligible for loans under this program.[198] These loans are only for cleanup activities.[199] Pre-cleanup activities such as site assessment and site characterization are not eligible for funding under the Brownfields Revolving Loan Fund.[200]

Remediation of brownfields received strong support from Governor Owens, as part of his "Smart Growth: Colorado's Future" initiative announced in November 1999.

> Colorado is currently "*the* place to live," making some growth inevitable. So it is important that we partner with local governments to take advantage of areas already developed but not necessarily fully utilized, before looking to develop pristine land. Today I am announcing that my Smart Growth plan contains state sales tax and income tax relief for those who rehabilitate and renovate brownfields and other land in our cities and towns. Land recycling has the added benefit of encouraging growth where supporting infrastructure such

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194. On April 9, 1999, Governor Owens signed into law House Bill 99-1213, which repealed section 25-16-311, the July 1, 1999 sunset provision for the Voluntary Cleanup Redevelopment Act. 1999 Colo. Legis. Serv. 139 (West).

195. HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION, COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT: *Voluntary Cleanup and Redevelopment Act Application Tracking Report* (Mar. 21, 2000) <http://www.cdphe.state.co.us/hm/rpvclist.asp>. The CDPHE Hazardous Materials and Waste Management Division updates their Voluntary Cleanup and Redevelopment Act Application Tracking Report regularly, and posts it on their web page.

196. *See id.*

197. HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION, COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, *Fact Sheet Colorado Brownfields Cleanup Revolving Loan Fund* (1999), p. 1 <http://www.cdphe.state.co.us/hm/bfprogguide.pdf> ("At the present time, only sites located within the Denver metropolitan area are eligible for this loan program. . . . The money used for making loans originated as a grant from the Environmental Protection Agency's Brownfields Program. . . . The funds are made available to borrowers a[t] below market interest rate loans").

198. *See id.* at 2.

199. *See id.* at 2-3.

200. *See id.*

> as roads and sewers already exist, thus lessening the need to build more and more infrastructure. Developing and redeveloping land within our current metro areas also means less commuting and, in turn, less traffic on our roads and highways.[201]

More than a million people are expected to move to Colorado in the next 15 years, which will increase development pressures on open spaces, wildlife habitat, farms, and ranches.[202] Aggressive remediation of brownfields will be critical in Colorado's struggle to accommodate growth and still preserve Colorado's heritage and quality of life.

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201. Governor Bill Owens, Announcement of Smart Growth: Colorado's Future 3, Draft Remarks at Denver, CO (November 29, 1999) (emphasis in the original). *See also,* 26 U.S.C. § 198 (1999) (The federal government has already implemented tax incentives for brownfields remediation, as part of the Taxpayer Relief Act of 1997. Under section 198, remediation costs for properties in certain target areas are fully deductible business expenses in the year in which the costs are incurred or paid. In other words, the remediation costs do not have to be capitalized). 26 U.S.C.A. § 198(h) (West Supp. 2000) (This federal tax incentive is in effect until Dec. 31, 2001).

202. Governor Bill Owens, Announcement of Smart Growth: Colorado's Future 3, Draft Remarks at Denver, CO (November 29, 1999).