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UNITED STATES COURT OF APPEALS

TENTH CIRCUIT

STATE OF NEW MEXICO; STATE
OF NEW MEXICO *ex rel.* PATRICIA A.
MADRID, ATTORNEY GENERAL
OF THE STATE OF NEW MEXICO,

Plaintiffs-Appellants,

v.

No. 04-2191

GENERAL ELECTRIC COMPANY, a New
York corporation; ACF INDUSTRIES, INC.,
a New York corporation,

Defendants-Appellees.

STATES OF COLORADO, KENTUCKY,
MAINE, MONTANA, NEVADA, NEW
JERSEY, OHIO, OKLAHOMA, OREGON,
SOUTH CAROLINA, UTAH, WISCONSIN,
AND WYOMING,

Amici Curiae in support
of Plaintiffs-Appellants,

and

AMERICAN CHEMISTRY
COUNCIL; AMERICAN PETROLEUM
INSTITUTE; NATIONAL MINING
ASSOCIATION; CHAMBER OF
COMMERCE OF THE UNITED STATES
OF AMERICA; NATIONAL ASSOCIATION
OF MANUFACTURERS;
UNITED STATES COUNCIL
FOR INTERNATIONAL BUSINESS;
INDEPENDENT PETROLEUM
ASSOCIATION OF AMERICA;

NATIONAL PETROCHEMICAL
& REFINERS ASSOCIATION; RUBBER
MANUFACTURERS ASSOCIATION;
AMERICAN GAS ASSOCIATION,

Amici Curiae in support
of Defendants-Appellees.

**APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO
(D.C. Nos. CIV-99-1118 BSJ/KBM; CIV-99-1254 BSJ/ACT)**

James D. Oliver, Special Assistant Attorney General (Caleb Stegall, with him on the briefs), of Foulston Siefkin, LLP, Overland Park, Kansas, for Plaintiffs-Appellants.

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John W. Suthers, Interim Attorney General of Colorado, and Victoria L. Peters, Senior Assistant Attorney General, Natural Resources & Environment Section, State of Colorado, Denver, Colorado, filed an Amicus Curiae Brief in Support of Plaintiffs-Appellants. Michael R. Thorp of Heller Ehrman LLP, Seattle, Washington, filed an Amicus Curiae Brief in Support of Defendants-Appellees.

Before, **McCONNELL**, **ANDERSON**, and **BALDOCK**, Circuit Judges.

BALDOCK, Circuit Judge.

This is a case in which the Attorney General for the State of New Mexico (AG) seeks

unrestricted money damages exclusively under state law for groundwater contamination in Albuquerque's South Valley. The district court granted summary judgment to Defendants General Electric (GE) and ACF Industries (ACF) because the AG "failed to raise genuine issues of material fact on the essential elements of injury and damages." New Mexico v. General Elec. Co., 322 F. Supp. 2d 1237, 1271 (D.N.M. 2004). We exercise jurisdiction under 28 U.S.C. § 1291, and affirm in part and dismiss in part.

I.

Because federal law, namely CERCLA, impacts the AG's damage claim in a myriad of ways, we first trace the course of federally-mandated remedial efforts over the past two decades to clean up the contamination.¹ The South Valley is located in a largely industrial area east of the Rio Grande River and west of the Albuquerque International Sunport, near the intersection of Broadway and Woodward Avenues.² The contaminated site encompasses approximately one square mile. A residential area with around 600 residents lies just north of the site. The contamination affects the city's San Jose well field, one of twenty-five well fields serving the city. The property from which the chemical contamination involved in this case originated is

¹ The official title of CERCLA, also known as Superfund, is the Comprehensive Environmental Response, Compensation, and Liability Act, Pub. L. No. 96-510, 94 Stat. 2767 (1980), as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613 (1986) (codified at 42 U.S.C. §§ 9601-9675). The core of the CERCLA cleanup program is the National Contingency Plan, 40 C.F.R. Part 300, which establishes response procedures. See United States v. City and County of Denver, 100 F.3d 1509, 1511 (10th Cir. 1996). The Environmental Protection Agency is the delegatee of the Presidents' authority under CERCLA. See 42 U.S.C. § 9615.

² The South Valley sits atop the Middle Rio Grande Underground Water Basin. The basin, which contains a series of interconnected aquifers, underlies New Mexico's Rio Grande River Valley, extending approximately 100 miles south from near Los Alamos to Elephant Butte Reservoir. The basin contains approximately 1.2 billion acre feet of groundwater and underlies a surface area of about 1.5 million acres.

located on the western portion of the site. In 1951, the Atomic Energy Commission procured the property, and, through Defendant ACF, engaged in production activities related to the manufacture of nuclear weapons components. In 1967, the United States Air Force (USAF) converted the facility into an aircraft engine parts manufacturing plant. For the next sixteen years, Defendant GE operated Plant 83, as it is commonly known, under a series of contracts with the USAF. In 1983, GE purchased Plant 83 and operates it still today.

A.

The city first suspected groundwater contamination in the South Valley in 1978 when irregular tastes and odors appeared in water from private wells near the area's industrial facilities. Subsequent sampling revealed certain volatile organic compounds (VOCs) harmful to health and the environment in the area's municipal wells, including the San Jose No. 6 (SJ-6). In 1981, after further sampling, the Environmental Improvement Division of the New Mexico Health and Environment Department (NMEID) decommissioned SJ-6. Shutting down SJ-6 significantly impacted the San Jose well field's production. SJ-6 had been a productive and economical source of potable water for thousands of Albuquerque residents and played a key role in providing sufficient fire protection to the South Valley. As a result of SJ-6's pivotal role in providing water to the city, NMEID named the South Valley site as the State's top priority for environmental cleanup.³

The State, pursuant to CERCLA, requested the United States Environmental Protection

³ Today, petroleum fuels and various other organic chemicals are handled and stored within the South Valley site. In addition to Plant 83, industrial facilities located in the South Valley include petroleum product pipeline and bulk distribution facilities owned by, among others, Chevron USA Inc. and Texaco Inc., and an industrial chemical distribution facility owned by Univar USA Inc. Chevron and Texaco were named defendants in this lawsuit, but settled with the State just prior to appellate argument. Univar was not a named Defendant.

Agency (EPA) to place the site on the “National Priorities List” (NPL). See 42 U.S.C. § 9605(a)(8)(B). The EPA placed the South Valley site on the NPL in 1983 and, at the State’s request, began the remedial investigation and feasibility study the same year.⁴ The EPA’s first task was to determine if initial remedial measures were necessary to mitigate potential threats to human health and/or the environment connected with the shutdown of SJ-6. In its March 1985 Record of Decision (ROD), the EPA noted certain contaminants detected during 1984 well sampling were suspected carcinogens with recommended maximum contaminant levels of zero in drinking water.⁵ Consequently, the EPA concluded the water quality of SJ-6 was unfit for human consumption. The EPA further concluded the lack of available water at the tap from SJ-6 adversely impacted available fire protection in the South Valley. Initial remedial measures, also termed “removal” measures, were therefore necessary to limit exposure to both health and

⁴ The NPL is the list of hazardous waste sites eligible for long-term remedial action financed under the federal Superfund program. CERCLA and accompanying EPA regulations outline a formal process for assessing hazardous waste sites and placing them on the NPL. See 42 U.S.C. § 9605; 40 C.F.R. § 300.425. The State of New Mexico had the South Valley site placed on the NPL pursuant to § 9605(a)(8)(B), which provides the NPL “to the extent practicable, shall include among the one hundred highest priority facilities one such facility from each State which shall be the facility designated by the State as presenting the greatest danger to public health or welfare or the environment among the known facilities in such State.” See also 40 C.F.R. § 300.425(c)(2). All sites placed on the NPL must undergo a remedial investigation and feasibility study. See 42 U.S.C. § 9620(e)(1). The purpose of such study is to determine the nature and extent of contamination and identify the possible remedial measures necessary to protect human health and the environment. See 40 C.F.R. § 300.430.

⁵ “To support the selection of a remedial action, all facts, analyses of facts, and site-specific policy determinations considered in the course of carrying out activities . . . shall be documented . . . in a record of decision . . . for inclusion in the administrative record” 40 C.F.R. § 300.430(f)(5)(i). Among other things, the ROD must describe “[h]ow the selected remedy is protective of human health and the environment, explaining how the remedy eliminates, reduces, or controls exposures to human and environmental receptors;” and “[t]he federal and state requirements that are applicable or relevant and appropriate to the site that the remedy will attain[.]” Id. § 300.430(f)(5)(ii)(A), (B).

environmental hazards in the South Valley.⁶

The EPA selected as an initial remedy the installation of a new well, the Burton No. 4 (B-4), to replace the capacity of the contaminated SJ-6. Specifically, the EPA–

determined that the installation of a new water supply well as an initial remedial measure at the South Valley Superfund Site is a cost effective, environmentally sound remedy and is necessary and feasible for protection of public health, welfare, and the environment from exposure or threat of exposure to a significant health or environmental hazard.

See 40 C.F.R. Pt. 300, App. D (listing the installation of “[n]ew wells in a new location or deeper wells” as an acceptable remedial response to groundwater contamination). The EPA labeled the work surrounding the replacement of SJ-6 with B-4 as Operable Unit (OU) 1.⁷ In its 1985 ROD

⁶ CERCLA technically defines “cleanup” in two ways. “Removal” refers to actions designed to address immediate environmental hazards. “The term includes . . . provision of alternative water supplies” and other emergency measures which “may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release” of any hazardous substance. 42 U.S.C. § 9601(23). “[R]emedial action” means those actions consistent with permanent remedy taken . . . in addition to removal actions . . . to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment.” The term similarly includes “provision of alternative water supplies[.]” Id. § 9601(24); see generally United States v. W.R. Grace & Co., 429 F.3d 1224, 1232-47 (9th Cir. 2005).

⁷ EPA regulations define an operable unit as–

a discrete action that comprises an incremental step toward *comprehensively* addressing site problems. This discrete portion of a remedial response manages migration, or eliminates or mitigates a release, threat of a release, or pathway of exposure. The cleanup of a site can be divided into a number of operable units, depending on the complexity of the problems associated with the site. Operable units may address geographical portions of a site, specific site problems, or initial phases of an action, or may consist of any set of actions performed over time or any actions that are concurrent but located in different parts of a site.

40 C.F.R. § 300.5 (emphasis added). The EPA divided the South Valley into six operable units, four of which are relevant to this action.

on OU1, the EPA reported: “The State of New Mexico requested this measure and has been consulted and agrees with the approved remedy.”

B.

The city placed B-4 into service in July 1988. Meanwhile, work continued on the remedial investigation and feasibility study at the South Valley site. The investigation surrounding SJ-6, *i.e.*, OU2, first sought to identify the source and extent of contaminants in the groundwater that supplied the well. In September 1988, the EPA delivered an ROD which identified six industrial facilities in the South Valley as the likely sources of SJ-6’s contamination. Potentially responsible parties (PRPs) included the USAF, GE, Chevron, Texaco, Whitfield Tank Lines, Univar Corporation, and Duke City Distributing. The ROD on OU2 identified Plant 83 and the Univar facility as the likely sources of chlorinated solvents found in the well. The ROD identified the remaining four facilities as the likely sources of petroleum contamination.⁸

Based on extended testing post 1984, the ROD noted “chlorinated solvents detected in SJ-6 most likely do not represent groundwater contamination, but contamination of sediments at the base of the well.” Because of source control and remediation of contaminated plumes

⁸ CERCLA imposes liability on PRPs for cleanup costs and specified damages. See 42 U.S.C. § 9607(a). For our purposes, PRPs in this case include the present owner or operator of a facility and the owner or operator of the facility at the time of waste disposal. See id. Notably, CERCLA contains a petroleum exclusion which excludes petroleum-derived contamination from its reach and limits its ability to fully address hazardous waste contamination. See id. § 9601(14), (33). EPA studies found significant levels of petroleum contamination in shallow and intermediate hydrogeologic zones underneath the South Valley, the cleanup of which falls within the State’s jurisdiction. Accordingly, the State has regulated the remediation of petroleum contamination in the South Valley through hydrocarbon agreements with responsible parties. See N.M. Stat. Ann. § 74-1-6.D. (empowering the New Mexico Department of Environment, formerly NMEID, to “enter into investigation and remediation agreements with persons potentially liable for sites within New Mexico subject to [CERCLA]”).

through other operable units in the South Valley, the EPA concluded “these [SJ-6] contaminants do not appear to pose a significant health threat.” Because B-4 had replaced SJ-6’s water supply, the EPA chose to clean and seal SJ-6 (along with at least one other municipal well and numerous private wells in the area), monitor the groundwater in the vicinity of SJ-6 for at least thirty years, and place access restrictions on new well construction in the vicinity of SJ-6. According to the ROD, the selected remedy would prevent SJ-6 from serving as a conduit for contaminant migration into the deep aquifers responsible for supplying municipal water.

To assure the permanence and effectiveness of the selected remedy, the EPA provided for a review of environmental conditions surrounding SJ-6 after five years. See 42 U.S.C. § 9621(c) (requiring review of remedial action “no less often than each 5 years after the initiation of such remedial action to assure that human health and the environment are being protected”); 40 C.F.R. § 300.430(f)(4)(ii) (same). The EPA also created a “Design Review Committee” consisting of representatives from the EPA, NMEID, the City of Albuquerque, and PRPs. Still today, the committee’s responsibility is to coordinate the various remedial actions implemented at the South Valley Superfund site to ensure site cleanup. In a letter to the EPA, NMEID concurred in the proposed remedy for SJ-6 “conditional on the timely implementation of the remedy selected in the GE/USAF [Plant 83] Record of Decision.” NMEID explained: “As with other individual remedies selected for operable units at the San Jose site, the San Jose 6 remedy alone does not address all potential threats to public health. However, this remedy will play a part in the overall strategy to do so.”

Together with its ROD on OU2, the EPA delivered its ROD on GE’s Plant 83, *i.e.*, OU5

and OU6, in September 1988.⁹ OU5 and OU6 respectively address remediation of the shallow and deeper zone groundwater aquifers underlying Plant 83. PRPs identified in the Plant 83 ROD included, among others, Defendants ACF and GE, the USAF, and the United States Department of Energy (USDOE). The USAF conducted a first round of investigation at Plant 83 in 1984 and 1985 and a second round of investigation in 1987 and 1988, each under a Memorandum of Understanding with the EPA. Based on the USAF's investigation, the EPA concluded VOCs present in the groundwater posed an unacceptable health risk, "requiring remediation to depths of up to 160 feet." This included remediation of the shallow groundwater zone (surface to 30 feet), the intermediate zone (30 to 110 feet) and the upper portion of the deep zone (110 to several thousand feet). The EPA reached its conclusion based on "Applicable or Relevant and Appropriate Requirements" (ARARs) as set forth in the Federal Safe Drinking Water Act, 42 U.S.C. §§ 300f thru 300j-26, the New Mexico Water Quality Act, N.M. Stat. Ann § 74-6-1 thru 74-6-17, and accompanying regulations. See 40 C.F.R. Part 141 (setting national drinking water standards); N.M. Admin Code § 20.6.2.3103 (setting state groundwater purity standards); id. § 20.6.2.4103 (setting state contamination abatement standards). At the same time, the EPA noted the contamination underlying Plant 83 did not pose a significant risk to the city's drinking water supply because "[t]he municipal water system draws from the lower portion of the deep groundwater zone."

To rectify the groundwater contamination emanating from Plant 83, the EPA elected to

⁹ OU3 and OU4 address contamination at the Univar facility. Also referred to as the Edmunds Street property, the Univar facility is located on the southeast portion of the site. A plume extraction and treatment system has been operational at the facility since the early 1990s. Because Univar is not a party to this action, remedial efforts to clean up contamination at that facility are only tangentially relevant. Suffice it to say those efforts are similar to and consistent with the overall remedial effort in the South Valley.

extract the contaminated groundwater through extraction wells and treat it with carbon adsorption, and in the case of the deeper zone, air stripping before reinjecting it into the aquifer.¹⁰ The ROD explained that “[t]he level of treatment in the selected remedy . . . [meets] the [ARARs] for water set by maximum contaminant limits . . . for discharge to the ground under NMWQCC [New Mexico Water Quality Control Commission] regulations.” See 42 U.S.C. § 9621(d)(2)(A) (discussing application of ARARs). The selected remedy also included groundwater monitoring both during and after completion of remediation to ensure the remedy’s effectiveness. Finally, the EPA scheduled five-year reviews as required by CERCLA to assure the remedy remained protective of human health and the environment. NMEID agreed with the selected remedy in a letter to the EPA:

EID concurs with the remedy outlined in the draft Record of Decision for the GE/USAF Operable Unit of the San Jose Superfund site. While this remedy alone does not address all potential threats to public health at the San Jose site, it is an important part of the overall strategy to do so. The Design Review Committee, to include representatives of affected agencies and PRPs at the site, will ensure that this and other remedies are coordinated to achieve site cleanup.

C.

The remedial design and action phase of the cleanup followed. See 40 C.F.R. § 300.435.¹¹ In June 1989, the EPA issued a Unilateral Administrative Order (UAO) to GE to

¹⁰ According to the ROD, air stripping “operates by mixing water contaminated with volatile compounds with air allowing the volatile chemicals to evaporate into the air. The air is collected as it leaves the treatment unit and passed through a filter where the contaminants are collected.” Carbon adsorption “passes contaminated water through activated carbon where the contaminants are adsorbed onto the carbon. The contaminated carbon is then taken to an offsite regeneration facility.” The EPA recognizes “packed tower aeration” and “granular activated carbon” as the “best available technologies” for treating water contaminated with specific VOCs. See 40 C.F.R. § 142.62.

¹¹ The remedial design and action phase includes developing the actual design of the selected remedy and implementing that remedy through construction. A period of operation and

perform the necessary work on OU2.¹² In September 1994, GE completed work on OU2 pursuant to that order. SJ-6, as well as one other less significant municipal well, SJ-3, and several private wells, were successfully plugged and abandoned. GE also established a groundwater monitoring program as required by the ROD. Both the EPA's 2000 and 2005 memoranda approving the five-year reviews for OU2 concluded "the analysis of the data shows that the plugging and abandonment program was effective. . . . [T]he remedy for OU2 has been, and is expected to continue to be, protective of human health and the environment."

At the same time, the EPA issued a second UAO to GE to cleanup the contamination associated with Plant 83 in a manner consistent with the ROD on OU5 and OU6.¹³ GE agreed and, following additional investigation at the site, began design of shallow and deeper zone remediation systems in 1991. The shallow and deeper zone systems became operable in May 1994 and April 1996, respectively. Today, the shallow zone system includes thirty monitoring

maintenance follows. During the course of this phase, the EPA is responsible for ensuring that ARARs are met. 40 C.F.R. § 300.435 (a), (b)(1), (b)(2).

¹² The EPA implements its RODs in one of three ways. The EPA may hire a contractor to cleanup the site and then sue PRPs to recover CERCLA costs and damages, provided the cleanup methods are consistent with CERCLA regulations. *See* 42 U.S.C. §§ 9604(a)(1), 9607(a)(4)(A). The EPA may enter into a settlement with a PRP, directing the PRP to remediate the site through procedures specified in a consent decree. *See id.* § 9622(a), (d). Or the EPA may issue a UAO to a PRP, requiring the PRP to clean up the site using methods specified in the ROD, or face fines of \$25,000 per day and treble damages. *See id.* §§ 9606(a), (b)(1), 9607(c)(3).

¹³ The district court reported that GE, the USAF, and the USDOE have shared the cost of remedial activities surrounding Plant 83. Based on the three PRPs relative duration of ownership, 9% of the cost was allocated to GE, 43.2% was allocated to the USDOE, and 47.8% was allocated to the USAF. *See New Mexico v. General Elec. Co.*, 335 F. Supp. 2d 1185, 1194 n.5 (D.N.M. 2004).

wells, eight extraction wells, an injection well, and a groundwater treatment system.¹⁴ The extracted groundwater is conveyed through a dual-contained pipe to the treatment system where it is treated using liquid-phase granulated activated carbon to adsorb the VOCs. Following treatment, the water is reinjected into the shallow aquifer. The EPA, the New Mexico Department of Environment (NMED, formerly NMEID), and GE evaluate the effectiveness of the system by collecting groundwater from extraction and monitoring wells and comparing the data to historical data previously collected. As reported in the 2000 and 2005 five-year review reports, approved by both EPA and NMED, VOC concentrations in the groundwater from the shallow extraction and monitoring wells have been steadily decreasing. The extent of the contaminant plume is decreasing as well. Both reports concluded: “[T]he Shallow Zone Groundwater Remediation System is working as designed and reducing the VOC concentrations in the Shallow Zone groundwater.”¹⁵

GE initially installed numerous wells to identify the boundaries of Plant 83’s deeper zone plume. The design objectives of the deeper zone remediation system (addressing the intermediate and deep zones as described in the ROD) included hydraulic control of the deeper

¹⁴ Until early 2000, the shallow zone remediation system consisted of seven extraction wells. To improve the efficiency of the system, GE installed with EPA approval an additional extraction well which became operational in February 2000. To further improve efficiency, GE also installed an injection well which became operational in May 2000.

¹⁵ Prior to remediation, the following six VOCs were detected above ARARs in the shallow zone aquifer: (1) 1,1-dichloroethane (1,1-DCA), (2) 1,1-dichloroethene (1,1-DCE), (3) 1,2-dichloroethane (1,2-DCA), (4) trichloroethylene (TCE), (5) tetrachloroethylene (perchloroethylene, PCE), and (6) vinyl chloride (VC). The 2005 five-year review report states that as of June 2005, the only VOCs detected above ARARs in the shallow zone aquifer are 1,1-DCA and 1,1-DCE: “All other VOCs in the Shallow Zone Aquifer groundwater have been remediated to levels below their respective ARARs, or are not detected at all in any of the monitoring wells and extraction wells.”

zone plume and flushing the VOCs from the aquifer to meet ARARs. The design established a hydraulic barrier between the contaminant plume and the nearest city water supply well three-quarters mile to the east. Today, the system consists of seventy-nine monitoring wells, four high volume extraction wells, twelve injection wells, and a groundwater treatment system.¹⁶ The system operates by extracting groundwater and conveying it via dual-contained pipe to the treatment center. The water is then pumped through two air-stripping towers on its way to two granulated active carbon vessels. Once in a holding tank, the water is piped through a filter system to remove particles. Finally, the water travels to twelve injection wells where it is returned to the deeper zone aquifer. Monitoring wells monitor the progress of the remediation both horizontally and vertically inside and outside the plume boundaries. According to the 2005 five-year review report: “[T]he Deep Zone Ground Water Remediation System is an effective hydraulic control, and operates as designed to maintain capture of impacted groundwater in the Deep Zone plume.”

Since startup, the deeper zone treatment system has operated 24 hours a day except for routine maintenance and unplanned stoppages due to, among other things, ice formation, lightning, and high winds. As stated in the 2000 five-year review report and reiterated in the 2005 report: “[T]he VOC plume has been captured by the Deep Zone Remediation System.” “The aerial extent of the Deep Zone Plume is shrinking, and concentrations of VOCs have reduced significantly since the Deep Zone Plant became operational[.]” “The treatment system has been effective in removing constituents to concentrations below the ARARs, and water

¹⁶ In reviewing 2001 data, GE noticed an increase in VOC concentration levels in two monitoring wells. With prior approval from the EPA and NMED, GE installed two new monitoring wells, two new injection wells, and one new extraction well. GE also upgraded the deeper zone treatment plant to accommodate the new extraction and injection wells.

injected back into the Deep Zone Aquifer is in compliance with the applicable discharge requirements.” “VOCs above ARARs have not been detected in any monitoring or water supply wells downgradient of the remediation system.”¹⁷ Both reports concluded the shallow and deeper zone remediation systems “are protective of human health and the environment.”

D.

Recently, the EPA and NMED approved the 2005 five-year review report for the South Valley site. Although remediation continues at OU5 and OU6 due to hazardous wastes in the subsurface above contaminant levels allowing for unlimited use and unrestricted exposure, the overall remedy remains protective of human health and the environment. The EPA’s approval memorandum, dated September 2005, indicates that “[f]rom system startup through July 2005, approximately 900,000 gallons of groundwater have been extracted and treated from the shallow zone aquifer [OU5].” “The shallow zone groundwater remediation system has mitigated the migration of VOCs in the saturated portion of the shallow zone aquifer and the size of the contaminant plume is decreasing.” To ensure the systems continuing effectiveness, the memo indicated “[t]he EPA and NMED will periodically split influent and effluent samples with [GE] at the treatment plant.”

The 2005 memo’s comment on the deeper zone remediation system was similarly favorable. From system startup through July 2005, “over 3.7 billion gallons of groundwater were extracted, treated, and returned to the subsurface at an average flow rate of over 900 gallons

¹⁷ Prior to remediation, the following seven VOCs were detected above ARARs in the deeper zone aquifer: (1) 1,1-DCA, (2) 1,1-DCE, (3) 1,2-DCA, (4) TCE, (5) PCE, (6) VC, and (7) methyl-tert butyl ether (MTBE). As of June 2005, the following four VOCs were detected above ARARs in the deeper zone aquifer: (1) 1,1 DCE, (2) 1,1-DCA, (3) TCE, and (4) PCE. The remaining three VOCs have been remediated to levels below their respective ARARs or not detected at all.

per minute. . . . Approximately 1,400 pounds of VOC mass have been removed.” Regarding the deep plume, the EPA’s memo reported: “The deep groundwater remediation system has been effective in capturing the groundwater contaminant plume associated with OU #6.” “Flushing continues to reduce the concentrations of VOCs within the deep zone plume, as is evidenced by the decreasing constituent concentrations.” The EPA concluded with a comment on the overall success of the ongoing cleanup at the South Valley site:

It should be noted that the groundwater remedial systems at the South Valley Superfund Site have been very effective in recovering and treating approximately 4.5 billion gallons of water since the remedial systems went on-line. Almost the entire amount of this large volume of water has been returned to the aquifer from which it was extracted, allowing the groundwater to be returned back to its beneficial use.

As the foregoing history illustrates, the State of New Mexico, through NMED and its predecessor NMEID, from the outset has played a meaningful role in the CERCLA-mandated removal and response plan for the South Valley Superfund site – a plan which to date appears to be achieving its aim of restoring the groundwater in the South Valley to below ARARs. See 40 C.F.R. § 300.180 (stating “state officials . . . will participate as part of the response structure”).¹⁸ Notably, we find nothing in the record which indicates NMED currently opposes any aspect of the ongoing cleanup which is scheduled to conclude around 2016. Rather, the EPA has worked with and addressed the concerns of NMED at every stage of the cleanup. The State’s role has been and continues to be consistent with CERCLA regulations which require the EPA to ensure

¹⁸ NMEID undertook its own investigation of groundwater contamination due to hydrocarbons discharged from various petroleum facilities in the South Valley. See supra n.8. NMEID then negotiated “Hydrocarbon Remediation Agreements” with PRPs in 1994, requiring them to treat the groundwater underlying their facilities. See General Elec., 335 F. Supp. 2d at 1195. Thus, in a real sense, cleanup at the South Valley site has been a joint operation among federal and state authorities.

“meaningful and substantial state involvement” in hazardous substance response: “EPA shall provide an opportunity for state participation in removal, pre-remedial, remedial, and enforcement response activities.” Id. § 300.500(a); see also 42 U.S.C. § 9621(f) (addressing state involvement in hazardous waste cleanup).¹⁹

II.

In addition to affording the State of New Mexico an opportunity to avail itself of a federally-mandated cleanup response in the South Valley, a form of mandatory injunctive relief, CERCLA empowered the State to bring an action against GE, ACF, and other PRPs for natural resource damages (NRDs) to the public’s groundwater. CERCLA’s “natural resources” definition includes “water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by . . . any State[.]” 42 U.S.C. § 9601(16). CERCLA makes PRPs jointly and severally liable not only for all costs of removal and/or remedial action, but also for “damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss” Id. § 9607(a)(4)(C); see, e.g., Kalamazoo River Study Group v. Menasha Corp., 228 F.3d 648, 652-53 (6th Cir. 2000) (subject to the right of contribution contained in § 9613(f)(1), liability under § 9607(a) is generally joint and several regardless of fault); California v. Montrose Chem. Corp., 104 F.3d 1507, 1518 n.9 (9th Cir. 1997) (subject to the defenses set forth in § 9607(b), liability under § 9607(a) is joint and several). Section 9607(f)(1) authorized the State, through its “Natural Resources Trustee”(NRT), to sue GE, ACF, and other PRPs for

¹⁹ CERCLA also provides for community input throughout the cleanup process. See 42 U.S.C. § 9617 (addressing public participation in cleanup). 40 C.F.R. §§ 300.155, 300.415(n), 300.430(c), and 300.435(c) address community relations at the various stages of cleanup.

NRDs:

In the case of an injury to, destruction of, or loss of natural resources under subparagraph (C) of subsection (a) of this section[,] liability shall be . . . to any State for natural resources within the State [T]he authorized representative of any State, shall act on behalf of the public as trustee of such natural resources to recover such damages. . . . Sums recovered by a State as trustee under this subsection shall be available for use only to restore, replace, or acquire the equivalent of such natural resources by the State. The measure of damages in any action under subparagraph (C) of subsection (a) of this section shall not be limited by the sums which can be used to restore or replace such resources.

42 U.S.C. § 9607(f)(1).

CERCLA directs New Mexico’s Governor to appoint a NRT to act on behalf of the public. Id. § 9607(f)(2)(B). Consistent with CERCLA, the New Mexico Legislature enacted the “Natural Resources Trustee Act” (NRTA) in 1993. See N.M. Stat. Ann. §§ 75-7-1 thru 75-7-5. The NRTA created the “Office of Natural Resources Trustee” (ONRT) within NMED. Id. § 75-7-2.B. The NRT serves at the pleasure of the Governor. Id. §§ 75-7-2.A. Among the NRT’s express duties are the assessment and collection of “damages for injury to, destruction of, or loss of natural resources, including bringing legal actions[.]” Id. § 75-7-3.A.(5). An award of NRDs in New Mexico “shall consist of those amounts calculated in accordance with federal law, including . . . the cost of restoration, replacement or acquisition of equivalent resources, plus compensation for the loss of use or enjoyment of the natural resources” Id. § 75-7-4.A.

Consistent with his duties under CERCLA and the NRTA, in 1999 New Mexico’s NRT entered into tolling agreements with several PRPs, including GE, the USAF, and USDOE, to delay a CERCLA-based NRD lawsuit while he attempted to negotiate a settlement of the State’s NRD claims. See generally William H. Hyatt, Jr., Jennifer L. Allaire, & Karyllan Dodson Mack, Natural Resource Damages: New Developments at the State Level, SK057 ALI-ABA 281, 290-960 (2005). The NRT believed tolling agreements were necessary due to CERCLA’s three-year

statute of limitations on NRD claims. See 42 U.S.C. § 9613(g).²⁰ At the same time, the NRT was seeking funding from the New Mexico Legislature for a NRD assessment. See 43 C.F.R. Part 11 (containing regulations relating to an NRD assessment); N.M. Stat. Ann. § 75-7-5 (establishing a NRT fund to carry out the provisions of the NRTA). The NRT apparently believed a NRD assessment pursuant to federal regulations was necessary to the success of the State’s NRD claims because such assessments “have the force and effect of a rebuttable presumption on behalf of the trustee in any administrative or judicial proceeding” under CERCLA. See 42 U.S.C. § 9607(f)(2)(C).

The regulations, promulgated by the Department of Interior, “provide[] a procedure by which a [NRT] can determine compensation for injuries to natural resources that have not been nor are expected to be addressed by response actions conducted pursuant to [CERCLA regulations].” 43 C.F.R. § 11.10. While the assessment procedures set out in Part 11 are not mandatory, a State NRT must use them to obtain the rebuttable presumption contained in § 9607(f)(2)(C). Id. Apparently, neither the New Mexico legislature nor the newly-elected AG saw need for such an assessment. Asserting her role as the State of New Mexico’s chief law enforcement officer, the AG filed suit against the PRPs on October 1, 1999, absent any NRD assessment.

A.

The AG retained independent counsel to file two separate NRD lawsuits relating to the South Valley Superfund site. The first, filed in federal district court, alleged claims for money

²⁰ Section 9613(g)(1) reads in relevant part: “With respect to any facility listed on the National Priorities List (NPL), . . . an action for damages under this chapter must be commenced within 3 years after the completion of the remedial action (excluding operation and maintenance activities)”

damages under CERCLA § 9607(f)(1). See 42 U.S.C. § 9613(b) (granting federal district courts “exclusive original jurisdiction” of CERCLA actions). Among a host of other business and government entities, the complaint named GE, ACF, the USAF, and USDOE as defendants. The complaint alleged harm arising “from the presence, migration, and threat of further migration of hazardous chemical wastes and other substances from the operable units which comprise the South Valley Superfund Site[.]” The suit named New Mexico’s NRT as an “involuntary plaintiff pursuant to Fed. R. Civ. P. 19.” The complaint indicated the AG would “provide legal counsel and representation to the ONRT pursuant to the provisions of [the NRTA].” See N.M. Stat. Ann. § 75-7-3.C.

The second suit, filed in state district court, alleged various state statutory and common law claims for NRDs, including trespass, public nuisance, and negligence. The complaint omitted the federal entities, but otherwise named the same defendants, including GE and ACF, as the federal suit.²¹ The state court complaint summarized the harm giving rise to the AG’s case against the PRPs in the exact manner as the federal court complaint. GE and ACF promptly removed the AG’s state action to federal court, where the district court, on its own motion, consolidated it with the AG’s federal action. The district court explained:

It has become plainly apparent to the court that the reach of plaintiffs’ state law claims . . . necessarily depend upon the breadth of the plaintiffs’ CERCLA claims

²¹ Our independent research reveals that on November 5, 1999, the AG sought a writ of mandamus from the New Mexico Supreme Court declaring the NRT’s tolling agreements with the PRPs invalid and enjoining the NRT from interfering in the NRD lawsuits. See New Mexico ex rel. Madrid v. Turner, No. 26035 (N.M., filed November 5, 1999). The court issued the writ on December 14, 1999. When defendants in the federal lawsuit moved to dismiss based on the AG’s lack of standing to pursue NRD claims under CERCLA, the AG was back before the state supreme court on April 17, 2000, seeking an order directing the NRT to voluntarily join her federal lawsuit. The state court granted the AG’s request on June 27, 2000, effectively rendering defendants’ standing argument moot.

. . . and of the ongoing CERCLA remediation program at the South Valley site. The two actions . . . are more than “related,” more than “actions involving a common question of law or fact” – the scope of one action inescapably defines the scope of the other.

New Mexico v. General Elec. Co., 335 F. Supp. 2d 1157, 1162 (D.N.M. 2003).

Despite filing an initial motion to remand for want of subject matter jurisdiction, the AG withdrew that motion and in June 2000 filed a first amended complaint alleging federal jurisdiction. Following a year of procedural wrangling which we need not detail here, the AG in July 2001 filed the “State of New Mexico’s Complaint in the Consolidated Case.” See id. at 1160-69 (providing a detailed procedural history of the case).²² The complaint alleged both CERCLA and state law claims.²³ Over the next year, the case “moved steadily forward through extensive discovery, voluminous document production, numerous depositions, intense expert witness and pretrial preparation – all at the instance of the State of New Mexico[.]” Id. at 1180-81.

During the course of an extended pretrial conference beginning in September 2002, the district court began to question the AG’s theory of the case in view of the ongoing remediation in the South Valley. The court told the State “to rethink its theory of damages.” Id. at 1168. Commenting on what the court described as the AG’s “expansive damage theories,” the court

²² At one point, the district court described the AG’s incessant pleading as “making a mockery of the pleading requirements” of Fed. R. Civ. P. 8(a). General Elec., 335 F. Supp. 2d at 1180.

²³ Once the AG alleged federal subject matter jurisdiction based on CERCLA’s NRD provisions in her first amended and subsequent consolidated complaint, any initial jurisdictional defects in removal were cured because a party “cannot voluntarily invoke, and then disavow federal jurisdiction.” Albert v. Smith’s Food & Drug Centers, Inc., 356 F.3d 1242, 1247-49 (10th Cir. 2004) (quoting Akin v. Ashland Chem. Co., 156 F.3d 1030 (10th Cir. 1998)); accord Bernstein v. Lind-Waldock & Co., 738 F.2d 179, 185-86 (7th Cir. 1984) (Posner, J.).

opined: “I need to be up front with you on your computations on damages. I, frankly, would find it difficult to send those computations to a jury.” Id. at 1168-69. The AG responded to the court’s concerns by filing two motions: (1) a motion to dismiss all CERCLA claims and federal defendants from the NRD lawsuit, and (2) a motion to remand the remaining state law claims to state court. The court granted the AG’s motion to dismiss with prejudice, effectively ending any entitlement the State may have had to NRDs under CERCLA.

The court, however, denied the motion to remand the state law claims based “at minimum” on its exercise of supplemental jurisdiction under 28 U.S.C. § 1367. See id. at 1183-84. The court’s reasoning was two-fold. See id. at 1169-1181. First, the court explained the prevalence of CERCLA-related questions in defining the scope and content of the remaining state law claims weighed in favor of retaining jurisdiction: “[T]he remaining claims inescapably must be defined in terms of the CERCLA remedy and the scope and extent of the ongoing CERCLA remediation.” Id. at 1177. Second, the court reasoned “[c]onsiderations of economy and convenience” in a case over three years old weighed in favor of retaining jurisdiction over the state law claims:

It would be burdensome indeed to shift a case with dozens of witnesses – mostly experts – and 8,000 listed exhibits, as well as a record containing nearly 1,000 docketed pleadings, motions, memoranda and other papers and nearly 3,000 pages of hearing transcripts, to a state trial judge having no background or familiarity with the case.

Id. at 1181. At the AG’s request, the district court subsequently certified its decision to continue exercising jurisdiction over the case for interlocutory appeal pursuant to 28 U.S.C. § 1292(b). In May 2003, we denied the AG’s “Petition for Permission to Appeal” under § 1292(b) without comment. See New Mexico v. General Elec. Co., No. 03-500, Order at 1 (10th Cir., May 13, 2003).

B.

Over the remaining course of the litigation, the district court issued a trilogy of opinions before ultimately granting summary judgment to GE and ACF. The first opinion, issued in April 2004 and comprising 145 pages, sought to define the scope of triable issues arising from the AG's remaining state law claims, namely, (1) common law trespass, (2) common law public nuisance, (3) statutory public nuisance, and (4) common law negligence. See General Elec., 335 F. Supp. 2d at 1222. By this time, the AG's NRD demand had fallen from over \$4 billion to over \$1.2 billion – cash compensation earmarked for the State's general treasury fund. See id. at 1231 & n.95.²⁴

Distinguishing between private property rights and public trust interests, the court first held the AG could not maintain a trespass action under New Mexico law against GE or ACF. Id. at 1231-35. The court noted the AG had brought suit not to protect private property rights, but to protect “the State's broader sovereign and public trust/parens patriae interests” in the public's right to beneficial use of groundwater “the stewardship of which is entrusted to the State.” Id. at 1234-35. These interests, the court reasoned, fell outside the scope of protection which the law of trespass traditionally afforded private landowners. Next, the court held the AG could pursue claims of common law and statutory public nuisance “to remedy the alleged injury

²⁴ More particularly, the district court described the AG's demand as follows:

As of January 2004, the Plaintiffs demand over \$1.2 billion dollars in cash compensation, including \$609,000,000 as the cost of water rights to nearly a quarter-million acre-feet of potable water that likely will never be purchased, and up to \$609,000,000 for the construction of a 289,500 acre-foot “replacement” surface storage reservoir that likely will never be built.

General Elec., 335 F. Supp. 2d at 1231 n.95.

to the public's groundwater and to vindicate the State's interest in making that groundwater available for public use." Id. at 1235.²⁵ The AG's right to pursue public nuisance claims against GE and ACF, however, was largely illusory (at least as far as the AG was concerned) because, according to the court, New Mexico law limited the available remedy to injunctive relief in the form of nuisance abatement and/or recovery of restoration costs. See id. at 1237-1244, 1251. Finally, the court held New Mexico law entitled the AG to maintain a negligence action against GE and ACF for money damages "limited to reasonable compensation for the actual and unavoidable consequences of an injury-in-fact to the State's interests, further limited by the degree of fault, if any, properly attributable to the wrongful conduct [of non-parties]." Id. at 1251.

The remainder of the district court's April 2004 opinion addressed the AG's injury and damage claims. The opinion well describes the AG's numerous theories of relief and we need not detail them here. Importantly, the court rejected the AG's "market value replacement cost" and "loss of use" damage theories in favor of a "cost of restoration" theory. First, according to the court, "the Middle Rio Grande Underground Water Basin was and is already fully appropriated, leaving the State unable to make additional water available for appropriation." Id. at 1213. In other words, the change in the point of diversion from SJ-6 to B-4 did not constitute a loss of use because the same amount of groundwater from the same aquifer remained available for use, as illustrated by the absence of any claim by water rights holders or users in the South

²⁵ New Mexico's statutory prohibition against water pollution appears in the State's criminal code at N.M. Stat. Ann. § 30-8-2: "Polluting water consists of knowingly and unlawfully introducing any object or substance into any body of public water causing it to be offensive or dangerous for human or animal consumption or use. Polluting water constitutes a public nuisance."

Valley:

Plaintiffs are not here as appropriators or users of water; nor are they here on behalf of other water rights holders or water users. The entity that once diverted groundwater from the South Valley wells to beneficial use – the City of Albuquerque – is not here. The city’s right to appropriate groundwater has been satisfied by changing the point of diversion to another well (the Burton #4 Well) that pumps groundwater from the same aquifer, and the city asserts no claim for damages in this action.

Id. at 1202-03. Second, the court ruled market value replacement cost was an inappropriate measure of damages because the AG failed to present “significant probative evidence”

establishing the permanent and total loss of the South Valley’s contaminated groundwater:

“Damage analysis based on ‘market value’ replacement cost necessarily assumes . . . a complete loss of the resource that has been injured, and proves to be irrelevant to the measure of damages . . . where a valuable use may be restored through remediation.” Id. at 1217-18.

Instead, the court held the cost of restoration was the appropriate measure of damages because, among other reasons, such measure was consistent with CERCLA’s remedial objectives to repair and restore contaminated natural resources:

Plaintiffs may seek an award of damages in an amount sufficient to reimburse the State of New Mexico for site investigation and other “response costs” incurred by the State in connection with a proven injury to the State’s interests at the South Valley Site, and any costs of restoration of the groundwater at South Valley already incurred by the State with respect to that injury. Plaintiffs, on behalf of the State of New Mexico in its capacity as public trustee, may also recover damages in the amount of future costs of restoration as established by substantial evidence, said damages to be held in trust for the benefit of the public, for the express purpose of paying for the actual remediation and restoration of the affected groundwater beneath the South Valley Site.

Id. at 1263.

C.

The district court delivered its second opinion in May 2004. See New Mexico v. General

Elec. Co., 335 F. Supp. 2d 1266 (D.N.M. 2004). That opinion addressed the proposed testimony of numerous expert witnesses, including the testimony of the AG’s three principal experts, David Brookshire, Stephen Johnson, and Dennis Williams. Pursuant to GE and ACF’s motion, the court excluded large portions of the experts’ testimony as irrelevant to the issues of injury and damage. Consistent with its preceding opinion, the court first held Dr. Brookshire’s “analysis and opinions concerning the market value replacement cost of a volume of groundwater totally and permanently lost to use has no bearing upon damages to be measured by the cost of restoration of the affected groundwater to use as drinking water.” Id. at 1276. The court next excluded the testimony of Mr. Johnson regarding the cost of replacing the storage capacity of the contaminated portion of the aquifer with a large surface storage reservoir. Id. The court excluded Mr. Johnson’s testimony based on its prior ruling that the State had no legally cognizable interest in the South Valley aquifer apart from the groundwater. The court had concluded the State did *not* own the aquifer as a “natural resource” in the same sense it owned the public waters: “Absent proof of some possessory ownership interest in *land* at the South Valley – title to the surface or subsurface estate, a reservation of minerals, or the like – the State has no legally cognizable interest in the aquifer beneath the South Valley site.” General Elec., 335 F. Supp. 2d at 1205.

Dr. Williams proposed testimony fared no better than his predecessors’. Dr. Williams relied on selected data to construct a model of a contaminant plume in the South Valley “circa 1992.” See General Elec., 335 F. Supp. 2d at 1278.²⁶ He then combined the estimated volume

²⁶ Interestingly, one of GE’s engineering experts, John Connor, questioned Dr. Williams use of a model to quantify the State’s damages. According to Mr. Connor:

[T]here’s so much data at [the South Valley] site we don’t need to model it. We

of his model plume with the estimated volume of a “buffer zone” needed to immobilize the plume to calculate (1) the total volume of *in situ* groundwater which the contamination impacted and (2) the lost “safe yield” of potable groundwater from the South Valley aquifer. Id. at 1279. The court found numerous problems with Dr. Williams’ approach. First, Dr. Williams acknowledged his projected plume volume included significant non-party contamination emanating outside Plant 83. Second, Dr. Williams made no projection as to what portion of his projected plume fell within the scope of the ongoing remediation. Third, Dr. Williams projected “buffer zone” volume was inconsistent with the EPA’s ongoing remediation. In other words, any volume of water needed to immobilize the plume would be relevant “only if the contaminated plume volume is treated as totally and permanently lost and the remedy chosen to address the resulting public health risks is the passive containment of the chemical contaminant plume.” Id. at 1286.

Finally, Dr. Williams failed to account for restrictions the New Mexico State Engineer had placed on further extraction of groundwater from the Middle Rio Grande Underground Water Basin. See id. at 1294-95. The court concluded Dr. Williams’ estimates of lost safe yield – hydrologically accurate or not – did not address the seminal issue of whether the groundwater beneath the South Valley could be made available for appropriation and thus was lost to further appropriation because of the contamination. The availability of water from underneath the South

use models to predict things we don’t know. We know where the plume is here. There are over 615 wells, 6,520 groundwater samples, 217,000 laboratory analysis, over 1,100 soil borings have been drilled. This is one of the most intensely investigated sites in this country, in the world. It’s very well understood. You don’t need a model when you know what’s going on.

General Elec., 335 F. Supp. at 1302 n.69.

Valley, the court explained, turned on “the groundwater volume of the entire aquifer treated as a unit, and could not be localized to a portion of the aquifer having no ascertainable geohydrological boundary distinguishing it from the rest of the Middle Rio Grande Basin.” Id. at 1295.

D.

With the State’s case significantly diminished, the district court delivered its third and final opinion in June 2004. By this time, the AG had narrowed her claim for damages to those “not recoverable under CERCLA for groundwater contamination ‘outside’ the ‘box that GE and the EPA are willing to remediate’ – that is, the ‘box’ defined by the intended scope of the existing EPA-ordered remediation.” New Mexico v. General Elec. Co., 322 F. Supp. 2d 1237, 1243 (D.N.M. 2004). Thus the “core of the controversy” between the parties became the intended scope of CERCLA-mandated remedial efforts in the South Valley, efforts the AG after a decade described as “woefully inadequate.” See id. at 1248. The AG rested her latest theory of recovery on the presence of a “deep, deep” contaminant plume beneath the South Valley Site, “hundreds of feet below the reach of the existing remediation system,” and outside the scope of the ongoing remediation. Id. at 1253. Once again, the court found the AG’s proof “woefully inadequate.”

To support her theory, the AG pointed to a recent expansion of the Plant 83 remedial system spawned by sample data from the system’s monitoring wells detecting additional contamination outside the prior scope of remediation.²⁷ The court, however, viewed such

²⁷ In this respect, the district court observed:

Uncontroverted facts in this record reflect that the Plant83/General Electric system has already been expanded to take into account additional contamination

evidence as proof of the ongoing remediation's effectiveness:

In effect, then, Plaintiffs rely upon specific facts showing that the existing EPA remedial system *is* detecting further contamination and *is* addressing it by adding additional extraction and monitoring wells as support for an inference that the system is *not* detecting and *not* treating contamination, an inference that there yet exists undetected “deep, deep” contamination that the system does not and will not treat. Viewed through Plaintiffs’ eyes, direct evidence of the system’s remedial efficacy becomes inferential proof of its deficiency.

* * *

Much like Scotland’s famed Loch Ness monster, the Plaintiffs’ “deep, deep contaminant plume” is believed to be “down there somewhere,” and has not been conclusively proven *not* to exist, but its proponents have yet to come forward with significant probative admissible evidence of specific facts affirmatively demonstrating that it *does* exist.

Id. at 1255-56 (footnote omitted). Recognizing the State of New Mexico, through NMED, remains an active participant in the oversight of the EPA’s operable units at the South Valley Site, the district court questioned the State’s failure to drill its own wells to verify the existence of contamination beyond the scope of the existing system. In the end, the court found the AG’s “deep, deep” plume theory just that – a theory unsupported by facts, or, in the court’s own words, “a concept built largely upon conjecture masquerading as inference.” Id. at 1256.

The district court also concluded the AG failed to raise any genuine issue of material fact regarding her “narrower, static view” of the intended scope of the CERCLA-mandated remediation. The court reasoned that defining the scope of remediation solely in terms of the

evidenced by sample data from more recently installed monitoring wells. In early 2000, the groundwater monitoring program detected contamination in a newly installed well. . . . This demonstrated to EPA that “the monitoring system is effective in showing that if there are any concentrations, they are picked up and detected. And once we have the detections, we take the appropriate steps to deal with them.” Accordingly, in 2003, GE expanded its existing remedial system by installing a new extraction well, two new injection wells, and an additional monitoring well, all approved by EPA and NMED.

General Elec., 322 F. Supp. 2d at 1250 (internal citations omitted); see supra n.16.

current operation ignored the language of the ROD for OU5 and OU6, as well as the “Plant 83/General Electric system’s demonstrated ability to monitor for contamination over an extended area and to expand and adjust in light of credible sample data evidencing the presence of additional contamination in need of treatment.” Id. at 1257. The record, according to the court, “indicates that the EPA’s selected remedy . . . is intended to address *all* contamination at or emanating from the Plant 83 site.” Id. 1248.

More importantly, the AG had failed to establish the presence of any contamination in the South Valley beyond the reach of CERCLA and the EPA’s remedial plan, thus leaving the AG without a case:

The array of existing remedial actions at South Valley – actions that the State has initiated, approved of, acquiesced in and agreed to – have largely occupied the field, leaving little or no room for the operation of the judicial damages remedy that Plaintiffs seek. The intended scope of the EPA-ordered remedy embraces all of the contamination attributable to the Plant 83 facility. . . . All of these remedial systems undertake to clean up groundwater sufficiently to satisfy both the federal drinking water standards and the NMWQCC abatement regulations – the end result that Plaintiffs insist they desire to achieve.

Id. at 1271. Whereupon, the court granted summary judgment to Defendants GE and ACF on the AG’s state law claims. See Fed. R. Civ. P. 56. Our review of that grant is de novo. See Adamson v. UNUM Life Ins. Co., 455 F.3d 1209, 1212 (10th Cir. 2006).

III.

Throughout the course of this chronicle, the State of New Mexico has availed itself of federal legislative and executive authority to compel the PRPs, including Defendants GE and ACF, to clean up their mess in the South Valley. During such course, New Mexico’s NRT, backed by and consistent with his duties under both federal and state law, began his pursuit of NRDs against the PRPs. See supra, at 18-21. In mid course, the State AG decided she had a

better plan to benefit the public treasury, and, at least in the opinion of some, usurped the authority of the State's NRT and jumped ship. See Ben Neary, Judge Dismisses Water Pollution Lawsuit, Santa Fe New Mexican, May 13, 2004, at B-1. Without any CERCLA-based NRD assessment to rely on, see 43 C.F.R. Part 11,²⁸ the State undertook the arduous task of proving as an initial matter natural resources injury outside the intended scope of a comprehensive, CERCLA-mandated remediation. The State also confronted the problem of restrictions which both CERCLA and the NRTA impose upon the measure of damages even supposing some redressable injury remains. These are the overlying concerns which lead us, like the district court, to conclude the State, at least for now, is entitled to no relief on its NRD claim arising out of groundwater contamination in the South Valley. We begin by defining the scope of the State's NRD claim.²⁹

²⁸ We are well aware that NRD assessment is a costly proposition. According to two commentators, after its 1986 amendments, CERCLA "cast trustees adrift to finance their own damage assessment before filing claims against polluters – a costly proposition, given that damage assessments typically cost millions of dollars. This lack of funding has created a virtually insurmountable obstacle considering that agency budgets have historically authorized little or no funding for NRD assessments." Gina M. Lambert & Anthony R. Chase, Remedying CERCLA's Natural Resource Damages Provision: Incorporation of the Public Trust Doctrine Into Natural Resource Damage Actions, 11 Va. Env'tl. L. J. 353, 371-72 (1992) (footnotes omitted). Still, given the AG's original multi-billion dollar claim against GE and ACF, a few million dollars seems not so significant a cost to take advantage of CERCLA's rebuttable presumption of NRDs, especially where the reasonable costs of assessment are recoverable from PRPs. See 42 U.S.C. § 9607(a)(4)(C), (f)(2)(C).

²⁹ We need not address in any detail the State's argument that, once the State dismissed its federal claims with prejudice, the district court abused its discretion in choosing to exercise supplemental jurisdiction over its remaining state law claims. See 28 U.S.C. § 1367(a). For the reasons stated in its opinion, the district court most assuredly did not abuse its discretion in retaining jurisdiction. At the time of dismissal, principles of economy and fairness far outweighed the interest in comity which the State raised to justify a remand to state court. See General Elec., 335 F. Supp. 2d at 1180-81. Furthermore, we view the State's belated dismissal of its federal claims, only after the district court expressed skepticism over the validity of its damage calculation, as in all likelihood a manipulative tactic designed to achieve a remand to

A.

No one doubts the State of New Mexico manages the public waters within its borders as trustee for the people and is authorized to institute suit to protect those waters on the latter's behalf. See, e.g., State ex rel. Reynolds v. Mears, 525 P.2d 870, 875 (N.M. 1974); State ex rel. Bliss v. Dority, 225 P.2d 1007, 1010 (N.M. 1950). In State ex rel. Reynolds v. Mendenhall, 362 P.2d 998, 1000 (N.M. 1961), the New Mexico Supreme Court declared all underground waters within the State to be public waters subject to appropriation for beneficial use. See N.M. Stat. Ann. § 72-12-18 (codification of the public trust doctrine as to groundwaters). Similarly, no one doubts the duty of the State AG generally to prosecute a state law civil action in which the State is a party. See id. § 8-5-2.B. In view of the foregoing, neither GE nor ACF challenges the State's Article III standing to pursue this state law action for harm to the public interest in its capacity as trustee of the State's groundwaters.³⁰

state court. See Carnegie-Mellon Univ. v. Cohill, 484 U.S. 343, 357 (1988) ("A district court can consider whether the plaintiff has engaged in any manipulative tactics when it decides whether to remand a case."). Lastly, the effect which federal law, namely CERCLA, might have upon the scope of the State's NRD claim also weighed in favor of retaining jurisdiction. Because the district court properly exercised supplemental jurisdiction under § 1367(a), we need not decide whether CERCLA's involvement with the state law claims was sufficient to warrant the district court's independent exercise of federal jurisdiction. See Grable & Sons Metal Prod., Inc. v. Darue Eng'g & Mfg., 125 S. Ct. 2363, 2366-67 (2005) (recognizing that "in certain cases federal question jurisdiction will lie over state-law claims that implicate significant federal issues").

³⁰ The State makes much ado over its supposed ability to pursue this action not only in its capacity as public trustee of the State's groundwaters, but also as *parens patriae* to repair harm to its "quasi-sovereign" interest in those groundwaters. See Satsky v. Paramount Commc'ns, Inc., 7 F.3d 1464, 1469 (10th Cir. 1993). The doctrine of *parens patriae* is a standing concept rather than one of substantive recovery. See Alfred L. Snapp & Son, Inc. v. Puerto Rico ex rel Barez, 458 U.S. 592, 600-08 (1982); 13 Charles A. Wright, Arthur R. Miller, & Edward H. Cooper, Federal Practice and Procedure § 3531.11 (1984 & Supp. 2006). The doctrine does not create any cause of action. Rather, the doctrine *may* provide a state with standing to sue for damages to a broader range of natural resources because it does not require

Armed with standing, the State throughout this litigation has asserted an unrestricted right to pursue against GE and ACF any and all claims, remedies, and damage theories available under state law. The State supports its assertion by referencing two of CERCLA's saving clauses. The first, 42 U.S.C. § 9614(a), provides: "Nothing in this chapter shall be construed or interpreted as preempting any State from imposing any additional liability or requirements with respect to the release of hazardous substances within such State." The second, 42 U.S.C. § 9652(d), provides: "Nothing in this chapter shall affect or modify in any way the obligations or liabilities of any person under other Federal or State law, including common law, with respect to releases of hazardous substances or other pollutants or contaminants." Given these saving clauses, as well as the spirit of cooperative federalism running throughout CERCLA and its regulations, we may safely say Congress did not intend CERCLA to completely preempt state laws related to hazardous waste contamination. See, e.g., Fireman's Fund Ins. v. City of Lodi, 302 F.3d 928, 941-43 (9th Cir. 2002). "Congress clearly expressed its intent that CERCLA should work in

state ownership of such resources. See Allan Kanner, The Public Trust Doctrine, Parens Patriae, and the Attorney General as the Guardian of the State's Natural Resources, 16 Duke Envtl. L. & Pol'y F. 57, 111 (2005). We have found no judicial authority, however, which suggests the doctrine of *parens patriae* provides a state substantive rights beyond those provided by the public trust doctrine in a case involving the contamination of a publicly-held natural resource. See Note, The Scope of Authority of Natural Resource Trustees, 20 Colum. J. Envtl. L. 301, 318-19 (1995) (suggesting courts should "look skeptically" at a NRT's assertion of authority under the *parens patriae* doctrine given its procedural character); but see Note, Theories of State Recovery Under CERCLA for Injuries to the Environment, 24 Nat. Resources J. 1101, 1110-1111 (1984) (suggesting the *parens patriae* doctrine may support a cause of action "analytically distinct" from a state's action as public trustee, thus providing remedies outside the scope of CERCLA). In any event, the point is largely academic given our conclusion that CERCLA does indeed limit the remedies available to the State under the circumstances of this case. See infra at 44-47. In other words, a suit in the State's capacity as *parens patriae* and a suit in its capacity as public trustee of the State's groundwaters afford the State identical remedies. Cf. New Jersey Dept. of Envtl. Prot. v. Jersey Cent. Power and Light Co., 336 A.2d 750, 759 (N.J. App. 1975) (rejecting "artificial differences between the State's role as public trustee and its role under the fiction of *parens patriae*"), rev'd on other grounds, 351 A.2d 337 (N.J. 1976).

conjunction with other federal and state hazardous waste laws in order to solve this country's hazardous waste cleanup problem.” United States v. Colorado, 990 F.2d 1565, 1575 (10th Cir. 1993); accord Manor Care, Inc. v. Yaskin, 950 F.2d 122, 125-26 (3d Cir. 1991) (Alito, J.).

At most then, this is a case of conflict preemption – an affirmative defense available to GE and ACF notwithstanding the presence of the saving clauses. See e.g., Buckman Co. v. Plaintiff's Legal Comm., 531 U.S. 341, 348 (2001) (recognizing a saving clause does not bar application of conflict preemption principles); Wuebker v. Wilbur-Ellis Co., 418 F.3d 883, 886 (8th Cir. 2005) (recognizing conflict preemption as an affirmative defense). To ascertain CERCLA's preemptive effect in this case and thus define the scope of the State's NRD claim, we ask whether that claim, or any portion thereof, stands as an obstacle to the accomplishment of congressional objectives as encompassed in CERCLA. See United States v. City and County of Denver, 100 F.3d 1509, 1512 (10th Cir. 1996); see also Rose v. Arkansas State Police, 479 U.S. 1, 3 (1986) (acknowledging Article IV's Supremacy Clause “invalidates all state laws that conflict or interfere with an Act of Congress”); Wyoming v. United States, 279 F.3d 1214, 1234 (10th Cir. 2002) (recognizing “[t]he Supreme Court has repeatedly declined to give broad effect to saving clauses where doing so would upset the careful regulatory scheme established by federal law”) (citing Geier v. American Honda Motor Co., 529 U.S. 861, 871-72 (2000)).

1.

CERCLA is best known as setting forth a comprehensive mechanism to cleanup hazardous waste sites under a restoration-based approach. See United States v. Bestfoods, 524 U.S. 51, 55 (1998). CERCLA's principle aims are to effectuate the cleanup of hazardous waste sites and impose cleanup costs on responsible parties. See Meghrig v. KFC Western, Inc., 516 U.S. 479, 483 (1996). Less well known but increasingly important is CERCLA's comprehensive

damage scheme which addresses damage assessment for natural resource injury, damage recovery for such injury, and use of such recovery. See generally Kevin R. Murray, Steven J. McCardell, & Jonathan R. Schofield, Natural Resource Damage Trustees: Whose Side Are They Really On?, 5 *Envtl. Law.* 407 (1999). As we have seen, CERCLA, at the behest of federal and state NRTs, imposes liability upon PRPs not only for cleanup costs, but also for “damages for injury to, destruction of, or loss of natural resources,” including the reasonable costs of assessing such damages. 42 U.S.C. § 9607(a)(4)(c). While damages recovered under CERCLA are “available for use only to restore, replace, or acquire the equivalent of such natural resources by the State,” damages are not limited, “by the sums which can be used to restore or replace such resource.” Id. § 9607(f)(1).

The legislative history of CERCLA’s 1986 amendments makes the meaning of § 9607(f)(1) abundantly clear. See supra n.1. The *measure* and *use* of damages arising from the release of hazardous waste is restricted to accomplishing CERCLA’s essential goals of restoration or replacement, while also allowing for damages due to interim loss of use:³¹

The Committee notes that the last sentence of this amendment, which is essentially a restatement of the language of the existing statute, has been the source of some confusion. Both the amendment and the present language of

³¹ Notably, NRDs allowable under New Mexico’s NRTA appear identical to damages allowable under CERCLA:

Awards of damages to natural resources in the state *shall* consist of those amounts calculated in accordance with federal law, including:

A. the cost of restoration, replacement or acquisition of equivalent resources, plus compensation for the loss of use or enjoyment of the natural resources; and

B. compensation for the state’s expenses in investigating, assessing and collecting damages and enforcing the state’s rights.

N.M. Stat. Ann. § 75-7-4 (emphasis added).

CERCLA state that sums recovered through a natural resource damage suit shall be used for natural resource restoration and replacement, but that the amounts recovered shall not be limited to those that can be used for that purpose. It is clear from this language that the primary purpose of the resource damage provisions of CERCLA is the restoration or replacement of natural resources damaged by unlawful releases of hazardous substances. However, the final clause is necessary because a situation could arise in which the amount of damages caused by a release of hazardous substances is in excess of the amount that could realistically or productively be used to restore or replace those resources. That is, *the total amount of damages includes the costs of restoration and the value of all the lost uses of the damaged resources . . . from the time of the release up to the time of restoration.* Since the damages contemplated by CERCLA include both, the total amount of damages recoverable would exceed the restoration costs alone.

The Committee therefore intends that any excess funds recovered [i.e. funds in excess of restoration costs] shall be used, in such an instance, for the third purpose spelled out in the language of the amendment, which is to “acquire the equivalent of the damaged resource.” . . . The Committee expects that any such acquisition would provide resources of an equivalent nature at a location as near as reasonably possible to the site at which the damages occurred.

H.R. Rep. No. 99-253(IV), at 50 (1985) (emphasis added), reprinted in 1986 U.S.C.C.A.N. 3068, 3080; accord Ohio v. United States Dept. of Interior, 880 F.2d 432, 454 & n.34 (D.C. Cir. 1989).³²

³² The statement of Representative Jones of North Carolina during the House Debate on the 1986 CERCLA amendments reinforces § 9607(f)(1)’s meaning:

[T]he amendment to [§ 9607(f)] clarifies that sums recovered by trustees are to be used only to restore the natural resources The amendment reflects the restitutionary nature of the natural resources regime of CERCLA. *The natural resource regime is not intended to compensate public treasuries. Nor are recovered damages to be diverted for general purposes.* The purpose of the regime, rather, is to make whole the natural resources that suffer injury from releases of hazardous substances. Of course, the trustees may use such sums to reimburse them for the costs associated with recovering such damages, including the costs of damage assessments. . . .

The basic measure of damages under CERCLA, as it is under the Clean Water Act, is the costs of restoration, replacement or acquisition of the equivalent of natural resources injured by unlawful releases. . . .

CERCLA's saving clauses (as well as other CERCLA provisions) undoubtedly preserve a quantum of state legislative and common law actions and remedies related to the release and cleanup of hazardous waste.³³ See, e.g., New York v. Shore Realty Corp., 759 F.2d 1032, 1049-52 (2d Cir. 1985) (upholding a state's public nuisance suit for injunctive relief where CERCLA failed to provide the state a right to such relief). The saving clause found at 42 U.S.C. § 9614(a) ensures that states may enact laws "to supplement federal measures related to the cleanup of hazardous wastes." Manor Care, 950 F.2d at 126 (Alito, J.). CERCLA sets a floor, not a ceiling. Section 9614(a) preserves state environmental regulations which in some instances set more stringent cleanup standards. See United States v. Akzo Coatings of America, Inc., 949 F.2d 1409, 1454-58 (6th Cir. 1991). Section 9614(a) reinforces a state's right to demand hazardous waste cleanup apart from CERCLA: "CERCLA [§ 9614(a)] preserves the right of a state or other party to proceed under applicable state law to conduct a cleanup of a site affected by hazardous substances." Colorado v. Idarado Mining Co., 916 F.2d 1486, 1488 (10th Cir. 1990); accord Shore Realty, 759 F.2d at 1047-48; see, e.g., N.M. Stat. Ann. §§ 74-4-1 thru 7-4-14 ("Hazardous Waste Act").

The value of lost uses between the release and completion of the restoration should also be accounted for; hence the proviso that the measures need not be limited by the costs of restoration.

132 Cong. Rec. H9561-03, 29767 (daily ed. October 8, 1986) (statement of Rep. Jones) (emphasis added).

³³ Congress recognized the role of state law in hazardous waste cleanup when it directly addressed the potential overlap of CERCLA and state law in 42 U.S.C. § 9614(b). Subsection (b) provides in relevant part: "Any person who receives compensation for removal costs or damages or claims pursuant to any other Federal or State law shall be precluded from receiving compensation for the same removal costs or damages or claims as provided in this chapter."

Meanwhile, the principle purpose of the saving clause located at 42 U.S.C. § 9652(d) “is to preserve to victims of toxic waste the other remedies they may have under federal or state law.” PMC, Inc. v. Sherwin-Williams Co., 151 F.3d 610, 617 (7th Cir. 1998) (Posner, J.).³⁴ “Congress, in enacting CERCLA, intended to provide a vehicle for cleaning up and preserving the environment from the evils of improperly disposed of hazardous substances rather than a new font of law on which private parties could base claims for personal and property injuries.” Artesian Water Co. v. Government of New Castle County, 659 F. Supp. 1269, 1286 (D. Del. 1987) (internal quotations omitted), aff’d, 851 F. 2d 643 (3d Cir. 1988).³⁵ In PMC, 151 F.3d at 618, the Seventh Circuit explained that while “federal environmental laws [were] not intended to wipe out the common law of nuisance[,]” § 9652(d) “must not be used to gut provisions of CERCLA[:]”

The purpose of a saving clause is merely to nix an inference that the statute in which it appears is intended to be the exclusive remedy for harms caused by the violation of the statute. The legislature doesn’t want to wipe out people’s rights inadvertently, with the possible consequence of making the intended beneficiaries of the legislation worse off than before it was enacted.

2.

Sound public policy, as reflected in CERCLA (and New Mexico’s NRTA), demands that

³⁴ Although some unsuccessful bills proposed to do so, CERCLA as enacted provides no private right of action for personal or economic injury caused by the release of hazardous substances. See United States v. Reilly Tar & Chem. Corp., 546 F. Supp. 1100, 1111 (D. Minn. 1982); Theories of State Recovery, supra n.30, at 1102 n.9 (citing bills).

³⁵ Examples of state law toxic tort suits stemming from hazardous waste cleaned up under CERCLA include suits for personal and economic harm by (1) 280 residents in the “Three Mile Island” nuclear disaster, (2) 1,300 residents in the “Love Canal” landfill disaster, and (3) 78 families in the Fullerton, California, Chevron McColl dumping disaster. See Note, Shovels First and Lawyers Later: A Collision Course for CERCLA Cleanups and Environmental Tort Claims, 21 Wm. & Mary Env’tl. L. & Pol’y Rev. 421, 428 (1997).

“environmental protection and preservation be the primary, if not the sole, objective of natural resource damage valuation.” Frank B. Cross, Natural Resource Damage Valuation, 42 Vand. L. Rev. 269, 327 (1989). The notion that NRDs should be used to restore or replace the injured natural resource predates CERCLA. Perhaps the best example is the First Circuit’s decision in Puerto Rico v. SS Zoe Colocotroni, 628 F.2d 652 (1st Cir. 1980). In that case, an oil spill contaminated beaches and mangrove forests. The district court awarded NRDs based on the replacement value of over ninety-two million affected “invertebrate animals.” On appeal, the First Circuit vacated the award because Puerto Rico had no intention of purchasing such “animals” to restore the area. Nor would the area, contaminated with oil, support them. In an oft-quoted statement, the court opined: “The ultimate purpose of any such remedy should be to protect the public interest in a healthy functioning environment, and *not to provide a windfall to the public treasury.*” Id. at 676 (emphasis added). The court remanded the case for a damage determination based on a reasonable plan to restore the injured area or acquire an alternative site. Id. at 678.

As the First Circuit recognized, an unrestricted award of money damages does not restore or replace contaminated natural resources. When trust resources, in this case groundwater, are contaminated, however, the trustee as fiduciary should restore or replace the corpus of the trust. See Cross, supra at 331 (recognizing the use of restoration costs as the primary measure of damages is “consistent with the state’s role as trustee for resources”). Such was the obvious objective of Congress in enacting 42 U.S.C. § 9607(f)(1). Consistent with this objective, we hold CERCLA’s comprehensive NRD scheme preempts any state remedy designed to achieve something other than the restoration, replacement, or acquisition of the equivalent of a contaminated natural resource. We reach this conclusion notwithstanding CERCLA’s saving

clauses because we do not believe Congress intended to undermine CERCLA's carefully crafted NRD scheme through these saving clauses. See International Paper Co. v. Ouellette, 479 U.S. 481, 494, 498-99 n.19 (1987) (acknowledging that preemption of state law remedies may occur where such remedies conflict with congressional objectives). The restrictions on the use of NRDs in § 9607(f)(1) represent Congress' considered judgment as to the best method of serving the public interest in addressing the cleanup of hazardous waste. We cannot endorse any state law suit that seeks to undermine that judgment. See id. at 497.

This is not to say the State's public nuisance and negligence theories of recovery are completely preempted in view of the ongoing remediation in the South Valley. We need not go that far.³⁶ Rather the remedy the State seeks to obtain through such causes of action – an unrestricted award of money damages – cannot withstand CERCLA's comprehensive NRD scheme. See Bedford Affiliates v. Sills, 156 F.3d 416, 426-27 (2d Cir. 1998) (holding CERCLA's contribution scheme preempted state law remedies of restitution and indemnification); In re Reading Co., 115 F.3d 1111, 1117-21 (3d Cir. 1997) (same).³⁷ An interpretation of the saving clauses that preserved the State's NRD claim for money damages in

³⁶ We agree with the district court that the State has no cause of action against GE or ACF for trespass to the South Valley aquifer *separate and apart* from injury to the groundwater. See supra at 26. While we can envision a case where *irreparable* damage to groundwater might require the acquisition of some sort of "reservoir" as part of a natural resource replacement plan, this is not that case. As the district court ably recognized, the State as guardian of the public trust has no possessory interest in the sand, gravel, and other minerals that make up the aquifer – a necessary requisite to maintaining a trespass action. See Schwartzman, Inc. v. Atchison, Topeka & Santa Fe Ry., 857 F. Supp. 838, 844 (D.N.M. 1994).

³⁷ We leave for another day the question of whether state law NRD claims such as New Mexico's may interfere with CERCLA's obvious preference for claim settlement. See Bedford Affiliates, 156 F.3d at 427 (CERCLA's statutory settlement scheme "was put in place to aid the expeditious resolution of environmental claims") (referencing 42 U.S.C. § 9613(f)); see also 42 U.S.C. § 9622.

its original form would seriously disrupt CERCLA's principle aim of cleaning up hazardous waste.

Under the logic of the State's approach, hazardous waste sites need never be cleaned up as long as PRPs are willing or required to tender money damages to a state as trustee. Similarly, PRPs conceivably might be liable for double recovery where a state's successful state law claim for money damages precedes an EPA-ordered cleanup. Finally, in a case where an NRD claim is premised upon both CERCLA and state law, a portion of the recovery if earmarked for the state law claims could be used for something other (for example, attorney fees) than to restore or replace the injured resource. The remainder of the NRD recovery, earmarked for the CERCLA claim, would then be insufficient to restore or replace such resource. Clearly, permitting the State to use an NRD recovery, which it would hold in trust, for some purpose other than to "restore, replace, or acquire the equivalent of" the injured groundwater would undercut Congress's policy objectives in enacting 42 U.S.C. § 9607(f)(1). See Ouellette, 479 U.S. at 494 ("A state law is also preempted if it interferes with the methods by which the federal statute was designed to reach [its] goals.").

B.

Having thus defined and narrowed the scope of the State's NRD claim against Defendants GE and ACF, we turn to the underlying merits of the State's arguments in support of NRDs as a result of groundwater contamination in the South Valley. The State essentially seeks to hold GE and ACF liable for both replacement and loss of use costs. According to the State, the CERCLA-mandated remediation process is both underinclusive and inadequate in that (1) a portion of the contaminated groundwater lies outside the parameters of the remediation and (2) the remainder of the contaminated groundwater cannot be restored to below the State's

maximum contaminant levels, *i.e.*, appropriate water quality standards. The State further argues it has lost the interim right to appropriate the South Valley's contaminated groundwater for beneficial use. We address these arguments in turn, dismissing the former and rejecting the latter.

1.

Despite the State's contrary assertion, its expert-intense argument that the remedial phase of the cleanup does not address the entirety of the contamination and will not restore the groundwater to beneficial use as drinking water is, in all respects, a challenge to an EPA-ordered remediation. In its opening brief, the State repeatedly takes aim at the ongoing remediation. The State argues the EPA is not applying the "proper remediation standard[s]." The State complains the EPA "abandon[ed] the ROD and require[d] remediation of only the shallowest portion of the total plume." The State attacks the remediation as "limited in scope" and argues the remediation "leaves a substantial portion of contaminated water untreated." The State's assertions are contrary to both the EPA's and NMED's view that the remediation system, which we have described extensively, (a) has fully captured the contaminant plume in the South Valley, (b) is successfully restoring the groundwater to drinking water standards, and (c) will continue to operate until restoration is complete. See supra 12-18; 31-34.

Of course, any challenge to the remediation in the South Valley must wait because CERCLA "protects the execution of a CERCLA plan *during its pendency* from lawsuits that might interfere with the expeditious cleanup effort." McClellan Ecological Seepage Situation v. Perry, 47 F.3d 325, 329 (9th Cir. 1995). Absent certain exceptions inapplicable to this case (including most notably an NRT's NRD lawsuit under § 9607), CERCLA § 9613(h), entitled "Timing of review," provides: "No Federal Court shall have jurisdiction . . . under State law . . .

to review any challenges to removal or remedial action selected” 42 U.S.C. § 9613(h). Commenting on said section, we have explained: “To the extent a state seeks to challenge a CERCLA response action, the plain language of § 9613(h) would limit a federal court’s jurisdiction to review such a challenge.” Colorado, 990 F.2d at 1576.³⁸ In other words, “[t]he obvious meaning of [§ 9613(h)] is that when a remedy has been selected, no challenge to the cleanup may occur prior to completion of the remedy.” Schalk v. Reilly, 900 F.2d 1091, 1095 (7th Cir. 1990); see also Perry, 47 F.3d at 338-331; Alabama v. United States Env’tl. Prot. Agency, 871 F.2d 1548, 1557-59 (11th Cir. 1989); H.R. Rep. No. 99-253(I), at 81, reprinted in 1986 U.S.C.C.A.N. 2835, 2863 (“[T]here is no right to judicial review of the [EPA’s] . . . implementation of response actions until after the response actions have been completed”). Because the State’s lawsuit calls into question the EPA’s remedial response plan, it is related to the goals of the cleanup, and thus constitutes a “challenge” to the cleanup under § 9613(h). See Broward Gardens Tenants Ass’n v. United States Env’tl. Prot. Agency, 311 F.3d 1066, 1072-73 (11th Cir. 2002).

The State’s argument that it is not seeking to alter or expand the EPA’s response plan but rather only to acquire money damages falls on deaf ears. Any relief provided the State would substitute a federal court’s judgment for the authorized judgment of both the EPA and NMED (lest we forget an arm of the State) that the cleanup is not only comprehensive but flexible and dynamic, readily adjusting as new data is received. See supra nn. 14 & 16. Accepting the

³⁸ Consistent with our interpretation of § 9613(h), we further noted in Colorado that “while the ARAR’s provision [42 U.S.C. § 9621] requires the [EPA] to allow a state to participate in remedial planning and to review and comment on remedial plans, *it only allows states to ensure compliance with state law at the completion of the remedial action.*” 990 F.2d at 1581 (emphasis added).

State's argument might place GE and ACF in the unenviable position of being held liable for monetary damages because they are complying with an EPA-ordered remedy which GE and ACF have no power to alter without prior EPA approval. No one doubts that § 9613(h) would prohibit us from entertaining a state law action requesting mandatory injunctive relief to alter or expand the ongoing response plan in the South Valley. See City and County of Denver, 100 F.3d at 1512 (recognizing preemption occurs where a party cannot comply with both federal and state directives). We will not permit the State to achieve indirectly through the threat of monetary damages, which would be available only to restore or replace the injured natural resource, what it cannot obtain directly through mandatory injunctive relief incompatible with the ongoing CERCLA-mandated remediation. See Feikema v. Texaco, Inc. 16 F.3d 1408, 14-18-19 (4th Cir. 1994) (Murnaghan, J., concurring); see also Ouellette, 479 U.S. at 498 n. 19 (recognizing that compensatory damages may have the same effect on a polluter as direct regulation imposed through injunctive relief); Ohio, 880 F.2d at 481 (“[A]ll sums recovered” for injury to the public’s natural resources “*must* be devoted to restoration of damaged resources or acquisition of equivalents.”) (emphasis added).

The State's argument that remediation in the South Valley is not working as the EPA and NMED claim constitutes a dispute over environmental cleanup methods and standards. See ARCO Env'tl. Remediation, L.L.C. v. Department of Health and Env'tl. Quality, 213 F.3d 1108, 1115 (9th Cir. 2000). So viewed, § 9613(h) reflects Congress's judgment that residual injury, if any, to the South Valley's groundwater be addressed at the conclusion of the EPA-ordered remediation. Cf. Proposed Rulemaking Notice, 61 Fed. Reg. 37031-01 (July 16, 1996) (“Trustees may recover damages for those natural resource injuries that are not fully remedied by response actions[.]”). Only then will we know the effectiveness of the cleanup and the precise

extent of residual damage. See City of Santa Fe v. Komis, 845 P.2d 753, 756 (N.M. 1992) (“Damages which are speculative, conjectural, or remote are not to be considered for compensation.”) (internal quotations omitted). Our view is entirely consistent with the State’s most recent characterization of its NRD claim in its reply brief as “residual to a CERCLA remedy.” Accordingly, we will dismiss for want of jurisdiction under § 9613(h) the State’s claim for monetary damages arising from the alleged inadequacy of the EPA’s selected remedy in the South Valley. Because under the common law the State is not subject to a statute of limitations, it may renew its common law claims for residual damages under state law if and when necessary. See In re Bogert’s Will, 329 P.2d 1023, 1025 (N.M. 1958) (recognizing the statute of limitations does not run against the sovereign unless expressly or by necessary implication provided).

2.

Lastly, we address the State’s loss-of-use damage theory, namely, the State’s argument the contamination in the South Valley has deprived it of the right to appropriate groundwater for beneficial use in that area.³⁹ As we have seen, the State’s groundwaters are public waters subject to appropriation for beneficial use. See N.M. Stat. Ann. § 72-12-1. State law vests the State

³⁹ As our analysis demonstrates, we have no quarrel with the general proposition that the State, in its capacity as trustee of the State’s groundwaters, is entitled to recover for all interim loss-of-use damages on behalf of the public from the time of any hazardous waste release until restoration: “[L]ost use damages incurred by the public prior to cleanup are damages that, in a layman’s terms, remain on the debit side of the ledger after cleanup, and are, in fact, unredressed damages for which the trustee[] may recover.” Alaska Sports Fishing Ass’n v. Exxon Corp., 34 F.3d 769, 772 (9th Cir. 1994). Any such remedy, however, must be tailored to redress specific injury to the State’s role as trustee, *i.e.*, its role of making water available for appropriation and beneficial use by water rights holders. Claims of impairment of beneficial use are better left to water rights holders whose uses are impaired. See Michael L. Rodburg & Timothy L. Borkoski, New Mexico v. General Electric: A Cautionary Tale, 176 N.J. Law J. 720, at 2 (May 31, 2004).

Engineer with oversight of those groundwaters. See id. § 72-2-1. In a declared underground basin such as that underlying the South Valley, would-be appropriators must apply to the State Engineer for a water rights permit. See id. § 72-12-3.A. The State Engineer may issue a permit *only* if he or she finds unappropriated waters are available and existing water rights would remain unimpaired. See id. § 72-12-3.E. The State’s position, accepted by neither the State Engineer nor NMED, is that absent the contamination, additional groundwater would be available for appropriation in the South Valley notwithstanding the replacement of SJ-6 with B-4. See supra, at 4-10. We conclude, however, the district court was quite correct in concluding the State failed to present any evidence on which a reasonable jury could find such availability and thus loss-of-use damages.

The Rio Grande Compact equitably apportions waters of the Rio Grande River among New Mexico, Texas, and Colorado. See 53 Stat. 785 (1939), reprinted at N.M. Stat. Ann. § 72-15-23; see generally City of El Paso v. Reynolds, 563 F. Supp 379, 383-84 (D.N.M. 1983) (discussing the history of the Compact). The surface waters of the Rio Grande have long been fully appropriated. See City of Albuquerque v. Reynolds, 379 P.2d 73, 77 (N.M. 1962). As part of the Middle Rio Grande Underground Water Basin, the groundwaters underneath the South Valley are located less than a mile from the river and “contribute substantially to the flow of the Rio Grande, thus constituting a part of the source of the stream flow.” Id. Because appropriation of groundwaters from the basin affect the surface flow of the Rio Grande, the State Engineer has the authority to require that previously appropriated water rights affecting such flow be retired as a condition to new appropriations of underground water from the basin. Id. at 80-81;⁴⁰ see

⁴⁰ In Reynolds, the court upheld the State Engineer’s decision to deny the City of Albuquerque the right to place wells in the underground basin unless the city retired its existing

generally A. Dan Tarlock, Law of Water Rights and Resources § 6:20 (2006) (discussing the integration of surface and groundwater rights in New Mexico).

According to the State Engineer's "Guidelines for Review of Water Rights Applications" in the "Middle Rio Grande Administrative Area" (MRGAA), a region which includes the South Valley: "Since the declaration of the Rio Grande Underground Water Basin, . . . groundwater permittees have been required to obtain valid water rights in an amount sufficient to offset the effects of their diversions on the surface flows of the Rio Grande stream system." "The public welfare is best served by limiting actual groundwater diversions within the MRGAA to the amount of valid surface water rights transferred or otherwise held by the permittees, plus the amount of water the permittee returns directly to the river." In other words, new appropriations of groundwater in the South Valley are unavailable absent an offset of existing water rights. Thus, additional groundwater in the South Valley, *for reasons unrelated to the contamination*, is not as readily available for appropriation as the State would have us believe.

Because B-4 provided a point of groundwater diversion outside the parameters of the contamination surrounding SJ-6, we presume all existing water rights in the South Valley are being and have been satisfied. The State has proffered little except bald assertions to suggest otherwise. At oral argument, the court asked the State whether since the startup of B-4 any water rights holders in the South Valley had complained about impairment of those rights or the lack of available water. The court further inquired whether any potential appropriators had been denied permits *due to* the contamination. In neither instance could the State point to an example.

Notably, the groundwater contamination in the South Valley apparently has not prevented the

surface rights to offset the effect of new groundwater pumping on the flow of the river. See Reynolds, 379 P.2d at 81.

City of Albuquerque, the principle holder of appropriated water rights in the South Valley from extracting and using the water to which it is entitled. That's because B-4 "replaced" SJ-6. Viewed alternatively, when B-4 was placed in operation, the State "acquired the equivalent" of the resources it lost when SJ-6 was decommissioned. See 42 U.S.C. § 9607(f)(1). As we have seen, this is precisely the principle measure of damages to which the State is entitled. If a contaminated natural resource such as groundwater can be replaced in a timely manner pending restoration, we have difficulty envisioning any significant loss-of-use damage. Thus, the district court properly entered summary judgment in favor of GE and ACF on the State's loss-of-use damage theory.

IV.

Consistent with the foregoing, the State's NRD claim for injury residual to the outcome of the EPA-ordered remediation in the South Valley, based on state law theories of nuisance and negligence, is dismissed for want of jurisdiction. 42 U.S.C. § 9613(h). Although our analysis is largely but not entirely in accord with the district courts', the court's entry of summary judgment in favor of Defendants GE and ACF is nonetheless in all other respects affirmed.

AFFIRMED IN PART and DISMISSED IN PART.