Natural Resources Restoration Plan for the South Valley Superfund Site, Albuquerque, New Mexico

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1. Introduction, Purpose, and Authority

The Natural Resources Restoration Plan for the South Valley Superfund Site (RP) has been prepared by the New Mexico Office of Natural Resources Trustee (ONRT) to address restoration actions arising from natural resource damage settlements at the South Valley Superfund Site (Site) in Albuquerque, New Mexico.

Between 1998 and 2006, ONRT[1] received $4.8 million in settlement funds for use toward natural resource restoration. The State sought these settlements because contamination at the Site had injured natural resources under State trusteeship authority. Trustees are required to use the settlement money to plan and implement restoration actions designed to compensate the public for natural resource injuries. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, commonly known as the Federal "Superfund" law) designates natural resource Trustees, and requires that before the settlement monies can be used for restoration activities, a Restoration Plan must be developed with a minimum of a 30-day public notice and comment period. This RP was developed in accordance with those requirements. Public notice comments and ONRT's responses to these comments are presented in Section 5 of this plan.

This RP provides information regarding the affected environment, describes and evaluates the different restoration alternatives considered, and explains the selection of the restoration projects that ONRT proposes to implement to compensate for groundwater injuries at the Site.

According to the guidance provided by Federal natural resource damage assessment (NRDA) regulations [43 CFR § 11.82(d)], the selected alternative is to be feasible, safe, cost-effective, address injured natural resources, consider actual and anticipated conditions, have a reasonable likelihood of success, and be consistent with applicable laws and policies. The selected restoration actions also must not conflict with the ongoing cleanup projects at the Site.

The restoration actions proposed in this document are based on conceptual plans that do not yet include full engineering design details. At this time ONRT will commence planning and implementation of selected restoration projects.

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1. Under Section 107(f) of the CERCLA, 42 USC § 9607(f), Section 311 of the Clean Water Act (CWA), 33 USC § 1321, and other applicable law, including Subpart G of the National Contingency Plan (NCP), 40 CFR §§ 300.600-300.615, the governor of each state appoints a Trustee for natural resources. The New Mexico Natural Resources Trustee, acting through the New Mexico Office of Natural Resources Trustee (collectively, "ONRT"), is the designated natural resource Trustee for the State of New Mexico. ONRT derives additional authority from the New Mexico Natural Resources Trustee Act, NMSA 1978, §§ 75-7-1 to- 45 (1993).

1.1 Overview of the Site

The Site covers about 2 square miles in the South Valley of Albuquerque, New Mexico, near the Rio Grande in an industrial portion of the city (Figures 1 and 2). Industrial operations at the Site began in the 1950s. The soil and groundwater at the Site were contaminated with organic solvents, metals, pesticides, and volatile organic compounds (VOCs) (U.S. EPA, 1983, 2007a). In 1979, wells in the San Jose well field became contaminated by organic compounds, which forced the closure of over 20 private wells and two Albuquerque municipal wells (U.S. EPA, 2007a). Numerous individual sources of contamination at the Site are suspected of contributing to the problem. The Site was proposed for inclusion in the National Priorities List (NPL) ("Superfund" list) on July 23, 1982 (U.S. EPA, 2007a).

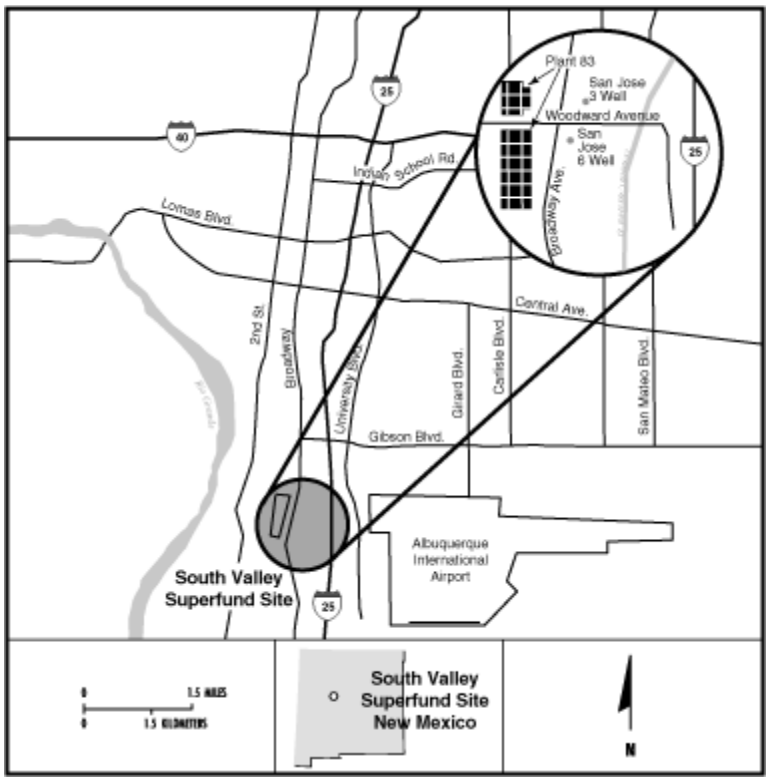

Figure 1. South Valley Superfund Site location.

Source: U.S. DOE, 2007.

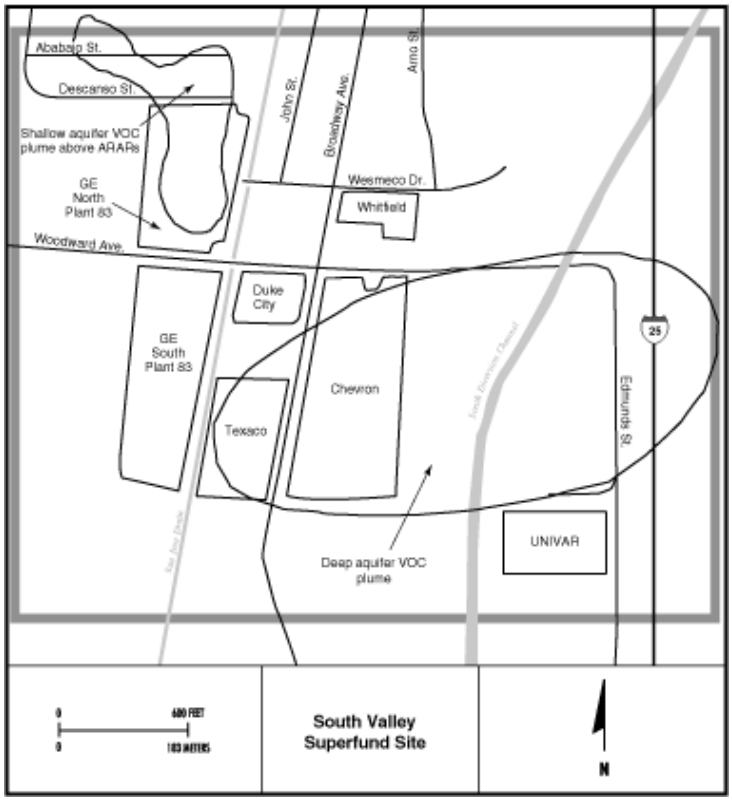

Figure 2. South Valley Superfund Site plume location.

Source: U.S. DOE, 2007.

In 1983, the U.S. Environmental Protection Agency (EPA) placed the Site on the NPL (U.S. EPA, 1983). In 1988, EPA determined that the groundwater should be remediated to meet Federal and State drinking water standards. In 1996, the Federal responsible parties [U.S. Departments of Energy (DOE) and Defense (DOD) and the U.S. Air Force (USAF)] and General Electric began cleanup operations to address the groundwater contamination.

The principal contaminants released at the Site include (U.S. EPA, 2007a):

- Halocarbons (1,1-dichloroethene, trichloroethylene, 1,1,1-trichloroethane, tetrachloroethylene) in shallow groundwater and the upper part of the deep zone
- Aromatics (benzene, ethlybenzene, toluene, xylene) in shallow groundwater
- Low-level halocarbons and high-level aromatics in the upper 60-feet of the intermediate groundwater.

In 1998, the State filed a natural resource damages claim for contamination of State resources under both State and Federal laws, including the CWA and CERCLA. The State identified the DOE, DOD, USAF, General Electric, ACF Industries, Chevron USA, Chevron Pipeline, Co., Texaco Pipeline, Texaco Refining and Marketing and Phillips Pipeline Co., West Emerald Pipeline Corp., Diamond Shamrock, the ATA Group, Giant Industries Arizona Inc., Duke City Distributing Co., and Whitfield Tank Lines as potentially responsible parties (State of New Mexico v General Electrical Company et al. Case Nos. CIV 99-1254, CIV 99-1470 and CIV 99-1118).

In early 2006, settlement was reached with a portion of the contributors to the groundwater contamination. As a result of these settlements, ONRT has $4.8 million available for restoration planning and implementation. This RP focuses on the use of these settlement funds to identify and implement appropriate restoration projects.

1.2 NRDA Restoration

NRDA is a process by which Trustees of natural resources determine what types of, and how many, restoration actions are necessary to compensate the public for injuries to natural resources. Restoration is the act of creating or improving natural resources and the services those resources provide to the public. The measure of compensation is the "cost of restoration, rehabilitation, replacement, and/or acquisition of the equivalent of the injured natural resources and the services those resources provide" [43 CFR § 11.80(b)].

Restoration is necessary to compensate for natural resource injuries that occurred before any cleanup activities of the Site, and to compensate for any residual natural resource injuries that may still exist after cleanup.

The money recovered in NRDA settlements can only be used to restore, rehabilitate, replace, or acquire the equivalent of the natural resources injured, destroyed, or lost as a result of the release of hazardous substances [42 USC § 9607(f)]**.** The amount of restoration required to compensate for the resource injuries depends on the size of the area, what types of resources are injured, the overall severity of the injuries, and the time period over which the resources are injured, including any injury that remains after cleanup.

1.3 Public Participation

Outreach activities and restoration planning activities began in 2006 with three open houses. Restoration project suggestions and comments were received during the public outreach. Public review of the Draft RP was an integral part of ONRT's restoration planning process. The public

comment period for the Draft RP and the proposed projects was from September 10 through October 9, 2007. A public meeting was held on September 12 in the South Valley on the Draft RP. Comments received were evaluated and incorporated into the finalization of this Plan. Section 5 provides a list of the comments received and ONRT's response to those comments.

1.4 Administrative Record

To facilitate public participation, ONRT has compiled an administrative record containing documents used by ONRT in the restoration planning process. An index to the administrative record can be found in Appendix A.

The administrative record can be viewed at the following location:

New Mexico Office of Natural Resources Trustee
610 Gold Avenue SW, Suite 236
Albuquerque, NM 87102
(505) 243-8087

Arrangements should be made in advance to review the record by calling or mailing ONRT at the above location.

1.5 Organization of this Document

The remainder of this document is organized as follows: Section 2 describes the affected environment, Section 3 presents the restoration goals and plan development, Section 4 presents the restoration alternatives, and Section 5 provides public comments and ONRT's response to those comments. References cited in the text are provided at the end of this RP.

2. Affected Environment

2.1 Physical Environment

Part of the Middle Rio Grande Underground Water Basin (Middle Rio Grande Basin) lies beneath the South Valley. The Middle Rio Grande Basin covers an area from Otowi Gauge near north Los Alamos to Elephant Butte Reservoir approximately 100 miles to the south. It contains approximately 1.2 billion acre-feet of groundwater and has a surface area of about 1.5 million acres. The contamination affects a surface area of about 640 acres (U.S. EPA, 2007b).

2.2 Cultural Environment

The South Valley is located in Bernalillo County, southwest of Albuquerque, between Old Coors Rd. and the Pan American East Freeway (Figure 3). The population of the South Valley is 39,000 (2000 Census data). Seventy-seven percent of the population is Hispanic. The great majority of the population are long-time residents of the area, descendents of the original 18th century Spanish/Mexican settlers. In the past two decades, a growing number of Mexican immigrants have moved into the South Valley, using it as an initial staging area for settling and working in the metropolitan area. Many new small businesses have started up in the South Valley, most of them owned and operated by these Mexican immigrants. These small businesses are predominantly restaurants, repair shops, retail clothing stores, and other businesses providing services targeted at the immigrant community. Twenty-two percent of South Valley residents are below the poverty level and 77% are at or barely above the poverty level (VOCES, 2006).

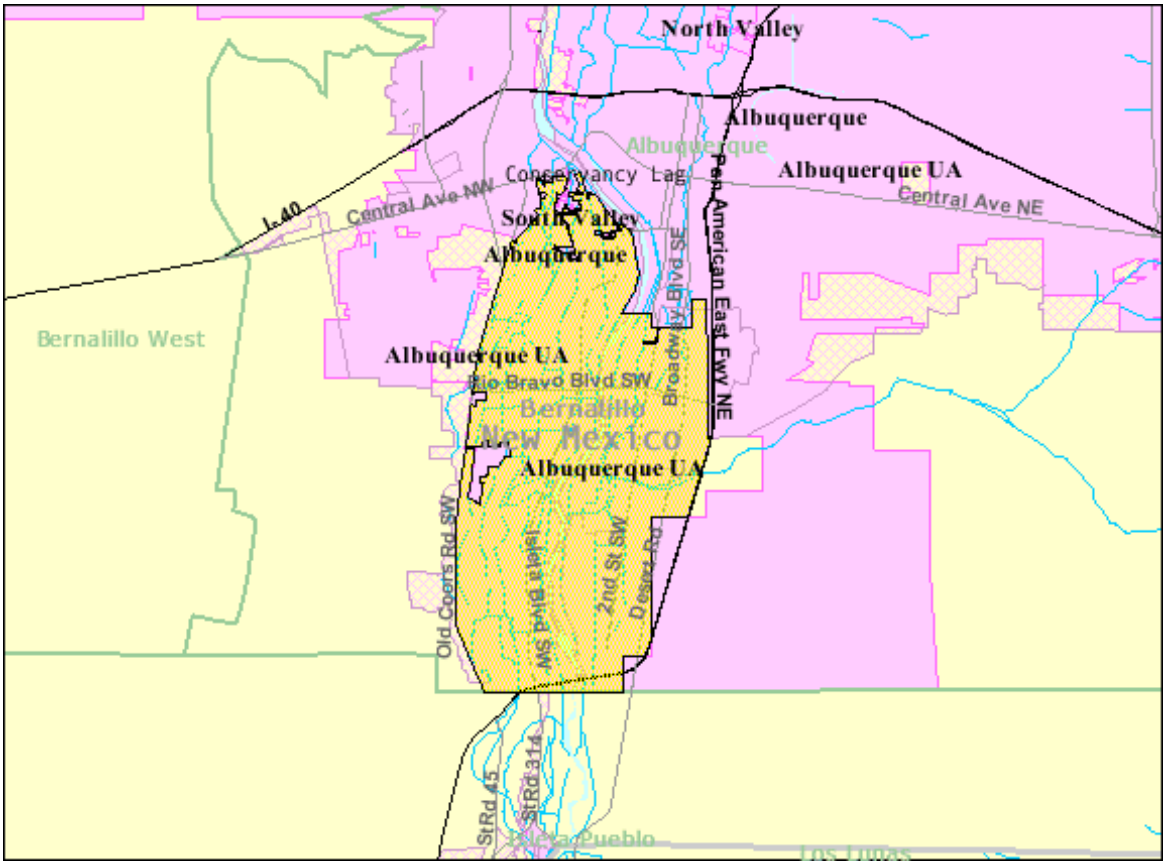

Figure 3. South Valley census urbanized area.

Source: U.S. Census Bureau, 2007.

3. Restoration Goals and Plan Development

This section describes the process used by ONRT to develop this RP. The process included identifying goals for restoration to address groundwater injuries, developing evaluation criteria for restoration alternatives, soliciting input from the public that resulted in a wide range of potential restoration alternatives, and applying the restoration goals and criteria to the identified restoration alternatives.

Restoration planning process

The restoration planning process began with ONRT developing restoration goals for the settlement money and identifying project screening and evaluation criteria. Next, a range of restoration alternatives was solicited (see Section 3.3). An initial round of screening and evaluation identified high-priority projects that were further evaluated. After conducting additional evaluation on those projects, ONRT identified a proposed restoration project. Depending on the cost to implement the final set of selected restoration actions, there may be funds available in the future for additional restoration actions. Therefore, ONRT has also identified potential supplemental projects that may be implemented pending availability of funds.

3.1 Goals for Restoration

The goal of ONRT is to restore, rehabilitate, replace, enhance, or acquire the equivalent of the natural resources and natural resource services that were injured as a result of groundwater contamination at the Site. In accordance with both ONRT policy and CERCLA [USC 42 §9607 (f)(1)], restoration projects should have a strong relationship to the injured resources and the services they provide. In this particular case, the projects should have a strong linkage to water resources and the services they provide to the ecosystem and humans.

ONRT has adopted a policy of favoring “in-kind” restoration, which means that restoration should focus on restoring the same types of resources as the ones that were injured. This is sometimes termed “like for like” restoration. In contrast, “out of kind” restoration restores resources that are different from the ones that were lost but that provide similar services as those that were lost. These projects are given lower priority compared to in-kind projects, but can be reasonable substitutes if in-kind projects are not feasible.

3.2 Evaluation Criteria for Restoration Alternatives

ONRT developed criteria to evaluate how well the different possible restoration projects meet the stated goals of the restoration. There are two basic categories of restoration selection criteria: screening and evaluation. Screening criteria are used as the first step in project evaluation. Projects must pass the screening criteria before they can be considered further in the evaluation process. Evaluation criteria are then used to evaluate and rank potential restoration projects.

3.2.1 Screening criteria

Screening criteria were used as a first step in project evaluation. ONRT used the following screening criteria to determine whether proposed projects met minimum standards of acceptability. To be acceptable, a project must meet all of the following screening criteria:

- Project is consistent with ONRT goals
- Project is technically and administratively feasible with limited planning costs
- Project is strongly connected to improving water resources
- Project provides an overall net benefit to the environment.

3.2.2 Evaluation criteria

Evaluation criteria were then used to evaluate and rank the restoration projects that passed the screening criteria. These criteria reflect the priorities for restoration, and projects are evaluated against them qualitatively (rather than pass-fail as for the screening criteria). The following evaluation criteria were applied to the set of projects that passed the initial screening:

- Project provides benefits quickly and benefits will last for a long time
- Project has a high potential for long-term success
- Project can provide the identified benefits cost-effectively
- Project location.

3.3 Soliciting and Formulating Restoration Alternatives

In developing this RP, ONRT solicited restoration alternatives, and formulated additional alternatives, based primarily on three open houses held in the South Valley between November 2006 and January 2007 and on comments received during a public comment period from November 1, 2006 through January 31, 2007. Restoration suggestions were received from the following organizations and agencies, as well as from private citizens:

- Albuquerque City Councilor (District 3)
- American Friends Service Committee
- Amigos Bravos
- Bernalillo Commissioner (District 2)
- Bernalillo County Office of Environmental Health
- Bernalillo County Public Works
- East San Jose Elementary
- Mountain View Neighborhood Association.
- New Mexico Environment Department (NMED)
- NM Senator (District 14)
- Pajarito Mesa Mutual Domestic Water Consumer Association (MDWCA)
- Rio Grande Agricultural Land Trust (RGAG)
- South Valley Academy
- South Valley Partners for Environmental Justice (SVPEJ)
- Southwest Organizing Project (SWOP)
- State Representative (House District 10).

4. Restoration Alternatives

A total of $4.8 million has been allocated for restoration planning and implementation of restoration projects. Because this sum is not sufficient to cover all the restoration alternatives that were suggested, the list of alternatives was narrowed down to those alternatives that carry out the intent of the NRDA regulations, are consistent with restoration goals outlined in this RP, and are cost-effective. Below we describe the proposed alternative, supplemental proposed alternatives, and non-selected restoration alternatives developed from the identified projects.

4.1 The Proposed Alternative

Groundwater cleanup is ranked as the favored project category type. The proposed project, cleaning up the South Valley nitrate plume, is expected to clean up contaminated groundwater as well as prevent future groundwater contamination. The following sections describe and evaluate the proposed project.

4.1.1 Proposed project description

ONRT's proposed restoration project is the cleanup of the South Valley groundwater nitrate plume located in Albuquerque's South Valley east of the Rio Grande near the mouth of Tijeras Arroyo.[2] This is a site of historical contamination for which no other sources of funding for cleanup are available. The suspected source of contamination is over-fertilization of a farm that operated from sometime after WWII to the early 1970s. The plume was first discovered in 1961 and is considered an "orphan" plume since there is no viable responsible party upon which to enforce regulatory requirements. The plume occupies a volume of approximately 1 square mile and 30-feet deep in the uppermost saturated Rio Grande valley-fill sediment (Figure 4). The plume is estimated to have a volume of 5,189 acre-feet (Nuttall and Dutta, 2004). The current maximum concentration of nitrate-nitrogen (nitrate) is greater than 350 milligrams per liter (mg/L). The State groundwater standard and drinking water standard for nitrate is 10 mg/L.

ONRT is proposing a phased approach to the cleanup of the South Valley nitrate plume. The first phase would be a site assessment and evaluation, which is necessary to determine the specific groundwater treatment locations and determine the need for soil remediation. The second phase would be the cleanup of the groundwater, and, if necessary, soil cleanup. In the second phase, In-Situ Biodenitrification (ISBD) is the proposed cleanup method. ISBD is a technology to clean up nitrate plumes in which the cleanup occurs in place; the groundwater does not need to be pumped out to be treated. In ISBD, a food source is injected into the contaminated plume to stimulate native bacterial growth. As the native bacteria in the groundwater grow and consume the injected food, nitrate is converted into harmless nitrogen gas.

There is a high probability that the soil underneath the farm is also contaminated with nitrate, which, if not addressed, could continue to contaminate groundwater even if actions to clean up the groundwater are taken. ONRT's first step in conducting the groundwater cleanup is to complete a one-year soil and groundwater assessment, the results of which will determine if soil cleanup is also necessary.

If soil contamination needs to be addressed, ONRT would remove the potential for recontamination of groundwater through either the removal or isolation of contaminated soils in the most cost-effective manner.

2. The project was proposed by Bart Faris of NMED. The following description is based on his project description dated May 15, 2006 and updated July 23, 2007.

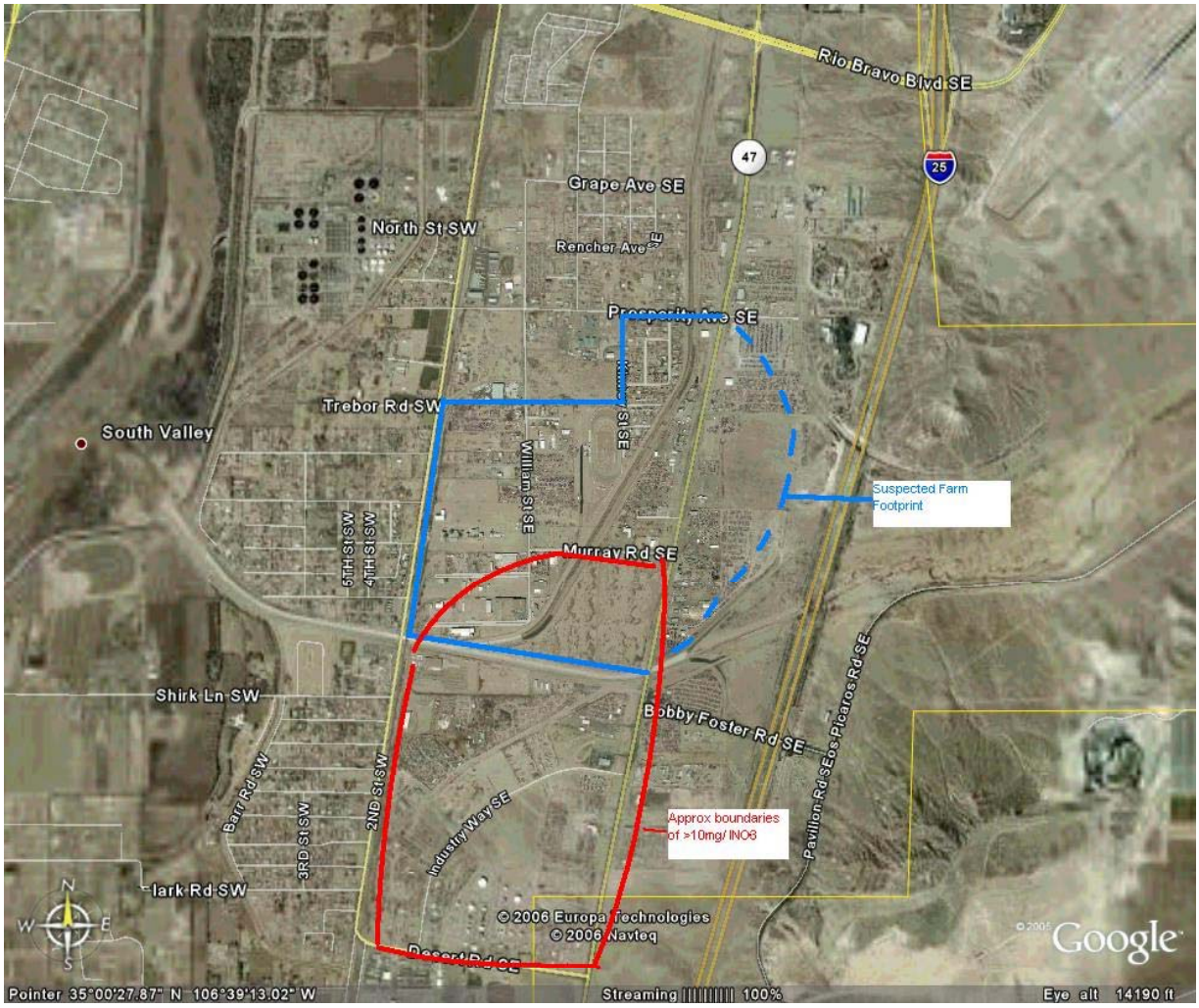

Figure 4. Location of the South Valley nitrate plume outlined in red.

Source: Bart Faris, NMED.

4.1.2 Project objectives

The objective of this project is to reduce the nitrate level in this aquifer below State standards to return this groundwater aquifer to usable conditions. The objective is also to prevent future recontamination from soils.

4.1.3 Probability of success

The probability of success is high. Three ISBD pilot projects, funded independently of this process, have been conducted at this nitrate plume. Each pilot project has demonstrated the complete reduction of nitrate to nitrogen gas in a matter of days. ISBD has been successfully completed at other locations in the United States, including Massachusetts, Tennessee, and North Carolina. Based on the on-site pilot projects and other sites, the probability of success of a full-scale remediation project is high.

4.1.4 Performance criteria and monitoring

Success of this project will be measured through groundwater monitoring to verify the nitrate concentration cleanup levels are reached and maintained. The monitoring will occur periodically in years 1, 3, and 5 of the project. Soil monitoring will also occur in subsequent years to ensure the risk of future recontamination has been eliminated or minimized.

4.1.5 Benefits and environmental impacts (direct and indirect)

The expected benefits of this project are that the plume of 5,189 acre-feet of groundwater will be cleaned up and the risk of spreading the contamination through groundwater migration will be eliminated or decreased.

Possible unwanted side effects of in-situ bio barriers are limited to possible decreases in the effectiveness of the cleanup as it progresses. These include clogging in the subsurface or loss of effective permeability in the aquifer as a result of factors such as biofilm buildup in the aquifer, mineral precipitates forming during the redox process, and gas bubbles from nitrogen and carbon dioxide generation. There are no known effects on human health or safety from the use of in-situ biobarriers.

4.1.6 Evaluation of the alternative

The cleanup of the plume is calculated to be cost-effective and feasible and is expected to benefit the injured resource (groundwater) in close proximity to the injury.

4.1.7 Project costs

The current estimated cost of cleaning up the South Valley nitrate groundwater plume is approximately $2.5 million. These costs include site evaluation, project implementation, and monitoring. In the event that the detailed site evaluation indicates that containment of contaminated soil above the plume is necessary, costs will increase. While the specific costs to contain the soils to levels that will not pose a potential risk of future contamination to the groundwater cannot be known until phase one of the project is completed, cost-effective methods for soil containment exist.

4.2 Trustee's Supplemental Proposed Alternative

In the event that funds remain after the cleanup of the South Valley groundwater nitrate plume, ONRT has identified a supplemental proposed restoration project. This supplemental project is to pay for connections to the municipal sanitary sewer and/or water systems for residents who currently use septic systems or domestic drinking water wells and who did not qualify for the Bernalillo County Public Work Partners in Improvement and Protection of the Environment (PIPE) assistance program.

4.2.1 Project description

The Bernalillo County Public Works Department ran a program that provided financial assistance to help qualified homeowners who were previously using septic tanks and well water and to connect to the municipal sanitary sewer and water systems. The county estimates that around 193 dwellings were not connected to the sanitary sewer system, and about 84 dwellings were not connected to the municipal water system due to financial assistance limitations. This project proposes to connect some or all of these remaining dwellings to both the municipal water system and the wastewater sewer system. The actual number of dwellings connected will depend on funding availability.

4.2.2 Project objectives

The objectives of this project are twofold: (1) protect groundwater from future contamination by decreasing the use of septic systems, and (2) decrease the demand for groundwater by switching users from private wells (which use groundwater) to a municipal supply (which uses primarily surface water).

4.2.3 Probability of success

The probability of success of this project is high. In New Mexico, on-site septic systems have contaminated more acre-feet of groundwater and more public and private water supply wells than all other sources combined (McQuillan, 2004). By reducing the use of septic systems, the risk of groundwater contamination is decreased. Similarly, by providing residents with municipal water, their demand for well water will decrease.

4.2.4 Performance criteria and monitoring

The success of this project depends on the decreased use of septic systems and the decreased demand for groundwater consumption.

4.2.5 Benefits and environmental impacts (direct and indirect)

The expected environmental benefits of this project are the prevention of groundwater contamination and decreased aquifer mining. Additional project benefits include providing cleaner, more reliable drinking water to local residents and decreased externalities from the use of septic systems (e.g., odor).

4.2.6 Project costs

The estimated cost of this project, in the form of financial assistance to each household, is approximately $3,500 per house for hookup to the municipal drinking water system and around $4,100 to connect to the sewer system. Total costs of the project will depend on available funds but are not expected to exceed $1.5 million.

4.2.7 Evaluation of the alternative

The project is expected to benefit groundwater that is near the injured groundwater at the Site. Removing septic systems from the region and changing water supplies to the municipal system will provide a reliable source of clean drinking water and will improve both the quality and quantity of groundwater in the region.

4.3 Non-selected Alternatives

A number of additional projects were identified as potential restoration alternatives but ultimately not selected by ONRT. Below we describe these projects and why they were not selected.

Several identified projects were ultimately considered to be out-of-kind when evaluated for a direct relationship to the improvement of the quality or quantity of water resources in the area. These projects, which were given lower priority compared to in-kind projects, include:

- Create open space
- Create an industry watch
- Create environmental education/stewardship program
- Provide farm equipment to the South Valley Academy
- Protect the Pajarito Mesa from development.

Several projects were identified as in-kind restoration yet had a weaker link to water resources than the proposed projects and were thus given lower priority. These projects include:

- Clean up farmlands using biodiesel-producing plants – this project has the potential to benefit groundwater by preventing runoff from contaminating surface and possibly groundwater. The degree of potential benefits strongly depends on the amount of precipitation (which is low for the area) and the connectivity of the farmland runoff to the groundwater aquifer.

- Plug abandoned wells in San Jose and Mountain View – this project has the potential to benefit groundwater by preventing the contamination of precipitation in the abandoned wells and thus preventing contamination of groundwater. The degree of potential benefits also strongly depends on the amount of precipitation (which is low for the area) and the connectivity of the wells to the groundwater aquifer.

- Restore abandoned auto recycling facilities – restoration actions of this type can help prevent contamination of groundwater by cleaning up contamination that can be washed into surface and groundwater following precipitation events. Again, benefits of this type are strongly dependent on precipitation and connectivity.

- Improve drainage in Mountain View – this project involved implementing storm water catchments to prevent storm water runoff contamination. Restoration actions of this type can help prevent contamination of groundwater by either cleaning up contamination that can be washed into surface and groundwater following precipitation events or by limiting the flow of contaminated water from reaching clean water systems. To gain any benefits,

some type of water treatment would be necessary. Again, benefits of this type are strongly dependent on precipitation and connectivity.

- Create and restore South Valley acequias – this project involved the creation and restoration of acequias in the Mountain View and San Jose communities. Acequias would be used to irrigate residential gardens in the community, which has potential for strong social benefits. While ONRT recognizes the potential social benefits, these benefits do not directly address the groundwater resource injury that occurred at the Site and do not meet the restoration selection criteria developed to evaluate proposed restoration actions.

Several other projects were identified as in-kind and as having a strong connection to groundwater but were given lower priority because of the relationship of the expected costs to the expected benefits relative to the proposed projects. These projects include:

- Build infrastructure to connect dwellings to municipal water and wastewater water treatment plants – this project is expected to have the same benefits as the proposed supplemental project (Section 4.2), yet at a much higher cost.

- Provide small-scale, on-site, wastewater treatment plants – this project is also expected to have the same benefits as the proposed supplemental project (Section 4.2), yet at a much higher cost.

- Community water conservation program – the City of Albuquerque has an extensive water conservation program with which this would strongly overlap. Therefore, the project is expected to have limited to no additional benefits.

Several projects and types of projects were eliminated from further consideration because of the potential for negative net environmental impacts. The following projects/types of projects were removed for this reason:

- Create wetlands – creating wetlands in arid regions has the potential for increased evaporation and thus a net decrease in water resources.

- Create a reservoir in which to store potable water – the proposed project would pump groundwater from the aquifer and store it in a reservoir for future use. This would increase evaporation and thus lead to a decrease in water resources.

5. Public Comment

The public comment period on the Draft RP was from September 10 to October 9, 2007. A public meeting was held on the Draft RP in the South Valley on September 12, 2007. A total of nine comments were received; seven of which were received at the public meeting.

5.1 Comments Received

Table 1 provides attendees and their comments.

Table 1. Attendees and comments from the Public Meeting on the Draft RP[a]

Patty Grice, Mountain View Neighborhood Association	I am pleased to see the nitrate plume is getting cleaned up! I also think helping families get off septic tanks is an excellent idea. If there was a way to restore the acequias it would benefit the neighborhood.
Irma Aceves	I think that it's necessary information in Spanish with the following step that they are giving, and public announcements also should be in Spanish so that a community finds out. Here more than 50% of the population speaks Spanish. My expectation is a restoration of (1) Mountain View acequias, (2) the city helps with connecting to city water as in my house we use groundwater, and (3) watch that the industry complies with the rules to not contaminate the water.[b]
Julio Dominguez, Mountain View Neighborhood Association	The community wants to see that the remediated water stays in the community. The remediated water should be piped onto people's property for irrigation. Here there are still water rights in the area which can be used to continue irrigating our properties. Our sector plans calls for a 1,000 ft buffer with walking trails and plants and wetlands.
Alan Marks	I really love the idea of cleaning up the plume in the Mtn. View nitrate area. This has been a horrible problem for the affected area and residents. I commend the Trust for this choice.
Jacob Dimas	I understand that a nitrate plume is currently being remediated. However, I also understand that our acequias/ditches were forced to close down due to the contamination from the Superfund Site. It is important that the affected community benefit from the $4.8 million settlement. By cleaning that nitrate plume, new developments (Mesa del Sol, Sun Cal Corp) will benefit. By reopening the acequias (possibly through pipes), the San Jose/Mtn. View communities will benefit directly.
James and Yvonne E. Maestas	To open acequias that are closed – to help with funding to get water hook up and to the home we have lived in for 34 years. The well water is undrinkable.
Ric Watson, Mountain View Neighborhood Association	I am proud to see the efforts going to clean up the plume in the South of Mountain View. If excess funds are available I first wish that we could help those in need with sewage hookup and second provide better and more effective culverts to drain 2nd Street and the Kinney Brick area around and about Prosperity.

a. Copy edits have been made to some comments.
b. Comments translated from Spanish.

Two additional comments were received via e-mail and are presented in Appendix B.

5.2 Response to Comments

ONRT received a total of nine comments during the public review process for the Draft RP. The comments can be divided into four main categories: (1) support for the proposed project, (2) advocates to create and restore acequias in the Mountain View and/or the San Jose communities, (3) concerns that once groundwater is remediated under the Trustees' preferred project, that water will not be directly used in the community effected by the injury, and (4) other. ONRT carefully considered these comments. ONRT continues to believe that the proposed restoration options presented in the Draft RP meet the restoration goals to protect and restore water resources. The restoration options in the Restoration Plan have not been modified.

The following sections review the comments received and provide ONRT's responses. Reviewers of the Final Restoration Plan and this section are reminded that this plan is intended to address injuries to groundwater resources.

1. Five commenters[3] specified their support of the nitrate plume cleanup and three specified their support of the supplemental project of removing septic systems and connecting residents to municipal drinking systems.

2. Five commenters would like to see funds used to create and restore acequias. ONRT understands that creating and restoring acequias could have strong social benefits in the Mountain View and San Jose communities. In their request for funding, the Mountain View Neighborhood Association describes these social benefits as: "Restoration of the acequias will greatly enhance the economy and health of the communities by allowing for increased productivity of home grown produce and other farm products, community gardens and the overall quality of life in providing common green areas in the open space or public areas." ONRT recognizes these potential benefits; however, these benefits do not directly address the groundwater resource injury that occurred at the site and do not meet the restoration selection criteria developed to evaluate proposed restoration actions. We re-emphasize our commitment and responsibility to spend settlement money to enhance the quality or quantity of water. Based on the screening and evaluation criteria, projects with the strong ability to improve the quality and quantity of water resources are preferred.

3. Two commenters were concerned that the groundwater cleaned up by the removal of the nitrate plume would be used to benefit communities other than those impacted by the injury. Clean up of the nitrate plume will improve groundwater quality, a stated goal of the Restoration Plan, and make more water available for all users in the region. The

3. Several commenters included multiple topics in their comments.

plume is directly underneath the communities most impacted by the Site contamination, and has been identified as a key negative environmental quality factor in the area. ONRT believes that cleanup of the nitrate plume will help remove this negative factor and benefit the local community. Ability and rights to use the water is determined by the Office of the State Engineer, who is responsible for the appropriation and distribution of all groundwater in the state.

4. Other comments included:

   a. One commenter suggested that any additional funds go toward improving the drainage in Mountain View. At this time, ONRT does not anticipate having additional funds subsequent to implementation of the proposed projects.

   b. One commenter requested an industry watch group to ensure that local industry is in compliance with regulations for preventing water contamination. ONRT recognizes that benefits that could come from ensuring industry compliance with water contamination regulations. However, this suggestion is logistically difficult as ONRT does not have the authority to inspect industries, which is necessary to verify compliance. Additionally, the evaluation of such a project against ONRT's cost-effectiveness criterion is problematic because quantification of the benefits to water resources under an industry monitoring program would be very difficult.

References

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B. Additional Public Comments

NEW MEXICO
ENVIRONMENT DEPARTMENT

Water and Waste Management Division

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Secretary
CINDY PADILLA
Deputy Secretary

October 5, 2007

Mr. Jim Baca, Trustee
New Mexico Office of Natural Resources
610 Gold St. NW, Suite 236
Albuquerque, NM 87102

RE: Comments of the Draft Natural Resources Restoration Plan for the South Valley Superfund Site, Albuquerque, New Mexico

Dear Trustee Baca:

The New Mexico Environment Department (NMED) is pleased that the Office of Natural Resources (ONRT) has a draft natural resources restoration plan to address the South Valley contaminated ground water nitrate plume. As you are aware, NMED has known about this nitrate plume for decades and since there was not a viable responsible party to require assessment and remediation, the ground water contamination has continued to impact New Mexico's ground water resources. ONRT's draft RP provides a mechanism and funding source to remediate this plume that otherwise would not be remediated.

NMED is an advocate of the draft RP and is in agreement that a two phased approach to the cleanup of the nitrate plume is appropriate. That is, the first phase addresses a more detailed site assessment to determine the vertical and horizontal extent of the ground water plume boundaries and identify any residual soil contamination that may pose a threat to ground water resources. The second phase addresses the remediation of the ground water plume and soil contamination stabilization or remediation, if necessary. The draft restoration plan proposes in-situ biodenitrification (ISBD) as the ground water cleanup method. NMED agrees that ISBD is a preferred remediation option that would address the nitrate contamination, but encourages ONRT to determine the optimal remediation option(s), following site assessment.

Again, NMED is highly supportive of this restoration plan and looks forward to a continued strong cooperative working relationship with ONRT to restore ground water resources to the people of New Mexico.

Should you have any questions or would like to discuss this further, please call Bart Faris of my staff at (505) 222-9521 or me at (505) 827-1758.

Sincerely,

Jon Goldstein,
Director
Water and Waste Management Division

Cc: Patty Grice, Mt. View Neighborhood Assoc., 206 Fenteman Pl., SE, Albq., NM 87105
Rebecca de Neri-Zagal, ONRT, 610 Gold St. NW, Suite 236, Albq., NM 87102
Bill Olson, Chief, GWQB, NMED
Bart Faris, GWQB, NMED Dist. 1
ROS Reading File

From: George Schroeder [gschroeder@bernco.gov]

Sent: Wednesday, September 12, 2007 4:12 PM

To: NMENV-onrtinfo

Subject: FW: Natural Resources Restoration Plan for South Valley Superfund Site

Dear Trustee Baca and ONRT Staff,

I regret I will be unable to attend the Open House scheduled for this evening at Mountain View Community Center. Thanks for the invitation and reminder.

While I am pleased to see that the nitrate plume may be dealt with, I am disappointed that the restoration of acequias is no longer being considered. The reason for dropping it from consideration seemed to be more an explanation of the hydrologic problems of acequias generally than a sound justification for not restoring the acequias in the vicinity of the superfund site specifically. Perhaps the restoration of the acequias in the Mountain View / Superfund site area could address the hydrologic concerns raised in the restoration plan.

I urge you to reconsider the restoration of acequias for the benefit of the people and natural environment of Bernalillo County's South Valley.

George Schroeder, MS REHS
Environmental Health Manager
Bernalillo County Office of Environmental Health
111 Union Square SE; Third Floor
Albuquerque, NM 87102
505-314-0326