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Note: The provisions of this draft are subject to change.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6

In The Matter Of:)
)
 Griggs and Walnut Ground Water Plume)
 Superfund Site, Las Cruces, New Mexico)
)
 City of Las Cruces, and Doña Ana County,)
 Respondents)
)
) U.S. EPA
) Docket No. _____
)
 Proceeding Under Section 106(a) of the)
 Comprehensive Environmental Response,)
 Compensation, and Liability Act of 1980,)
 as amended (42 U.S.C. § 9606(a)))

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as amended (42 U.S.C. § 9606(a)))

ADMINISTRATIVE ORDER
FOR REMEDIAL DESIGN AND REMEDIAL ACTION

I. INTRODUCTION AND JURISDICTION

1. This U.S. Environmental Protection Agency (“EPA”) Order directs two governmental Respondents, the City of Las Cruces and Doña Ana County, to undertake a response action to remove perchloroethylene (“PCE”) and other hazardous substances [*or* “PCE and <list of other hazardous substances, to be provided by J. Costello>] from an aquifer used as a source of drinking water for the City of Las Cruces, New Mexico. Concentrations of PCE in this drinking water aquifer exceed 5 micrograms per liter—the Maximum Contaminant Level established under the Safe Drinking Water Act, 42 U.S.C. § 300f *et seq.* Where ground water that is used for drinking water is contaminated, EPA regulations at 40 CFR § 300.430(e)(5)(C) call for remediation of the contaminated ground water until contaminant concentrations meet or exceed Maximum Contaminant Levels; accordingly, this Maximum Contaminant Level was selected by EPA as the remediation goal for the contaminated aquifer.¹ This Order directs the Respondents to treat the ground water to remove the PCE until concentrations in the ground meet the Maximum

¹ Under 40 CFR § 300.430(e)(5)(C), where the Maximum Contaminant Level Goal established under the Safe Drinking Water Act for a contaminant has been set at a level of zero (as it has been for PCE), then the Maximum Contaminant Level promulgated for that contaminant under the Safe Drinking Water Act shall be attained by remedial actions for ground water that is a current or potential source of drinking water, where, as in this case, the MCL is relevant and appropriate under the circumstances of the release. *See* EPA’s Record of Decision for the Griggs and Walnut Ground Water Plume Superfund Site dated June 18, 2007 (the “ROD”) at p. 111 and at Table 13-1 (the ROD is Appendix B to this Order and is incorporated into this Order).

Contaminant Level. The PCE-contaminated ground water poses an imminent and substantial danger to anyone who drinks it.

2. The EPA calls the contaminated area at issue the Griggs and Walnut Ground Water Plume Superfund Site (the "Site"). EPA named the Site after the intersection of two Las Cruces streets that intersect in an area that overlies the contaminated ground water. Appendix A to this Order is a Map which generally describes the surface area that overlies the contaminated ground water. This Order directs Respondents to perform a remedial design for the Site remedy described in the EPA decision document called the Record of Decision for the Griggs and Walnut Ground Water Plume Superfund Site dated June 18, 2007 (the Record of Decision is Appendix B to this Order and is incorporated into this Order), and to implement the design by performing a remedial action.

3. This Order is issued to Respondents the City of Las Cruces, and Doña Ana County by EPA under the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580 (52 Fed. Reg. 2926, January 29, 1987), and was further delegated to EPA Regional Administrators on May 11, 1994, by EPA Delegation No. 14-14-B. The Regional Administrator, EPA Region 6, redelegated this authority to the Director of the Superfund Division, on June 8, 2001, by EPA Regional Delegation No. R6-14-14-B.

III. FINDINGS OF FACT

Overview: There is PCE contamination in ground water in City of Las Cruces' drinking water wells at concentration levels that exceed Maximum Contaminant Levels established under the Safe Drinking Water Act. EPA added the Site to the National Priorities List. Following National Contingency Plan procedures, EPA has selected a remedy to address Site contamination, and EPA documented that remedy in its June 18, 2007, Record of Decision.

EPA asserts the following Findings of Fact, which Respondents neither admit nor deny:

4. Ground water used in the City of Las Cruces, New Mexico, for municipal drinking water and for irrigation is contaminated with perchloroethylene ("PCE") also known as tetrachloroethene or tetrachloroethylene). PCE, a chlorinated solvent, causes cancer in laboratory animals, is a potential human carcinogen, and could cause liver damage. There is strong evidence that ingested PCE causes cancer. Water drawn from four City of Las Cruces municipal supply wells (Well Nos. 18, 19, 21, and 27) has been found to be contaminated by PCE, although not delivered to consumers, at concentrations that exceed the 5 microgram per liter Maximum Contaminant Level for PCE established under the Federal Safe Drinking Water Act, 42 U.S.C. § 300f *et seq.* PCE, a solvent, has been used in the United States since the 1930s for cleaning mechanical parts including automobile and truck parts by numerous entities, including federal,

state and local governments and private entities.

5. The Site is located in the City of Las Cruces, Doña Ana County, New Mexico. Doña Ana County is located in the south central part of the state and borders Mexico and Texas at its southern boundary. The geographic coordinates at the Site are approximately 32° 18' 56.0" north latitude and 106° 45' 36.0" west longitude. The Site includes the plume of PCE-contaminated ground water which underlies the City of Las Cruces, and associated contaminated soil. (In this order the "plume" means the ground water with concentrations of PCE that exceed the 5 micrograms per liter Maximum Contaminant Level for PCE established under the Safe Drinking Water Act. The Site also includes all suitable areas in very close proximity to the contamination necessary for the implementation of the response action.

6. The PCE-contaminated ground water plume begins at about 190 feet below ground surface and affects the local municipal water supply to depths of about 650 feet below ground surface. The plume is located in the subsurface generally between East Griggs Avenue and East Hadley Avenue, extending east to beyond Interstate 25 (I-25), and west to beyond North Solano Avenue. On the surface, the Site measures at least 9,750 feet by 2,250 feet. The affected municipal supply wells are located in the eastern part of the City's well field, and obtain water from the Santa Fe Group aquifer which is within the Mesilla Basin a geologic formation. The Site is generally described in the attached map, Exhibit 1, which is incorporated herein. The property uses in this area are predominately recreational, light industrial, retail, and residential.

7. EPA added the Site to its National Priorities List on June 14, 2001 (66 Fed. Reg. 32235 (June 14, 2001)). The National Priorities List is found at 40 CFR Part 300, Appendix B.

8. From June 2001 to November 2006, EPA undertook a Remedial Investigation and Feasibility Study ("RI/FS") for the Site, pursuant to CERCLA and the Contingency Plan, 40 C.F.R. Part 300. The RI/FS was funded in part by the Respondents under an administrative order on consent (*In Re: Griggs and Walnut Ground Water Plume, Las Cruces, New Mexico* CERCLA Docket No. 06-06-04 (April 20, 2005)).

9. Pursuant to section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the Feasibility Study and of the proposed plan for remedial action on November 25, 2006, in the *Las Cruces Sun News* (a local newspaper of general circulation) and provided opportunity for public comment on the proposed remedial action.

10. EPA's June 18, 2007, Record of Decision memorializes the remedial action that EPA selected to address contamination at the Griggs and Walnut Ground Water Plume Superfund Site. The Record of Decision is attached to this Order as Attachment 1 and is incorporated into this Order. The Record of Decision is supported by an administrative record that contains the documents and information upon which EPA based the selection of the response action.

11. The contaminant of concern at this Site is perchloroethylene (PCE, also known as tetrachloroethene or tetrachloroethylene), a volatile organic compound. EPA's Record of

Decision for the Site calls for remediation of PCE-contaminated ground water estimated at between 735 and 1,102 acre-feet (2.39 to 3.59 billion gallons). The concentration of PCE in this ground water exceeds the Maximum Contaminant Level established under the Safer Drinking Water Act. The Maximum Contaminant Level is 5 micrograms per liter. The PCE plume is approximately 1.8 miles by one-half miles in size, based on ground water sampling.

The City of Las Cruces and Doña Ana County are the Respondents addressed in this Order.

12. The City of Las Cruces and Doña Ana County (“Respondents”) are named in this Order solely on the basis of their ownership. The evidence as to the origin of the PCE releases on properties owned by the City and the County is still under investigation.

13. Respondent the City of Las Cruces is now, and has been since on or about *February 18, 1941, the owner and operator of the Site property located at 1501 E. Hadley Avenue near the intersection of East Hadley Avenue and North Walnut Street (along the former location of what was once the Crawford Municipal Airport runway) in Las Cruces. PCE that was spilled, leaked, poured, or dumped onto the land surface at this property is a source of Site ground water contamination.

14. Respondent the City of Las Cruces is now the owner of the Site property located at 701 N. Solano Drive, near the corner of East Hadley Avenue in Las Cruces that was once the site of the National Guard Armory. PCE that was spilled, leaked, poured, or dumped onto the land surface at this property is a source of Site ground water contamination. Prior owners and lessees of this property include the following:

Time period	Owners of Solano/Hadley armory property	Lessees of Solano/Hadley armory property
Prior to 7/9/1940 - 2/18/1941	Maria K. Nevarez, Manuel Moreno, George Quesenberry Sr., <i>et al.</i>	None known
2/18/1941 - 12/6/1965	Town of Las Cruces	State of New Mexico (7/16/1948 - 3/9/1962) and the New Mexico State Armory Board (3/9/1962 - 12/6/1965), both for “National Guard purposes”
12/6/1965 - 5/17/1971	Maria K. Nevarez, Manuel Moreno, George Quesenberry Sr., <i>et al.</i>	New Mexico State Armory Board, for “National Guard purposes”
5/17/1971 - 11/21/1990	New Mexico State Armory Board	None known
11/21/1990 - Present	City of Las Cruces	None known

15. Respondent Doña Ana County is now, and has been since on or about December 7, 1937, the owner and operator of the Site property that is the location of the Doña Ana County Transportation Department maintenance yard located at 2025 East Griggs Avenue in Las Cruces. PCE that was spilled, leaked, poured, or dumped onto the land surface at this property is a source of Site ground water contamination.

History of Site investigations undertaken by EPA and the New Mexico Environment Department.

16. The New Mexico Environment Department Drinking Water Bureau first found PCE contamination in Site ground water in City of Las Cruces' municipal drinking water supply wells Number 18, Number 19, Number 21 and Number 27 in samples collected during the period 1993 to 1995. The Drinking Water Bureau was sampling these wells as called for by regulations promulgated under the Safe Drinking Water Act, 42 U.S.C. § 300f *et seq.* These wells are located in the City of Las Cruces' eastern well field, and obtain water from the Santa Fe Group aquifer, a ground water reservoir within the Mesilla Basin, a geologic formation. NMED initiated an investigation of the four affected municipal water supply wells and the investigation was continued to completion by the EPA.

17. After PCE was detected in the City of Las Cruces municipal water supply wells by the New Mexico Environment Department Drinking Water Bureau, in 1993 the New Mexico Environment Department performed a preliminary site assessment and other site inspection activities in consultation with EPA. The New Mexico Environment Department analyzed ground water and soil samples collected at new and existing monitoring well locations and tested soil vapor at the Doña Ana County Transportation Department maintenance yard. The sampling results confirmed the presence of PCE in ground water, soil vapor, and in soil. In these early investigations, the New Mexico Environment Department detected PCE in only one soil sample, at a concentration of 241 micrograms per kilogram. This soil sample was collected at 135 feet below ground surface. The New Mexico Environment Department also detected PCE in the shallow soil vapor at the Doña Ana County Transportation Department maintenance yard DACTD maintenance facility at concentrations up to 12 parts per billion by volume (ppbv).

18. EPA used the results of these various investigations in its Hazard Ranking System as the basis for adding the Site to the National Priorities List on June 14, 2001 (66 Fed. Reg. 32235 (June 14, 2001)). The National Priorities List is found at 40 CFR Part 300, Appendix B.

As part of the remedial investigation for the Site, beginning about April 29, 2002, EPA began a field investigation to identify the sources of the PCE detected in ground water. (In this Order, "source" means the locations where liquid PCE was dumped or spilled, and from which PCE migrated to the ground water. It does not denote who is responsible for the source.) PCE is a volatile organic hydrocarbon that can leave a vapor gas as it migrates or degrades. EPA performed a soil gas survey across the site because soil vapor analysis is a proven and effective

method for identifying and delineating volatile organic compounds and chlorinated solvent plumes under a variety of geologic and hydrologic settings. It is effective in identifying and measuring PCE in all phases (not only the vapor phase). Chlorinated solvents, like PCE, are known to leave a residual vapor or a partitioning phase in areas just below where they were released at land surface, and they persist in pore spaces of the soil matrix in the vadose zone and in ground water. (The vadose zone or unsaturated zone is the soil between the land surface and the regional water table.) This “vapor trail” in the unsaturated zone can persist over time, depending largely on how much waste was released. Based on the physical and chemical processes of vapor transport between the unsaturated zone and the ground water, the sources of PCE (as detected by the soil vapor analyses) should be found in the vicinity of the PCE sources. PCE can also partition into the aqueous phase at rates slow enough to continue to persist as a residual or free-phase contaminant, affecting ground water for prolonged periods of time. Dissolved phase PCE in ground water at the Site is likely the result of leaching by induced infiltration by natural forces (*e.g.*, rainfall, gravity) and by air diffusion.

19. During the field investigation component of the soil vapor study, EPA collected more than 600 soil vapor samples, installed seven soil vapor monitoring stations, drilled and installed eight multi-level ground water monitoring wells, and collected over 200 ground water samples from new and existing wells. The initial soil vapor samples were collected at 5, 10, 15, and 20 feet below ground surface. During the investigation, the sampling program (including the depths sampled and the sample spacing) was adjusted and expanded based on the preliminary findings from the data collected. The locations of the eight multi-level wells were selected based on the ground water data gathered from the existing water table monitoring wells, and based on preliminary findings from the soil vapor investigation. The multi-level wells were used to determine variations in the concentration of PCE contamination in the aquifer according to depth. The field investigation component took place during the period from April 29, 2002, through February 3, 2003.

20. EPA’s soil vapor study detected concentration levels of PCE in soil vapor as high as 1,186 parts per billion (by volume) in the unsaturated zone. The unsaturated zone is the zone between the land surface and the regional water table. The unsaturated zone at the Site extends to depths that can be as shallow as 15 feet below ground surface or as deep as 184 feet below ground surface. EPA found that the highest concentrations of PCE in soil vapor occur beneath, and in the vicinity of, three Site areas. These areas include the following spots located in the City of Las Cruces:

- a. The area near the intersection of East Hadley Avenue and North Walnut Street (along the former airport runway and the former arroyo parallel to and south of the former airport runway);
- b. The Doña Ana County Transportation Department maintenance yard on East Griggs Avenue; and

- c. The area where the National Guard Armory was once located on East Hadley Avenue.

These three Site areas have the highest concentrations of PCE in soil vapor because they are sources. Shallow soil vapor sampling confirms that broad areas of the subsurface are impacted by the PCE contamination from the source areas. Laterally, the concentration of PCE in soil vapor decreases in samples collected further away from each source area. These source areas are the same Site areas described in paragraphs 12, 14, and 15 of this Order.

21. Also as part of its remedial investigation of the Site, during the period from October 2005 through December 2005, EPA performed a second field investigation of the Site with support from the New Mexico Environment Department. The second field investigation had two purposes. The first purpose was to collect sampling data sufficient to delineate the extent of contaminant plume on the Site. (In this Order the “plume” means the ground water with concentrations of PCE that exceed the 5 micrograms per liter Maximum Contaminant Level for PCE established under the Safe Drinking Water Act.) The second purpose was to collect data sufficient to support a baseline human health risk assessment (EPA uses a baseline human health risk assessment to evaluate the potential threat to human health in the absence of any remedial action.), and to support the evaluation of remedial alternatives for the Site. The tasks performed as part of this investigation included installation of two additional ground water monitoring wells, installation of one additional deep soil vapor monitoring station, collection of additional shallow subsurface soil vapor samples, and collection of ground water samples in the new well and in existing wells. While the plume is not completely defined, EPA determined that the PCE ground water plume extends approximately 9,500 feet (1.8 miles) west-to-east and approximately 2,700 feet (0.5 miles) north-to-south. The plume extends to a depth of approximately 635 feet below ground surface. EPA estimates the volume of the plume at between 735 and 1,102 acre-feet (2.39 to 3.59 billion gallons).

The PCE contaminated ground water plume has affected City of Las Cruces’ drinking water wells and it is expanding and endangering additional City wells.

The PCE in ground water appears to be the result of surface spills, caused by current or former occupants of the source areas, with subsequent leaching (partitioning) from soil to ground water. Local pumping from City of Las Cruces municipal supply wells induced PCE migration (infiltration and expansion), both horizontally and vertically, across the Site and into deeper portions of the aquifer. The existing PCE contaminated ground water plume will continue expanding toward operational municipal supply wells that are used to produce water for municipal water supply. The plume will continue to expand and act as a low level source of PCE to these and other nearby wells.

22. EPA uses a baseline human health risk assessment to evaluate the potential threat to human health posed by contamination in the absence of any remedial action. Part of the purpose of the baseline human health risk assessment is to identify complete exposure pathways. An exposure pathway refers to the way in which a person could come into contact with a hazardous

substance. There are three basic exposure pathways: inhalation, ingestion, or direct dermal contact. The degree or extent of exposure is determined by measuring the amount of the hazardous substance at the point of contact. EPA's baseline human health risk assessment determined that, if no remedial action is performed at the Site, complete exposure pathways exists. Site residents could ingest PCE contaminated ground water drawn from untreated water supply, or through private domestic wells, Since the baseline human health risk assessment identified ingestion of PCE contaminated ground water as a potentially complete exposure pathway at the Site, EPA evaluated the concentration of PCE in ground water at the contact point.

Regarding human health risk from ingestion of ground water containing PCE, the baseline human health risk assessment determined that the concentrations of PCE in the City's water supply are presently within acceptable risk levels as a result of the City of Las Cruces' blending program. (The City blends clean water with the PCE contaminated water to reduce the concentrations of PCE to levels that are below the Maximum Contaminant Level for PCE established under the Safe Drinking Water Act.) In the future, however, one or more of the following scenarios may occur, resulting in human ingestion of ground water with PCE concentrations that exceed Maximum Contaminant Levels: a) the City of Las Cruces may complete additional wells in the Mesilla Basin within the PCE contaminated ground water plume; b) private landowners may complete wells in the Mesilla Basin within the PCE contaminated ground water plume; c) the City of Las Cruces municipal water supply blending program which mixes clean water with PCE contaminated water could experience a malfunction; and d) the PCE contaminated ground water plume could continue to migrate (expand) and impact additional wells used for potable water. In any of the scenarios described in the preceding sentence there would be an unacceptable risk to human health because humans would be ingesting water with concentrations of PCE that exceed the Maximum Contaminant Level established under the Safe Drinking Water Act. PCE, a chlorinated solvent, causes cancer in laboratory animals, is a potential human carcinogen, and could cause liver damage. There is strong evidence of the carcinogenicity of PCE through ingestion. *See* 56 Fed. Reg. 3526, 3541 (January 30, 1991). Any humans visiting or residing in Las Cruces under the scenarios described above in this paragraph may ingest PCE contaminated water, and humans who ingest PCE contaminated ground water at concentrations that exceed the Maximum Contaminant Level may develop cancer and/or liver damage.

EPA's selected remedy addresses the potential threat to human health posed by the PCE contaminated ground water at the Site.

23. After completing a Remedial Investigation and Feasibility Study, and after evaluating comments from the public regarding its Proposed Plan, EPA issued its Record of Decision for the Site on June 18, 2007 (the Record of Decision is attached to this Order as Appendix B). The Record of Decision documents EPA's selected remedy.

24. The EPA selected enhanced ground water extraction with treatment as its remedy to address PCE contaminated ground water at the Site. This selected remedy calls for treatment of

ground water and hydraulic control of the PCE contaminated ground water plume, relying upon the existing municipal supply wells to the extent possible. The objectives of the remedy are as follows: 1) to remove PCE from ground water until concentrations of PCE in ground water meet the Maximum Contaminant Level of 5 micrograms per liter, 2) to contain the PCE contaminated ground water plume through hydraulic containment and treatment to keep the PCE contaminated plume from migrating (*i.e.*, expanding beyond its currently delineated boundaries), and 3) to reduce the plume size by targeted ground water pumping in areas within the plume boundaries that have higher PCE concentrations.

25. Under the selected remedy, ground water will be pumped from the subsurface and treated. The extracted ground water will enter a conveyance system that will transport the ground water to a central treatment plant. The remedy will utilize the existing infrastructure to the extent practicable (*i.e.*, it will maximize use of the pipes and pumps that the City of Las Cruces currently uses to manage water) to transport the extracted ground water to the central treatment plant. The treatment plant will be centrally located on the surface within the lateral extent of the contaminated ground water plume. Once treated, the water will be delivered by pipeline to the public water supply for the City of Las Cruces.

26. In addition to extraction and treatment of the PCE contaminated ground water, EPA's selected remedy also calls for institutional controls such as government imposed restrictions on well placement, and coordination with other agencies regarding spills and releases in order to prevent commingling of contaminants from other source areas. In addition to ground water sampling, long-term monitoring, under the selected remedy, will include sampling for other volatile organic compounds (including halogenated organic compounds) including without limitation the following: benzene; methyl tertiary-butyl ether; and PCE degradation products such as trichloroethylene, 1,2 cis-dichloroethylene, 1,2 trans-dichloroethylene, and vinyl chloride. The reason that EPA is calling for sampling to test for benzene and methyl tertiary-butyl ether is that these contaminants were detected within the plume boundary and are part of the contaminant releases from the on-site land use activities and are part of the existing comingled plume. The reason that EPA is calling for sampling to test for PCE degradation products such as trichloroethylene, 1,2 cis-dichloroethylene, 1,2 trans-dichloroethylene, and vinyl chloride is because although the site conditions are not conducive to natural degradation of PCE, these contaminants, are associated with various chlorinated solvents and contaminants commonly used at maintenance facilities and parts cleaning operations and were detected as part of the existing comingled plume. The Record of Decision (attached to this Order as Appendix B) provides a complete description of the selected remedy.

EPA's selected remedy is designed to address the endangerment posed by the PCE contaminated ground water.

27. By extracting contaminated ground water from the PCE contaminated ground water plume, treatment, and making it available to the City of Las Cruces as drinking water, the remedy

selected in the Record of Decision will ultimately reduce PCE concentrations in ground water to levels below the Maximum Contaminant Level of 5 micrograms per liter. Once the PCE concentrations in the ground water are less than or equal to the Maximum Contaminant Level, there will no longer be a PCE exposure pathway that poses a danger to human health at the Site. Until the concentrations of PCE in the aquifer meet the Maximum Contaminant Level, the institutional controls called for in the Record of Decision help protect human health, by prohibiting completion of wells in the contaminated aquifer, and by coordinating with other government officials when other contaminant spills that might come are released in the vicinity of the Site. Monitoring called for in the Record of Decision will provide EPA, the City, the County and NMED with a warning if the plume expands endangering additional wells. With advance warning, EPA will be able to take action to prevent exposure.

III. CONCLUSIONS OF LAW AND DETERMINATIONS

28. The Griggs and Walnut Ground Water Plume Superfund Site is a "facility" as defined in section 101(9) of CERCLA, 42 U.S.C. § 9601(9).
29. Respondents are "persons" as defined in section 101(21) of CERCLA, 42 U.S.C. § 9601(2).
30. Respondents are "liable parties" within the meaning of section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and are subject to this Order under section 106(a) of CERCLA, 42 U.S.C. § 9606(a).
31. The PCE described in paragraph 11 is found at the Site and is a "hazardous substance" as defined in section 101(14) of CERCLA, 42 U.S.C. § 9601(14).
32. This hazardous substance, PCE, has been spilled, leaked, poured, or dumped onto the land surface at the Site, it has leached into the ground water at the Site, and it is emitted into the air at the Site.
33. At the Site, the spilling, leaking, pouring, and dumping of PCE onto the land surface; the leaching of PCE into the ground water; and the emitting of PCE into the air are "releases" as defined in section 101(22) of CERCLA, 42 U.S.C. § 9601(22).
34. The potential for future leaching (induced infiltration and expansion) of the hazardous substance PCE from the Site into ground water poses a threat of a "release" as defined in section 101(22) of CERCLA, 42 U.S.C. § 9601(22).
35. The release of hazardous substances from the facility (*i.e.*, the Site) may present an imminent and substantial endangerment to the public health or welfare or the environment.
36. The contamination and endangerment at this Site constitute an indivisible injury. The

actions required by this Order are necessary to protect the public health, welfare, and the environment.

IV. NOTICE TO THE STATE

37. On [*date], prior to issuing this Order, EPA notified the New Mexico Environment Department that EPA would be issuing this Order.

V. ORDER

38. Based on the foregoing, Respondents are hereby ordered, jointly and severally, to comply with the following provisions of this Order which include without limitation all appendices to this Order, all documents incorporated by reference into this Order, all EPA-approved submissions, and all schedules and deadlines in this Order including without limitation schedules and deadlines in all EPA-approved submissions:

VI. DEFINITIONS

39. Unless otherwise expressly provided herein, terms used in this Order which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in the statute or its implementing regulations. Whenever terms listed below are used in this Order or in the documents attached to this Order or incorporated by reference into this Order, the following definitions shall apply, whether or not they are capitalized:

- a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. § 9601 *et seq.*
- b. "Day" shall mean a working day. "Working day" shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the end of the next working day. Further, in computing any deadline the period shall start from the date of receipt, if applicable.
- c. "Deliverable" shall mean any action, activity, task, or submission required to be done by Respondent under this Order. A deliverable is work. A deliverable is a requirement of this Order.
- d. "Effective Date" shall be the effective date of this Order as provided in paragraph 99
- e. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.
- f. For the purposes of this Order including the SOW, the words "include," "includes," or

"including" shall not be construed as words of limitation; that is, they shall be construed such that the phrases "without limitation" or "but not limited to" are implied, unless such phrases are already in place. For example, "including x, y, and z" would be construed as "including without limitation x, y, and z" or as "including, but not limited to, x, y and z," but the phrase "including, but not limited to, x, y and z" would be construed as it reads.

- g. "Griggs and Walnut Superfund Site Special Account" or "Special Account" shall mean the special account established for the Site pursuant to Section 122(b)(3) of CERCLA, 42 U.S.C. § 9622(b)(3), and this Order.
- h. "Interest," with respect to amounts owed to the United States shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.
- i. "National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.
- j. "NMED" shall mean the New Mexico Environment Department.
- k. "Operation and Maintenance" or "O & M" shall mean all activities required to maintain the effectiveness of the Remedial Action as required under the Operation and Maintenance Plan approved or developed by EPA pursuant to this Order including without limitation the Statement of Work (SOW).
- l. "Order" shall mean this document and all appendices attached hereto including:
 - Appendix A – Map of surface of the Griggs and Walnut Ground Water Plume Superfund Site;
 - Appendix B - Record of Decision, Griggs and Walnut Ground Water Plume Superfund Site, Las Cruces, New Mexico (June 18, 2007)
 - Appendix C - Statement of Work, Griggs and Walnut Ground Water Plume Superfund Site, Las Cruces, New Mexico.

Appendix D – Model Performance Guarantee Documents

In the event of conflict between this document and any appendix, this document shall control.

- m. "Paragraph" shall mean a portion of this Order identified by an arabic numeral or an

uppercase letter. A paragraph may contain subparagraphs identified by lowercase letters or by lowercase Roman numerals. References to paragraphs in appendices to this Order will be identified as such (*e.g.*, SOW paragraph 10).

- n. "PCE" shall mean perchloroethylene also known as tetrachloroethene or tetrachloroethylene.
- o. "Performance Standards" shall mean those cleanup standards, standards of control, and other substantive requirements, criteria or limitations, identified in the Record of Decision, in the Statement of Work, and in submissions that are approved by EPA in writing, that the Remedial Action and work required by this Order must attain and maintain. Performance standards include the remediation goals and remedial action objectives identified in the Record of Decision at ROD section 8.
- p. "Record of Decision" or "ROD" shall mean the EPA Record of Decision relating to the Site, signed on June 18, 2007 by the Superfund Division Director, EPA Region 6, and all attachments thereto. The ROD is attached as Appendix B.
- q. "Remedial Action" or "RA" shall mean those activities, except for Operation and maintenance, to be undertaken by Respondents to implement the ROD in accordance with the SOW, the final EPA-approved Remedial Design, the final EPA-approved Remedial Action Work Plan, and in accordance with other submissions approved by EPA, and including any additional activities required under Sections IX through XX of this Order. Remedial Design and Remedial Action may be referred to as "RD/RA."
- r. "Remedial Action Work Plan" shall mean the document developed pursuant to paragraph 51 of this Order and approved by EPA, and any amendments thereto.
- s. "Remedial Design" or "RD" shall mean those activities to be undertaken by the Respondents to develop the final plans and specifications for the Remedial Action pursuant to the Remedial Design Work Plan. Remedial Design and Remedial Action may be referred to as "RD/RA."
- t. "Remedial Design Work Plan" shall mean the document developed pursuant to paragraph ** of this Order and approved by EPA, and any amendments thereto.
- u. "Requirement(s) of this Order" or "Requirement(s) of the Order" or any similar term shall include: Performance Standards that Respondents are to meet under this Order; Work that Respondents are to perform under this Order including Work that Respondents are to perform under the SOW or under EPA-approved submissions; scheduled deadlines that Respondents are to meet under this Order including deadlines set forth in schedules in EPA-approved submissions or in the SOW; payments that Respondents are to make under this Order; and any other obligation of Respondents

under this Order. It is a requirement of this Order for Respondents to complete and submit deliverables by the deadlines established in EPA-approved submissions. It is a requirement of this Order for Respondents to submit submissions to EPA which EPA will approve. That is, if Respondents offer a submission which is not approved by EPA as described in Section XIV (EPA Approval of Plans and Other Submissions) of this Order, Respondents have not met a Requirement of this Order. It is a violation of this Order for Respondents to fail to meet a Requirement of this Order.

- v. "Response Costs" shall mean all costs, including direct costs, indirect costs, and accrued interest incurred by the United States to perform or support response actions at the Site. Response costs include but are not limited to the costs of overseeing the Work, such as the costs of reviewing or developing plans, reports and other items pursuant to this Order and costs associated with verifying the Work.
- w. "Respondents" means the City of Las Cruces, and Doña Ana County.
- x. "Section" shall mean a portion of this Order identified by an uppercase Roman numeral and includes one or more paragraphs. References to sections in appendices to this Order will be identified as such (*e.g.*, SOW Section II).
- y. "Section" shall mean a portion of this Order identified by a roman numeral and includes one or more paragraphs.
- z. "Site" shall mean the Griggs and Walnut Ground Water Plume Superfund Site including the following: a) a PCE-contaminated ground water plume that begins at about 190 feet below ground surface and which extends to a depth of about 650 feet below ground surface containing approximately 735 to 1,102 acre-feet of water (2.39 to 3.59 billion gallons); b) the land surface that overlies the plume—generally located between East Griggs Avenue and East Hadley Avenue, extending east to beyond Interstate 25 (I-25), and west to beyond North Solano Avenue and measuring at least 9,750 feet by 2,250 feet; and c) all suitable areas in very close proximity to the contamination necessary for implementation of the response action described in the ROD. The surface of the Site is generally depicted on the map that is Appendix A to this Order.
- aa. "Statement of Work" or "SOW" shall mean the statement of work for implementation of the Remedial Design, Remedial Action, and Operation and Maintenance at the Site, as set forth in Appendix C to this Order and any modifications made in accordance with this Order.
- bb. "Submission" shall mean any and all written materials Respondents are required to submit for EPA approval pursuant to this Order including without limitation correspondence, notifications, plans, reports, specifications, and schedules. A

Submission is a Deliverable. A Submission is Work. Submissions include without limitation the Remedial Design Work Plan, the Remedial Action Work Plan, and the schedules and deadlines therein. Once a Submission is approved in writing by EPA as described in Section XIV (EPA Approval of Plans and Other Submissions) of this Order, the Submission is incorporated into this Order and becomes an enforceable part of this Order.

- cc. "Supervising Contractor" shall mean the principal contractor retained by the Respondents to supervise and direct the implementation of the Work under this Order.
- dd. "United States" shall mean the United States of America.
- ee. "Work" shall mean all activities Respondents are required to perform under this Order including under the SOW and including under Submissions approved by EPA, except those required by Section XXI (Record Preservation). Work includes Deliverables which Respondents are required to produce under this Order. Work includes the Remedial Design, the Remedial Action and O&M.

VII. NOTICE OF INTENT TO COMPLY

40. Respondents shall provide, not later than thirty days after the effective date of this Order, written notice to EPA's Remedial Project Manager (RPM) stating whether they will comply with the terms of this Order. If Respondents do not unequivocally commit to perform the Remedial Design, and Remedial Action as provided by this Order, they shall be deemed to have violated this Order and to have failed or refused to comply with this Order. Respondents' written notice shall describe, using facts that exist on or prior to the effective date of this Order, any "sufficient cause" defenses asserted by Respondents under sections 106(b) and 107(c)(3) of CERCLA, 42 U.S.C. §§ 9606(b) and 9607(c)(3). The absence of a response by EPA to the notice required by this paragraph shall not be deemed to be acceptance of Respondents' assertions.

VIII. PARTIES BOUND

41. This Order shall apply to and be binding upon the City of Las Cruces, and Doña Ana County, their officials, commissioners, directors, officers, employees, agents, successors, and assigns. Respondents are jointly and severally responsible for carrying out all activities required by this Order. No change in the governmental organization, ownership, corporate status, or other control of the Respondents shall alter any of the Respondents' responsibilities under this Order.

42. Respondents shall provide a copy of this Order to any prospective owners or successors before a controlling interest in Respondents' assets, or property rights are transferred to the prospective owner or successor. Respondents shall provide a copy of this Order to each contractor, sub-contractor, laboratory, or consultant retained to perform any Work under this

Order, within thirty days after the effective date of this Order or on the date such services are retained, whichever date occurs later. Respondents shall also provide a copy of this Order to each person representing any Respondents with respect to the Site or the Work and shall condition all contracts and subcontracts entered into hereunder upon performance of the Work in conformity with the terms of this Order. With regard to the activities undertaken pursuant to this Order, each contractor and subcontractor shall be deemed to be related by contract to the Respondents within the meaning of section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3). Notwithstanding the terms of any contract, Respondents are responsible for compliance with this Order and for ensuring that their contractors, subcontractors and agents comply with this Order, and perform any Work in accordance with this Order.

43. Within fifteen days after the effective date of this Order each Respondent that owns real property comprising all or part of the Site shall record a copy or copies of this Order in the appropriate governmental office where land ownership and transfer records are filed or recorded, and shall ensure that the recording of this Order is indexed to the titles of each and every one of Respondents' properties at the Site so as to provide notice to third parties of the issuance and terms of this Order with respect to those properties. Respondents shall, within 15 days after the effective date of this Order, send notice of such recording and indexing to EPA.

44. Not later than sixty days prior to any transfer of any of Respondents' real property interest in any property included within the Site, Respondents shall submit a true and correct copy of the transfer documents to EPA, and shall identify the transferee by name, principal business address and effective date of the transfer.

IX. WORK TO BE PERFORMED

45. The Respondents shall cooperate with EPA in providing information regarding the Work to the public. As requested by EPA, Respondents shall participate in the preparation of such information for distribution to the public and in public meetings which may be held or sponsored by EPA to explain activities at or relating to the Site.

46. All aspects of the Work to be performed by Respondents pursuant to this Order shall be under the direction and supervision of a qualified Supervising Contractor the selection of which shall be subject to disapproval by EPA. Within 60 days after the effective date of this Order, Respondents shall notify EPA in writing of the name and qualifications of Respondents' proposed Supervising Contractor, including primary support entities and staff, proposed to be used in carrying out work under this Order. With respect to any proposed Supervising Contractor, Respondents shall demonstrate that the proposed Supervising Contractor has a quality system that complies with ANSI/ASQ E4-2004, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, 2004), by submitting a copy of the proposed Supervising Contractor's Quality

Management Plan (QMP). The QMP should be prepared in accordance with the specifications set forth in “EPA Requirements for Quality Management Plans (QA/R-2),” (EPA/240/B-01/002, May 2006), EPA/240/B-01/003 May 2006 “EPA Requirements for Quality Assurance Project Plans (QA/R-5) or equivalent documentation as determined by EPA. If at any time Respondents propose to use a different Supervising Contractor, Respondents shall notify EPA and shall obtain EPA’s authorization to proceed before the new Supervising Contractor performs any work under this Order.

47. The EPA will review Respondents’ selection of a Supervising Contractor according to the terms of this paragraph and Section XIV (EPA Approval of Plans and Other Submissions) of this Order. If EPA disapproves of the selection of the Supervising Contractor, Respondents shall submit to EPA within 30 days after receipt of EPA's disapproval of the Supervising Contractor previously selected, a list of Supervising Contractors, including primary support entities and staff, that would be acceptable to Respondents. EPA will thereafter provide written notice to Respondents of the names of the Supervising Contractors that are unacceptable to EPA. Respondents may then select any Supervising Contractor from the list that remains and shall notify EPA of the name of the Supervising Contractor selected within 21 days of EPA's designation of unacceptable proposed Supervising Contractors. Upon receipt of Respondents’ notice identifying the Supervising Contractor from the list of managers that are not unacceptable to EPA, EPA will issue a notice to proceed.

A. Remedial Design

48. Pursuant to the provisions of the SOW, Respondents shall submit to EPA for EPA review and approval, pursuant to Section XIV (EPA Approval of Plans and Other Submissions), a work plan for the performance of the Remedial Design at the Site ("Remedial Design Work Plan" or "RD Work Plan") including a Remedial Design Work Plan Schedule. Respondents shall provide a copy of the RD Work Plan to NMED. Respondents shall provide to EPA (with a copy to NMED) all submissions and perform all other deliverables required under the EPA-approved Remedial Design Work Plan in accordance with the EPA approved Remedial Design Work Plan Schedule.

49. Respondents shall ensure that the RD Work Plan shall be consistent with, and shall provide for implementing the Statement of Work, and shall comport with EPA's "Superfund Remedial Design and Remedial Action Guidance, “OSWER Directive 9355.0-4A” (June 1986).

50. Upon approval by EPA as provided in Section XIV (EPA Approval of Plans and Other Submissions), the RD Work Plan is incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order. Any failure of Respondents to complete the work described in the EPA-approved RD Work Plan according to the EPA-approved schedule shall be a violation of this Order.

B. Remedial Action

51. Pursuant to the provisions of the SOW, Respondents shall submit to EPA for EPA review and approval, pursuant to Section XIV (EPA Approval of Plans and Other Submissions), a work plan for the performance of the Remedial Action at the Site ("Remedial Action Work Plan" or "RA Work Plan") including a Remedial Action Work Plan Schedule. Respondents shall provide to EPA all submissions and perform all other deliverables required under the EPA-approved Remedial Action Work Plan in accordance with the EPA approved Remedial Action Work Plan Schedule. Unless otherwise directed by EPA in writing, Respondents shall not commence physical Remedial Action activities at the Site prior to EPA approval of the Remedial Action Work Plan. Respondents shall ensure that the RA Work Plan shall be consistent with, and shall provide for implementing the Statement of Work. Respondents shall also submit a copy of the RA Work Plan to NMED.

52. Upon approval by EPA as provided in Section XIV (EPA Approval of Plans and Other Submissions), the RA Work Plan is incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order. Any failure of Respondents to complete the work described in the EPA-approved RA Work Plan according to the EPA-approved schedule shall be a violation of this Order.

53. The Work performed by Respondents pursuant to this Order shall, at a minimum, achieve the Performance Standards specified in the Record of Decision, including the remedial action objectives and remediation goals described in ROD section 8, and in SOW Section III (Performance Standards).

54. Notwithstanding any action by EPA, Respondents remain fully responsible for achievement of the Performance Standards in the Record of Decision and Statement of Work. Nothing in this Order, or in EPA's approval of the Remedial Design Work Plan, the Pre-Final Remedial Design (which then becomes the Final Remedial Design), or the Remedial Action Work Plan or approval of any other submission or deliverable, shall be deemed to constitute a warranty or representation of any kind by EPA that full performance of the Remedial Design or Remedial Action will achieve the Performance Standards set forth in the ROD and in SOW section III (Performance Standards). Neither Respondents' compliance with such EPA-approved submissions, nor Respondents' production of other deliverables can foreclose EPA from seeking additional work to achieve the applicable performance standards.

55. Respondents' shall, prior to any off-Site shipment of hazardous substances from the Site to an out-of-state waste management facility, provide written notification to the appropriate state environmental official in the receiving state and to EPA's RPM of such shipment of hazardous substances. However, the notification of shipments shall not apply to any off-Site shipments when the total volume of all shipments from the Site to the state will not exceed 10 cubic yards.

- a. The notification shall be in writing, and shall include the following information, where available: (1) the name and location of the facility to which the hazardous substances

are to be shipped; (2) the type and quantity of the hazardous substances to be shipped; (3) the expected schedule for the shipment of the hazardous substances; and (4) the method of transportation. Respondents shall notify the receiving state of major changes in the shipment plan, such as a decision to ship the hazardous substances to another facility within the same state, or to a facility in another state.

- b. The identity of the receiving facility and state will be determined by Respondents. Respondents shall provide all relevant information; including information under the categories noted in paragraph 55(a) above, regarding the off-Site shipments as soon as practicable after the award of the contract and before the hazardous substances are actually shipped.

56. Within 30 days after Respondents conclude that the Remedial Action has been fully performed, Respondents shall so notify EPA and shall schedule and conduct a pre-certification inspection to be attended by Respondents and EPA. Respondents shall also invite NMED to attend. Within 30 days of the precertification inspection, Respondents shall submit a written report by a registered professional engineer and by Respondents' Supervising Contractor certifying that the Remedial Action has been completed in full satisfaction of the requirements of this Order. Respondents shall include in their written report the information required by SOW paragraphs 55 through 57, and Respondents must obtain the EPA approval described in SOW paragraph 58. If, after completion of the pre-certification inspection and receipt and review of the written report, EPA determines that the Remedial Action or any portion thereof has not been completed in accordance with this Order, EPA shall notify Respondents in writing of the activities that must be undertaken to complete the Remedial Action and shall set forth in the notice a schedule for performance of such activities. Respondents shall perform all activities described in the notice in accordance with the specifications and schedules established therein. If EPA concludes, following the initial or any subsequent certification of completion by Respondents that the Remedial Action has been fully performed in accordance with this Order, EPA may notify Respondents that the remedy is Operational and Functional. EPA's notification shall be based on information contained in EPA's administrative record file at the time of the notification and on Respondents' certification to EPA, and shall not limit EPA's right to perform periodic reviews pursuant to section 121(c) of CERCLA, 42 U.S.C. § 9621(c), or to take or require any action that in the judgment of EPA is appropriate at the Site, in accordance with 42 U.S.C. §§ 9604, 9606, or 9607. Once the remedy is Operational and Functional, Respondents shall perform Operation and Maintenance (O&M) of the remedy consistent with the EPA-approved O&M plan (which is part of the Remedial Action Work Plan).

57. Within 30 days after Respondents conclude that all phases of the Work have been fully performed, that the Performance Standards have been attained, and that all O&M activities have been completed, Respondents shall submit to EPA a written Remedial Action Report by a registered professional engineer certifying that the Work has been completed in full satisfaction of the requirements of this Order. Respondents shall provide a copy of the Report to NMED. EPA shall require such additional activities as may be necessary to complete the Work or EPA may,

based upon information contained in EPA's administrative record file at the time of the notification and on Respondents' certification to EPA, issue written notification to Respondents that the work has been completed, as appropriate, in accordance with the procedures set forth in Paragraph 56 for Respondents' certification of completion of the Remedial Action. EPA's notification shall not limit EPA's right to perform periodic reviews pursuant to section 121(c) of CERCLA, 42 U.S.C. 9621(c), or to take or require any action that in the judgment of EPA is appropriate at the Site, in accordance with 42 U.S.C. §§ 9604, 9606, or 9607.

X. FAILURE TO ATTAIN PERFORMANCE STANDARDS

58. In the event that EPA determines that additional response activities are necessary to meet applicable Performance Standards, EPA may notify Respondents that additional response actions are necessary.

59. Unless otherwise stated by EPA, within thirty days of receipt of notice from EPA that additional response activities are necessary to meet any applicable Performance Standards, Respondents shall submit for approval by EPA a work plan for the additional response activities. The plan shall conform to the applicable requirements of sections IX (Work to Be Performed), XVI (Quality Assurance, Sampling, and Data Analysis), and XVII (Compliance With Applicable Laws) of this Order. Upon EPA's approval of the plan pursuant to Section XIV (EPA Approval of Plans and Other Submissions), Respondents shall implement the plan for additional response activities in accordance with the provisions and schedule contained therein.

XI. EPA PERIODIC REVIEW

60. Under section 121(c) of CERCLA, 42 U.S.C. § 9621(c), and any applicable regulations, EPA may review the Site to assure that the Work performed pursuant to this Order adequately protects human health and the environment. Until such time as EPA certifies completion of the Work, Respondents shall conduct the requisite studies, investigations, or other response actions as determined necessary by EPA in order to permit EPA to conduct the review under section 121(c) of CERCLA. As a result of any review performed under this paragraph, Respondents may be required to perform additional work or to modify work previously performed.

XII. ADDITIONAL RESPONSE ACTIONS

61. EPA may determine that in addition to the work identified in this Order and appendices to this Order, additional response activities may be necessary to protect human health and the environment. If EPA determines that additional response activities are necessary, EPA may require Respondents to submit a work plan for additional response activities. EPA may also require Respondents to modify any plan, design, or other deliverable required by this Order, including any approved modifications.

62. Not later than thirty days after receiving EPA's notice that additional response activities are required pursuant to this Section, Respondents shall submit a work plan for the response activities to EPA for review and approval. Upon approval by EPA, the work plan is incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order. Upon approval of the work plan by EPA, Respondents shall implement the work plan according to the standards, specifications, and schedule in the approved work plan. Respondents shall notify EPA of their intent to perform such additional response activities within seven days after receipt of EPA's notice that additional response activities are required.

XIII. ENDANGERMENT AND EMERGENCY RESPONSE

63. In the event of any action or occurrence during the performance of the Work which causes or threatens to cause a release of a hazardous substance or which may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action to prevent, abate, or minimize the threat, and shall immediately notify EPA's Remedial Project Manager (RPM). If the RPM is unavailable Respondents shall notify the EPA Response and Prevention Branch, Region 6 at (866) EPA-SPILL or (866) 372-7745 or (214) 665-6428. Respondents shall take such action in consultation with EPA's RPM and in accordance with all applicable provisions of this Order, including but not limited to the Health and Safety Plan and the Remedial Design Contingency Plan and the Remedial Action Contingency Plan. In the event that Respondents fail to take appropriate response action as required by this Section, and EPA takes that action instead, Respondents shall reimburse EPA for all costs of the response action not inconsistent with the NCP. Respondents shall pay the response costs in the manner described in Section XXIV (Reimbursement of Response Costs) of this Order, within 30 days of Respondents' receipt of demand for payment and a EPA Region 6 SCORPIOS report, or whatever report EPA then determines to be the equivalent of a SCORPIOS report, that summarizes direct and indirect costs paid by EPA and its contractors.

64. Nothing in the preceding paragraph shall be deemed to limit any authority of the United States to take, direct, or order all appropriate action to protect human health and the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances on, at, or from the Site.

XIV. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS

65. After review of any submission that Respondents are required to submit to EPA for review and approval pursuant to this Order, EPA may: (a) approve the submission; (b) approve the submission with modifications which modifications may include without limitation written passages prepared by EPA which passages Respondents shall incorporate, word for word, into the text of the submission as directed by EPA in writing, and which modifications may also include without limitation EPA required deletions of certain passages contained in the submission which deletions Respondents shall make, word for word, as directed by EPA in writing; (c) disapprove the submission and direct Respondents to resubmit the submission after incorporating EPA's

modifications which modifications may include without limitation written passages prepared by EPA which passages Respondents shall incorporate, word for word, into the text of the submission as directed by EPA in writing, and which modifications may also include without limitation EPA required deletions of certain passages contained in the submission which deletions Respondents shall make, word for word, as directed by EPA in writing; or (d) disapprove the submission and assume responsibility for performing all or any part of the Work. As used in this Order, the terms “approved by EPA,” “approval by EPA,” “EPA approval,” or a similar term means the action described in subparagraphs (a) or (b) of this paragraph.

66. In the event of approval or approval with modifications by EPA, Respondents shall proceed to take any action required by the submission, as approved or modified by EPA.

67. Upon receipt of a notice of disapproval or a request for a modification, Respondents shall, within 21 days or such longer time as specified by EPA in its notice of disapproval or request for modification, correct the deficiencies and resubmit the plan, report, or other item for approval. Notwithstanding the notice of disapproval, or approval with modifications, Respondents shall proceed, at the direction of EPA, to take any action required by any non-deficient portion of the submission.

68. If EPA disapproves a submission as provided in paragraph 68(d), then Respondents may be in violation of this Order.

XV. PROGRESS REPORTS

69. In addition to the other deliverables set forth in this Order, Respondents shall provide monthly progress reports to EPA and NMED with respect to actions and activities undertaken pursuant to this Order. The progress reports shall be submitted on or before the 1st day of each month following the effective date of this Order. Respondents' obligation to submit progress reports continues until EPA gives Respondents written notice under paragraph 57. At a minimum these progress reports shall: (1) describe the actions which have been taken to comply with this Order during the prior month; (2) include all results of sampling and tests and all other data received by Respondents and not previously submitted to EPA; (3) describe all work planned for the next two months with schedules relating such work to the overall project schedule for RD/RA completion; and (4) describe all problems or delays encountered and any anticipated problems, and actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays; and 5) progress made toward meeting design criteria and remediation objectives.

XVI. QUALITY ASSURANCE, SAMPLING AND DATA ANALYSIS

70. Respondents shall use the quality assurance, quality control, and chain of custody procedures described in the “EPA Requirements for Quality Assurance Project Plans (QA/R-5)” (EPA/240/B-01/003, March 2001) and “Guidance on Systematic Planning Using the Data Quality

Objectives Process” (QA/G-4 February 2006) and “Guidance for Quality Assurance Project Plans (QA/G-5)” (EPA 600/R-02/009, December 2002, and any amendments to these documents, while conducting all sample collection and analysis activities required herein by any plan. To provide quality assurance and maintain quality control, Respondents shall:

- a. Use only laboratories which have a documented quality system that complies with ANSI/ASQ E4-2004, “Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs,” (American National Standard, 2004) and “EPA Requirements for Quality Management Plans (QA/R-2)” (EPA/240/B-01/002, May 2006) or equivalent documentation as determined by EPA. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program (NELAP) to meet the quality system requirements QAMS-005/80.
- b. Ensure that the laboratory used by the Respondents for analyses, performs according to a method or methods deemed satisfactory to EPA and submits all protocols to be used for analyses to EPA at least 10* days before beginning analysis.
- c. Ensure that EPA and NMED personnel and EPA's and NMED's authorized representatives are allowed access to the laboratory and personnel utilized by the Respondents for analyses.

71. Respondents shall notify EPA and NMED not less than fourteen days in advance of any sample collection activity. At the request of EPA, Respondents shall allow split or duplicate samples to be taken by EPA, NMED or their authorized representatives, of any samples collected by Respondents with regard to the Site or pursuant to the implementation of this Order. In addition, EPA shall have the right to take any additional samples that EPA deems necessary.

XVII. COMPLIANCE WITH APPLICABLE LAWS

72. Respondents shall perform all activities pursuant to this Order in accordance with the requirements of all Federal and state laws and regulations. EPA has determined that the activities contemplated by this Order are consistent with the National Contingency Plan (NCP).

73. Except as provided in section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and the NCP, no permit shall be required for any portion of the Work conducted entirely on-Site. Where any portion of the Work requires a Federal or state permit or approval, Respondents shall submit timely applications and take all other actions necessary to obtain and to comply with all such permits or approvals.

74. This Order is not, and shall not be construed to be, a permit issued pursuant to any Federal or state statute or regulation.

75. Respondents shall dispose of or treat all materials removed from the Site at a facility approved by EPA's RPM and in accordance with section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3). Before shipping any hazardous substances, pollutants, or contaminants from the Site to an off-site location, Respondent shall obtain EPA's certification that the proposed receiving facility is acceptable for CERCLA wastes within the meaning of 40 CFR 300.440. Respondent shall only send hazardous substances, pollutants, or contaminants from the Site to an off-site facility that is acceptable for CERCLA wastes within the meaning of 40 CFR 300.440.

XVIII. REMEDIAL PROJECT MANAGER

76. All communications, whether written or oral, from Respondent to EPA shall be directed to EPA's Remedial Project Manager. Respondent shall submit to EPA *two copies of all submissions which are developed pursuant to this Order, and shall send these submissions by overnight mail except for progress reports which may be sent by fax or by e-mail (only one copy of progress reports need be sent).

EPA's Remedial Project Manager is:
Ms. Petra Sanchez (6SF-RL)
U.S. Environmental Protection Agency Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Telephone: (214) 665-6686
E-mail: sanchez.petra@epa.gov
Fax:(214) 665-6660

EPA's Alternate Remedial Project Manager is:
[Mr. Buddy Parr
U.S. Environmental Protection Agency Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Telephone: (214) 665-8424
E-mail: parr.buddy@epa.gov
Fax:(214) 665-6660

The City of Las Cruces' Remedial Project Manager is:

Dan Santantonio
Administrator, Regulatory & Environmental Services
City of Las Cruces
PO Box 20000
Las Cruces, NM 88004

Telephone: (575) 528-3548
E-mail: dsantantonio@las-cruces.org
Fax : (575) 528-3619

Doña Ana County's Remedial Project Manager is:

Ed Fridenstine
Risk Manager
Doña Ana County
845 N. Motel Blvd.
Las Cruces, NM 88007

Telephone: 505-525-5919
E-mail: edf@co.dona-ana.nm.us
Fax : 505-525-5924

Where this Order requires that Respondents notify the NMED or provide it with copies of submissions, Respondents correspondence shall be directed to:

Mr. Angelo Ortelli
New Mexico Environment Department
Superfund Oversight Section
Ground Water Quality Bureau
1190 St. Francis
PO Box 26110
Santa Fe, New Mexico 87502

Telephone: (505) 827-2866
E-mail: angelo.ortelli@state.nm.us
Fax : (505) 827-2965

77. EPA has the unreviewable right to change its Remedial Project Manager or Alternate Remedial Project Manager. If EPA changes its Remedial Project Manager or Alternate Remedial Project Manager, EPA will inform Respondents in writing of the name, address, and telephone number of the new Remedial Project Manager or Alternate Remedial Project Manager.

78. EPA's RPM and Alternate RPM shall each have the authority lawfully vested in a Remedial Project Manager (RPM) and On-Scene Coordinator (OSC) by the National Contingency Plan, 40 C.F.R. Part 300. EPA's RPM and Alternate RPM shall each have authority, consistent with the National Contingency Plan, to halt any work required by this Order, and to take any necessary response action.

XIX. ACCESS TO SITE NOT OWNED BY RESPONDENTS

79. If the Site property, the off-Site property that is to be used for access, the property where documents required to be prepared or maintained by this Order are located, or other property subject to or affected by the response action, is owned in whole or in part by parties other than those bound by this Order, Respondents shall obtain, or use their best efforts to obtain, access agreements from the present owner(s) within 90 days of EPA's approval of the remedial design. Respondents shall ensure that agreements shall provide access for EPA, its contractors and oversight officials, the New Mexico Environment Department and its contractors, and Respondents or Respondents' authorized representatives and contractors. Respondents shall ensure that such agreements shall specify that Respondents are not EPA's representatives with respect to liability associated with Site activities. Respondents shall save and hold harmless the United States and its officials, agents, employees, contractors, subcontractors, or representatives for or from any and all claims or causes of action or other costs incurred by the United States including but not limited to attorneys fees and other expenses of litigation and settlement arising from or on account of acts or omissions of Respondents, their officials, commissioners, officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Order, including any claims arising from any designation of Respondents as EPA's authorized representatives under section 104(e) of CERCLA, 42 U.S.C. § 9604(e). Copies of such agreements shall be provided to EPA prior to Respondents' initiation of field activities. Respondents' best efforts shall include providing reasonable compensation to any off-Site or on-Site property owner. If access agreements are not obtained within the time referenced above, Respondents shall notify EPA of their failure to obtain access within five days. Subject to the United States' non-reviewable discretion, EPA may use its legal authorities to obtain access for the Respondents, may perform those response actions with EPA contractors at the property in question, or may terminate the Order if Respondents cannot obtain access agreements. If EPA performs those tasks or activities with contractors and does not terminate the Order, Respondents shall perform all other activities not requiring access to the property at issue, and shall reimburse EPA, pursuant to Section XXIV (Reimbursement of Response Costs) of this Order, for all costs incurred in performing such activities. Respondents shall integrate the results of any such tasks undertaken by EPA into its reports and deliverables. Respondents shall reimburse EPA, pursuant to Section XXIV (Reimbursement of Response Costs) of this Order, for all response costs (including attorney fees) incurred by the United States in obtaining access for Respondents.

XX. SITE ACCESS AND DATA/DOCUMENT AVAILABILITY

80. *If the Site, or any other property where access and/or land/water use restrictions are needed to implement this Order or the selected remedy described in the ROD, is owned or controlled by Respondents, Respondents shall:

- a. commencing on the date of lodging of this Order, provide EPA, NMED, and their representatives, including contractors, with access at all reasonable times to the Site,

or such other property, for the purpose of conducting any activity related to the ROD or this Order including, but not limited to, the following activities:

- i) Monitoring the Work;
- ii) Verifying any data or information submitted to the EPA;
- iii) Conducting investigations relating to contamination at or near the Site;
- iv) Obtaining samples;
- v) Assessing the need for, planning, or implementing additional response actions at or near the Site;
- vi) Assessing implementation of quality assurance and quality control practices as defined in the EPA-approved Quality Assurance Project Plans;
- vii) Implementing the Work pursuant to the conditions set forth in Paragraph 92 of this Order;
- viii) Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Respondents or their agents;
- ix) Assessing Respondents' compliance with this Order; and
- x) Determining whether the Site or other property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted, by or pursuant to this Order

Nothing herein shall be interpreted as limiting or affecting EPA's right of entry or inspection authority under Federal law.

- b. commencing on the effective date of this Order, refrain from using the Site, or such other property, in any manner that would interfere with or adversely affect the implementation, integrity, or protectiveness of the remedial measures to be performed pursuant to the ROD or this Order.

81. Respondents may assert a claim of business confidentiality covering part or all of the information submitted to EPA pursuant to the terms of this Order under 40 C.F.R. § 2.203, provided such claim is not inconsistent with section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), or other provisions of law. This claim shall be asserted in the manner described by 40 C.F.R. § 2.203(b) and substantiated by Respondents at the time the claim is made. Information determined to be confidential by EPA will be given the protection specified in 40 C.F.R. Part 2. If no such claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA without further notice to the Respondents. Respondents shall not assert confidentiality claims with respect to any data related to Site conditions, sampling, or monitoring.

82. Respondents shall maintain for the period during which this Order is in effect, an index of documents that Respondents claim contain confidential business information. The index shall contain, for each document, the date, author, addressee, and subject of the document. Upon written request from EPA, Respondents shall submit a copy of the index to EPA.

XXI. RECORD PRESERVATION

83. Respondents shall provide to EPA upon request, copies of all documents and information within their possession and/or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Order, including but not limited to sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondents shall also make available to EPA for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

84. Until ten years after EPA provides notice pursuant to paragraph 57, Respondents shall preserve and retain all documents and information in their possession or control, including the documents in the possession or control of the Respondents' contractors and agents on and after the effective date of this Order that relate in any manner to the Site. At the conclusion of this document retention period, Respondents shall notify the United States at least ninety days prior to the destruction of any such documents or information, and upon request by the United States, Respondents shall deliver any such documents or information to EPA.

85. Until ten years after EPA provides notice pursuant to paragraph 57 of this Order, Respondents shall preserve, and shall instruct their contractors and agents to preserve, all documents and information, of whatever kind, nature or description relating to the performance of the Work. Upon the conclusion of this document retention period, Respondents shall notify the United States at least ninety days prior to the destruction of any such documents or information, and, upon request of the United States, Respondents shall deliver all such documents and information to EPA.

86. Within ten days after the effective date of this Order, Respondents shall submit a written certification to EPA's RPM that they have not altered, mutilated, discarded, destroyed or otherwise disposed of any documents or information relating to their potential liability with regard to the Site since notification of potential liability by the United States or the State or the filing of suit against it regarding the Site. Respondents shall not dispose of any such documents or information without prior approval by EPA. Respondents shall, upon EPA's request and at no cost to EPA, deliver the documents and information or copies of the documents and information to EPA.

XXII. DELAY IN PERFORMANCE

87. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondents under the terms of this paragraph shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondents' obligations to fully perform all obligations under the terms and conditions of this Order.

88. Respondents shall notify EPA of any delay or anticipated delay in performing any

requirement of this Order. Such notification shall be made by telephone to EPA's RPM or Alternate RPM within forty eight hours after Respondents first knew or should have known that a delay might occur. Respondents shall adopt all reasonable measures to avoid or minimize any such delay. Within five business days after notifying EPA by telephone, Respondents shall provide written notification fully describing the nature of the delay, any justification for delay, any reason why Respondents should not be held strictly accountable for failing to comply with any relevant requirements of this Order, the measures planned and taken to minimize the delay, and a schedule for implementing the measures that will be taken to mitigate the effect of the delay. Increased costs or expenses associated with implementation of the activities called for in this Order are not justification for any delay in performance.

XXIII. ASSURANCE OF ABILITY TO COMPLETE WORK

Under Revision

XXIV. REIMBURSEMENT OF RESPONSE COSTS

89. If EPA seeks to recover response costs from Respondents, it will not do so until EPA issues written notification to Respondents that the work has been completed in accordance with the procedures set forth in Paragraph Within 30 days after Respondents conclude that the Remedial Action has been fully performed, Respondents shall so notify EPA and shall schedule and conduct a pre-certification inspection to be attended by Respondents and EPA. Respondents shall also invite NMED to attend. Within 30 days of the precertification inspection, Respondents shall submit a written report by a registered professional engineer and by Respondents' Supervising Contractor certifying that the Remedial Action has been completed in full satisfaction of the requirements of this Order. Respondents shall include in their written report the information required by SOW paragraphs 55 through 57, and Respondents must obtain the EPA approval described in SOW paragraph 58. If, after completion of the pre-certification inspection and receipt and review of the written report, EPA determines that the Remedial Action or any portion thereof has not been completed in accordance with this Order, EPA shall notify Respondents in writing of the activities that must be undertaken to complete the Remedial Action and shall set forth in the notice a schedule for performance of such activities. Respondents shall perform all activities described in the notice in accordance with the specifications and schedules established therein. If EPA concludes, following the initial or any subsequent certification of completion by Respondents that the Remedial Action has been fully performed in accordance with this Order, EPA may notify Respondents that the remedy is Operational and Functional. EPA's notification shall be based on information contained in EPA's administrative record file at the time of the notification and on Respondents' certification to EPA, and shall not limit EPA's right to perform periodic reviews pursuant to section 121(c) of CERCLA, 42 U.S.C. § 9621(c), or to take or require any action that in the judgment of EPA is appropriate at the Site, in accordance with 42 U.S.C. §§ 9604, 9606, or 9607. Once the remedy is Operational and Functional, Respondents shall perform Operation and Maintenance (O&M) of the remedy consistent with the EPA-approved O&M plan (which is part of the Remedial Action Work Plan). for Respondents'

certification of completion of the Remedial Action. Until that time, no interest shall accrue on any demand made of Respondents by EPA for response costs.

XXV. UNITED STATES NOT LIABLE FOR WORK PERFORMED UNDER THIS ORDER

90. The United States, by issuance of this Order, assumes no liability for any injuries or damages to persons or property resulting from acts or omissions by Respondents, or their officials, commissioners, directors, officers, employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order. Neither EPA nor the United States may be deemed to be a party to any contract entered into by Respondents or their officials, commissioners, directors, officers, employees, agents, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order.

XXVI. ENFORCEMENT AND RESERVATIONS

91. EPA reserves the right to bring an action against Respondents under section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order or to the Site and not reimbursed by Respondents. EPA's reservation of its right to bring an action against Respondents includes without limitation the right to bring an action to recover past costs, direct costs, indirect costs, the costs of oversight, the costs of compiling the cost documentation to support oversight cost demand, as well as accrued interest as provided in section 107(a) of CERCLA.

92. Notwithstanding any other provision of this Order, at any time during the response action, EPA may perform its own studies, complete the response action (or any portion of the response action) as provided in CERCLA and the NCP, and EPA may seek reimbursement from Respondents for EPA's costs, or EPA may seek any other appropriate relief.

93. Nothing in this Order shall preclude EPA from taking any additional enforcement actions, including modification of this Order or issuance of additional Orders, and/or additional remedial or removal actions as EPA may deem necessary, or from requiring Respondents in the future to perform additional activities pursuant to CERCLA, 42 U.S.C. § 9606(a), *et seq.*, or any other applicable law. Respondents shall be liable under CERCLA section 107(a), 42 U.S.C. § 9607(a), for the costs of any such additional actions.

94. Notwithstanding any provision of this Order, the United States hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA, the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901 *et seq.*, and any other applicable statutes or regulations.

95. Respondents shall be subject to civil penalties under section 106(b) of CERCLA, 42 U.S.C. § 9606(b), of not more than \$32,500 for each day in which Respondents willfully violates, or fails or refuses to comply with this Order without sufficient cause. In addition, failure

to properly provide response action under this Order, or any portion hereof, without sufficient cause, may result in liability under section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3), for punitive damages in an amount at least equal to, and not more than three times the amount of any costs incurred by the Fund as a result of such failure to take proper action. Furnishing false, fictitious, or fraudulent statements or representations to EPA is subject to criminal penalty under 18 U.S.C. § 1001.

96. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person for any liability it may have arising out of or relating in any way to the Site.

97. If a court issues an order that invalidates any provision of this Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Order, Respondents shall remain bound to comply with all provisions of this Order not invalidated by the court's order.

XXVII. ADMINISTRATIVE RECORD

98. Upon request by EPA, Respondents must submit to EPA all documents related to the selection of the response action for possible inclusion in the administrative record file.

XXVIII. EFFECTIVE DATE AND COMPUTATION OF TIME

99. This Order shall be effective 30 days after the Order is signed by the EPA Region 6 Superfund Division Director.

XXIX. OPPORTUNITY TO CONFER

Prior to [Time* and date ten days before effective date, e.g., "2:30 p.m. CST on date"], Respondents may request a conference with EPA. The conference, if requested, shall be held before the Regional Judicial Officer on [Date]*, at [time, e.g., 1:00 p.m. CST] which is prior to [effective date, e.g., December 23, 2001] the effective date of the Order. The conference shall be held in the EPA Region 6 Regional Hearing Room at 1445 Ross Avenue, Dallas, Texas.

100. The purpose and scope of the conference shall be limited to issues involving the implementation of the response actions required by this Order and the extent to which Respondents intends to comply with this Order. This conference is not an evidentiary hearing, and does not constitute a proceeding to challenge this Order. It does not give Respondents a right to seek review of this Order, or to seek resolution of potential liability, and no official stenographic record of the conference will be made. At any conference held pursuant to Respondent's request, Respondents may appear in person or by an attorney or other representative.

101. Requests for a conference shall be made by telephone or email to EPA Senior Attorney

