

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF NEW MEXICO**

**SIERRA CLUB,**

Plaintiff,

v.

**SAN JUAN COAL COMPANY, BHP  
BILLITON, LTD., PUBLIC SERVICE  
COMPANY OF NEW MEXICO, and PNM  
RESOURCES, INC.,**

Defendants.

Case No. 10-cv-00332-MCA-LAM

**CONSENT DECREE**

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Exhibits (5)

Upon consideration of the Motion for Entry of Consent Decree filed by the Parties, it is hereby ORDERED, ADJUDGED, AND DECREED as follows:

**I. BACKGROUND**

1. Sierra Club has filed a lawsuit in the United States District Court for the District of New Mexico (“Court”) as Cause No. 10-cv-00332-MCA-LAM (“Lawsuit”) against San Juan Coal Company (“SJCC”), BHP Billiton, Ltd., Public Service Company of New Mexico (“PNM”), and PNM Resources, Inc. (altogether, “Defendants”).

2. Sierra Club claims Defendants have violated and continue to violate the requirements of the Surface Mining Control and Reclamation Act, 30 U.S.C. §§ 1201–1328 (“SMCRA”), the approved New Mexico state regulatory program promulgated thereunder, 30 C.F.R. Part 931 (“the New Mexico Program”), and the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901–6992k, (“RCRA”) at the San Juan Generating Station and the San Juan Mine (together, the “Facilities”).

3. Sierra Club seeks injunctive relief and civil penalties.

4. Sierra Club alleges that activities and operations at the Facilities have caused releases of water which have resulted in, and will continue to result in, concentrations of arsenic, barium, boron, cadmium, chloride, chromium, fluoride, lead, nitrates, selenium, sodium, sulfates, total dissolved solids, and uranium in surface water and alluvial and other groundwater to exceed applicable state and federal standards.

5. PNM and SJCC (collectively, the “Companies”) and Sierra Club (the Companies and Sierra Club are sometimes collectively referred to herein as the “Parties”) agreed on August 27, 2010, to stay ongoing proceedings in the Lawsuit pending discussions aimed at

resolving Sierra Club's claims through a mutually-agreeable settlement, and on August 27, 2010, this Court entered an Order granting the Parties' Joint Motion to Stay the Litigation.

6. The Parties engaged in lengthy settlement negotiations including the development and informal exchange of Settlement Information to facilitate their settlement negotiations and to better define the technical matters at issue in the Lawsuit.

7. Defendants deny and dispute that any violations or non-compliance as alleged by Sierra Club have occurred or are occurring, maintain that they have been and remain in compliance with SMCRA, RCRA, the CWA, and all applicable federal, state, and local environmental laws and regulations, and are not liable for civil penalties or injunctive relief.

8. The Parties have agreed, and this Court by entering this Consent Decree finds, that: this Consent Decree has been negotiated in good faith and at arm's length; this settlement is fair, reasonable, and consistent with the goals of SMCRA, RCRA, and the CWA, in the best interest of the Parties, and in the public interest; and that entry of this Consent Decree without further litigation is the most appropriate means of resolving this matter.

## **II. JURISDICTION AND VENUE**

9. This Court has jurisdiction over the Companies and the subject matter of this Consent Decree pursuant to 28 U.S.C. § 1331 (federal question jurisdiction), 30 U.S.C. § 1270 (SMCRA citizen suit provision), and 42 U.S.C. § 6972 (RCRA citizen suit provision).

10. Venue is proper with respect to the Companies in the District of New Mexico: (a) pursuant to 28 U.S.C. § 1391(b)–(c) because it is the judicial district in which the corporations SJCC and PNM reside and also because it is the judicial district in which a

substantial part of the alleged events or omissions giving rise to the claim occurred; (b) pursuant to 30 U.S.C. § 1270(c) because it is the judicial district in which the surface coal mining operation complained of is located; and (c) pursuant to 42 U.S.C. § 6972 because it is the judicial district in which the alleged violation occurred.

11. Neither BHP Billiton, Ltd. nor PNM Resources, Inc. has been served in this Lawsuit.

12. For purposes of this Consent Decree or any action to enforce this Consent Decree, the Parties consent to this Court's jurisdiction over this Consent Decree and consent to venue in this judicial district.

### **III. APPLICABILITY**

13. The provisions of this Consent Decree apply to and are binding upon Sierra Club and those with authority to act on its behalf, including, but not limited to, its officers, directors, and staff, but only in their capacities as such.

14. Subject to the provisions of Section XIV, the provisions of this Consent Decree apply to and are binding upon the Companies, any of their respective successors and/or assigns, and those with authority to act on their behalf, including, but not limited to, their officers, directors, staff, but only in their capacities as such.

15. The provisions of this Consent Decree apply to and are binding upon the Parties and their contractors and agents for the purposes of Section XIII.

### **IV. DEFINITIONS**

16. Whenever the terms set forth below are used in this Consent Decree, the definitions in this Paragraph shall apply.

(a) “Alternative Remedial Measure(s)” shall mean the measure or measures to which the Parties may agree under the provisions of Section V.B.

(b) “Administrative Permit Amendment” shall mean any permit application that requests an amendment or modification to an existing permit, which is limited to the following: (i) a change of the name, address, or telephone number of the permittee; (ii) the transfer or assignment of the permit; (iii) the correction of a typographical error in the permit; or (iv) the replacement of any permitted equipment with equipment of substantially like kind.

(c) “Clean Air Act” shall mean the Clean Air Act, 42 U.S.C. §§ 7401–7671q, and regulations promulgated thereunder.

(d) “Clean Water Act” or “CWA” shall mean the Federal Water Pollution Control Act, 33 U.S.C. §§ 1251–1387, and regulations promulgated thereunder.

(e) “Companies” shall mean SJCC and PNM.

(f) “Court” shall mean the United States District Court for the District of New Mexico.

(g) “Consent Decree” shall mean this Consent Decree.

(h) “Design Criteria” shall mean those site-specific design criteria set forth in Paragraphs 22 through 25.

(i) “Environmental Restoration Projects” shall mean those projects set forth in Section VIII.

(j) “Facilities” shall mean PNM’s San Juan Generating Station and SJCC’s San Juan Mine, both located in San Juan County, New Mexico near Waterflow, New Mexico.

(k) “Financial Assurance Plan” shall mean that document prepared in accordance with the requirements of Paragraph 28.

(l) “Laws” shall mean all foreign, federal, tribal, state, and local statutes, laws, ordinances, regulations, rules, resolutions, orders, determinations, writs, injunctions, common law rulings, awards (including, without limitation, awards of any arbitrator), judgments, and decrees applicable to the Companies and to the Facilities (including, without limitation, the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601–9675, SMCRA, RCRA, and the CWA), relating to the remediation, generation, production, installation, use, storage, treatment, transportation, release, threatened release, or disposal of hazardous materials or hazardous or other wastes, or noise control, or the protection of human health, safety, natural resources, animal health or welfare, or the environment. This definition only applies to the reference to “Laws” in Paragraph 78 herein.

(m) “New Mexico Program” shall mean the approved state regulatory program for New Mexico pursuant to SMCRA, 30 C.F.R. Part 931.

(n) “Operations and Closure Plan” shall mean that document prepared in accordance with the requirements of Paragraph 27.

(o) “Parties” shall mean SJCC, PNM, and Sierra Club.

(p) “Permit Application” shall mean any regulatory permit application required for the construction, operation, maintenance, or removal from service of the Recovery System, but shall not include any permit applications that are required for Site Characterization.

(q) “PNM” shall mean Public Service Company of New Mexico.

(r) “Raw Water Reservoir Recovery Trench” shall mean the recovery trench and associated equipment to be constructed and installed pursuant to Section VIII in the vicinity of the San Juan Generating Station raw water reservoir.

(s) “RCRA” shall mean the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901–6992k, and regulations promulgated thereunder.

(t) “Recovery System” shall mean the slurry wall and the associated recovery trench as described in Paragraphs 22 and 23 to be constructed at the location generally described on Exhibit 1.

(u) “Recovery System Cost” shall mean all costs of acquiring property, equipment, access rights, water rights, and all other goods and services for Site Characterization, permitting (including financial assurance costs paid to third parties, if any), design, construction, and closure of the Recovery System and Recovery System Site. To the extent that any equipment used for the foregoing purposes is also utilized for tasks that are unrelated to the Recovery System Site, then the cost of such equipment shall be pro-rated in a manner that reflects the proportionate utilization of the equipment for the Recovery System Site.



(v) “Recovery System Site” shall mean all land areas: (i) upon which the construction, operation, maintenance, repair, storage, or closure of the Recovery System are ongoing; (ii) where the natural land surface is or remains disturbed as a result of the foregoing activities; (iii) where non-public roads are used to gain access for purposes of the foregoing activities; and (iv) where any structures, facilities, or other materials are located as a result of the foregoing activities. Notwithstanding the foregoing, the Recovery System Site shall not include any part of the currently fenced area of the San Juan Generating Station property, any electrical lines used to supply electricity to the Recovery System, Well RCB-1, Well WWA-4BC, the surface water monitoring station upstream of the San Juan Generating Station in the Westwater Arroyo, or any existing lines or facilities used to transport water to any evaporation pond at the San Juan Generating Station. No part of the existing SJCC lease or mine permit area shall be included in the Recovery System Site as long as the area is subject to U.S. Bureau of Land Management or New Mexico Energy Mineral and Natural Resources Department Mining and Minerals Division environmental requirements, respectively.

(w) “San Juan Participants” shall mean the co-owners of the various units at the San Juan Generating Station as of the date of entry of this Consent Decree, in particular, PNM, Tucson Electric Power Company, Southern California Public Power Authority, Tri-State Generation and Transmission Association, Inc., M-S-R Public Power Agency, City of Anaheim, California, City of Farmington, New Mexico, the Incorporated County of Los Alamos, New Mexico, and Utah Associated Municipal Power Systems and any of their respective successors and assigns.

(x) “Settlement Information” shall mean all confidential information and data exchanged by the Parties in furtherance of the settlement negotiations pursuant to the letter agreements between the Parties dated May 21 and 27, 2010.

(y) “Site Characterization” shall mean all work associated with the assessment of the final location, configuration, and design of the Recovery System as required under Section V.A.2, including, but not limited to, surface and subsurface investigation and testing, related modeling, and preparation of the final Site Characterization report.

(z) “SJCC” shall mean San Juan Coal Company.

(aa) “Slurry Wall Construction Standards” shall mean those minimum construction standards set forth in Paragraph 22.

(bb) “SMCRA” shall mean the Surface Mining Control and Reclamation Act, 30 U.S.C. §§ 1201–1328.

(cc) “Study Area” shall mean the area of the Shumway and Westwater Arroyos extending from the Recovery System to the location noted on Exhibit 2 in which the biomonitoring program required in Paragraph 62(b) will be conducted.

(dd) “Supplemental Environmental Projects” or “SEPs” shall mean those commitments set forth in Section VII.

(ee) “Surface Water Base Flow” shall mean any surface water flow at the Recovery System Site that is not in direct response to precipitation or snowmelt. The provisions of Paragraph 36 govern whether an observed flow is in “direct response.”

(ff) “Technical Dispute Representative” shall mean those persons designated for purposes of dispute resolution under Section XVI.

(gg) “Trench Construction Standards” shall mean those minimum construction standards set forth in Paragraph 23.

**V. PERFORMANCE OBLIGATIONS**

**A. The Recovery System**

***1. Site Acquisition and Governmental Approvals for Site Characterization***

17. No later than sixty (60) days after entry of this Consent Decree, PNM shall either:

(a) establish its right to enter and conduct operations—including securing any governmental approvals necessary to conduct Site Characterization—at the proposed location of the Recovery System shown on the map attached as Exhibit 1 to this document; or

(b) inform Sierra Club in writing of: (i) its efforts to do so to that date; and (ii) each required task in the site acquisition or governmental approval process that remains uncompleted on that date.

If PNM has not completed its site acquisition and secured the necessary governmental approvals to conduct the Site Characterization within ninety (90) days after entry of this Consent Decree, PNM shall report to Sierra Club in writing on the status of its site acquisition and government approval efforts on the first business day of every month thereafter until the site acquisition and governmental approval work is complete.

18. PNM is considering alternative locations for the Recovery System should it be unable to obtain such approvals or rights for the proposed location identified on Exhibit 1. If PNM determines that it is unable to obtain any necessary right of entry or governmental approvals for the proposed location of the Recovery System on commercially reasonable terms,

PNM shall immediately inform Sierra Club of that determination. The Parties shall thereafter attempt to agree on an alternative location for the Recovery System. With respect to each alternative location for the Recovery System to which the Parties may agree over time, PNM—and if necessary, as agreed upon by the Parties, SJCC—shall conduct any necessary site acquisition work and secure such approvals and rights and report to Sierra Club first within sixty (60) days of any new siting agreement and then regularly thereafter as described in Paragraph 17.

19. If the Parties are unable to agree under Paragraph 18 upon an alternative location for the Recovery System, or if the Parties agree at any point that there is no suitable, accessible location for the Recovery System, the Parties will meet in good faith to attempt to negotiate an alternative approach for managing alluvial groundwater flow and Surface Water Base Flow to achieve the objectives of this Consent Decree.

20. If the Recovery System cannot be constructed at the location identified in Exhibit 1, and if the Parties are unable to reach agreement on alternative locations under Paragraph 18 or if efforts to resolve the issues between the Parties under Paragraph 19 fail, the Parties agree to so inform the Court and to move jointly for: (a) rescission of the provisions of this Consent Decree that have not, as of the date of such motion, been fully implemented; and (b) reinstatement and adjudication of Sierra Club's complaint, provided, however, that in no case shall the right of reinstatement and adjudication extend to BHP Billiton, Ltd. or PNM Resources, Inc.

**2. *Site Characterization and Formulation of Site-Specific Design Criteria***

21. As quickly as practicable, but no later than one-hundred-twenty (120) days from the date on which the Companies' establish their right to enter and conduct operations at the proposed location of the Recovery System, PNM shall commence the necessary Site Characterization, including below surface testing, to develop the Design Criteria.

22. The Design Criteria for the slurry wall shall implement the following minimum construction standards ("Slurry Wall Construction Standards"): (a) permeability of not greater than  $10^{-7}$  cm/sec; (b) span the lateral locations shown in Exhibit 1; and (c) key into competent bedrock to a depth of three (3) feet or to the maximum practical penetration of the excavation equipment, whichever is less.

23. The Design Criteria for the recovery trench shall implement the following minimum construction standards (the "Trench Construction Standards"): (a) span the lateral locations shown in Exhibit 1; (b) extend the recovery trench to not less than three (3) feet below the base of the alluvium or to the maximum practical penetration of the excavation equipment, whichever is less; (c) include a drain pipe positioned as near as practicable to the bottom of the excavated trench; (d) include pumping sumps at one or more low spots in the trench as conditions indicate; and (e) be located no more than thirty (30) feet upgradient of the slurry wall.

24. The Design Criteria may deviate from the Slurry Wall Construction Standards or Trench Construction Standards when reasonably required, in the judgment of the Recovery System design engineer, pursuant to good engineering practices, based on site conditions, provided that no deviation or number of deviations shall excuse any failure of the Recovery System to meet the performance requirements specified in Paragraphs 31 through 36.

25. If PNM determines that site conditions require deviation from the Slurry Wall Construction Standards or Trench Construction Standards, it shall immediately notify Sierra Club. No later than seven (7) business days after PNM transmits such notice, the Parties shall confer in good faith to agree on any necessary alternative Slurry Wall Construction Standards or Trench Construction Standards that are consistent with good engineering practices based on specific site conditions.

**3. *The Recovery System Operations and Closure Plan***

26. As quickly as practicable, but no later than sixty (60) days after completing the Site Characterization work described in Section V.A.2, PNM shall serve upon Sierra Club a proposed Operations and Closure Plan for the Recovery System in which SJCC concurs in writing, such concurrence not to be unreasonably withheld.

27. PNM's proposed Operations and Closure Plan for the Recovery System shall include, at a minimum, the following information:

- (a) a map or set of maps, with appropriate references to the latitude and longitude of each boundary corner and each existing or proposed structure, showing: (i) the entire land area on which PNM proposes to construct, operate, and maintain the Recovery System, together with the buildings or facilities to be used; (ii) the road or roads by which PNM proposes to gain access to the Recovery System Site; (iii) the utility corridors that PNM proposes to use for access to the Recovery System Site; (iv) the structures, facilities, or areas where PNM proposes to transport surface water and alluvial groundwater from the Recovery System; (v) the location of

each facility that will remain on the Recovery System Site; and (vi) each contiguous tract of land adjacent to the Recovery System Site;

(b) the name, address, telephone number, tax identification number, and resident agent of each entity that intends to construct, operate, or maintain the Recovery System, together with a statement as to whether each such entity is a corporation, partnership, single proprietorship, association, or other business entity;

(c) a copy of the document(s) upon which PNM bases its legal right to enter and construct, operate, and maintain the Recovery System in the area or areas identified in the maps provided pursuant to subparagraph (a);

(d) the commitment by PNM to self-insure construction, operation, and closure of the Recovery System for bodily injury and property damage;

(e) a list of all licenses and permits needed to construct, operate, or maintain the Recovery System, which list shall identify each license or permit by: (i) type of permit or license; (ii) the name and address of the issuing authority; (iii) the identification numbers of the application for the permit or license or, if issued, the identification number of the permit or license; and (iv) if a permit decision has been made, the date of approval or disapproval by the issuing authority;

(f) PNM's detailed and complete reports describing its Site Characterization and the proposed design, construction, operation, maintenance, and removal from service of the Recovery System;

(g) a plan to: (i) install no fewer than three (3) piezometers screened from competent bedrock to no less than (1) one foot above the base of the alluvium no farther

than fifteen (15) feet downgradient of the slurry wall; (ii) install no fewer than three (3) piezometers screened to the base of the alluvium no farther than fifteen (15) feet upgradient of the slurry wall; and (iii) install an automated system for transporting recovered alluvial groundwater and surface water to a specific upgradient facility or set of facilities;

(h) a narrative description of the proposed construction, modification, use, maintenance, and removal from service of roads used in connection with the Recovery System, which shall at a minimum:

(i) identify as a “primary road” any road that will be frequently used for access to or other purposes related to the Recovery System for a period in excess of six (6) months or, alternatively, that will be retained after closure of the Recovery System (“Primary Road”), or certify that no road used in connection with the Recovery System will be frequently used for a period in excess of six (6) months or will be retained after closure of the Recovery System; and

(ii) identify as an ancillary road each road that is not a Primary Road (“Ancillary Road”);

(i) for each road:

(i) an identification of appropriate limits for grade, width, surface materials, surface drainage control, culvert placement, and culvert size, so as to ensure environmental protection and safety appropriate for the planned duration and use, including consideration of the type and size of equipment used to construct the road;



(ii) a detailed description of how each proposed road will be located, designed, constructed, reconstructed, used, maintained, and removed from service in a manner that controls or prevents erosion, siltation, and fugitive dust attendant to erosion by stabilizing all exposed surfaces in accordance with current, prudent engineering practices;

(iii) a detailed description of how PNM will control or prevent damage to fish, wildlife, and their habitat as a result of the construction, use, and removal from service of each road;

(iv) a detailed description of how PNM will control or prevent additional contributions of suspended solids to stream flow or runoff near the Recovery System as a result of the construction, use, and removal from service of each road;

(v) a detailed description of how PNM will minimize the diminution to or degradation of the quality or quantity of surface and groundwater systems as a result of the construction, use, and removal from service of each road;

(vi) a detailed description of how PNM will refrain from significantly altering the flow of water in streambeds or drainage channels as a result of the construction, use, and removal from service of each road;

(vii) a certification that PNM will use nonacid- or nontoxic-forming substances in any road surfacing;

(viii) a detailed description of how PNM will, except as necessary for the construction or closure of the Recovery System, not locate any part of any road in the channel of Westwater Arroyo or Shumway Arroyo;

(ix) a detailed description of how PNM will timely remove from the Westwater and Shumway Arroyos any road or portions thereof that were used for the purposes of construction or closure of the Recovery System; and

(x) a detailed description of how each road will be located to minimize downstream sedimentation and flooding;

(j) for any Primary Road that is identified:

(i) a detailed description of how PNM will locate such road, insofar as practical, on the most stable available surfaces;

(ii) a detailed description of how PNM will maintain adequate drainage control to pass safely peak runoff from a 10-year, 6-hour (1.3 inches or greater) precipitation event;

(iii) a detailed description of how PNM will avoid plugging or collapse and erosion at inlets and outlets as a result of the construction, use, and removal from service of any Primary Road;

(iv) a detailed description of how PNM will prevent uncontrolled drainage over any Primary Road surface and embankment from drainage ditches associated with any Primary Road;

(v) a detailed description of how PNM will sustain the vertical soil pressure, the passive resistance of the foundation, and the weight of vehicles using the road with respect to culverts associated with any Primary Road;

(vi) a certification that the surfacing of each Primary Road shall be rock, crushed gravel, or asphalt; and

(vii) a detailed description of how PNM will conduct routine maintenance to ensure all necessary and prudent repairs to the road surface, blading, filling of potholes, replacement of surfacing material, and, as necessary, revegetation, brush removal, and minor reconstruction of road segments; provided, however, that notwithstanding the foregoing, the existing roadway, commonly known as the “Red Gravel Road” which will be used for purposes of access to the Recovery System Site, shall not be construed or deemed to constitute a “Primary Road” for purposes of this Consent Decree;

(k) a plan for protection of fish, wildlife, and their habitat which includes, at minimum:

(i) a detailed description of how PNM will reasonably ensure that construction, operation, maintenance, and removal from service of the Recovery System will, to the extent reasonably possible, minimize disturbances and adverse impacts of the Recovery System on fish, wildlife, and their habitats;

(ii) a detailed description of how PNM will reasonably ensure that construction, operation, maintenance, and removal from service of the Recovery System will not likely jeopardize the continued existence of endangered or

threatened species listed either by the Secretary of the Interior or the New Mexico Department of Game and Fish, or which are likely to result in the destruction or adverse modification of designated critical habitats of such species in violation of the Endangered Species Act of 1973, 16 U.S.C. §§ 1531–1544; and

(iii) a detailed description of how PNM will reasonably prevent, control, and suppress range fires,

provided, however, that notwithstanding the foregoing, the Parties acknowledge that operation of the Recovery System is designed and intended to capture the presence of water and that changes in flora, fauna, and other environmental values that occur as a result of the capture and reduction of water as described above shall not constitute a failure to adhere to the requirements of this Consent Decree;

(l) a plan for continuous monitoring (collected on an hourly basis) at the Recovery System of the following parameters: (i) surface water flow as required in Paragraph 35; (ii) groundwater levels in all piezometers as measured by pressure transducers, vibrating wire, or other similarly accurate methods; and (iii) the pumping rate of all recovery wells, which plan shall provide for the reporting to Sierra Club of the data obtained from such monitoring, and which monitoring data PNM shall maintain for not less than six (6) months;

(m) a plan for the continuous monitoring (collected on an hourly basis) of pH, conductivity, and temperature in: (i) all water pumped from the Recovery System trench (as measured at a sampling point in the Recovery System pipeline following the confluence of all piping from the pumps associated with the Recovery System trench,

provided that the chosen sampling point shall measure only water pumped from the Recovery System trench and not from any other source); and (ii) all water encountered in the Recovery System culvert, which plan shall be consistent with the technical requirements and limitations for the operation and maintenance of relevant monitoring devices and systems, and shall provide for the reporting to Sierra Club of the data obtained from the required continuous monitoring, and which monitoring data PNM shall maintain for not less than six (6) months; and

(n) a detailed plan and timetable for restoring the Recovery System Site in the event that the Recovery System is removed from service pursuant to this Consent Decree, including:

(i) a detailed description of the proposed immediate use of the Recovery System Site after removal of the Recovery System from service, provided, however, that: (a) nothing in this Consent Decree shall operate to restrict the use or development of the Recovery System Site after closure of the Recovery System and restoration of the affected area pursuant to this Consent Decree; and (b) the foregoing requirements shall not apply in the event that the Recovery System Site is owned in fee exclusively by PNM, the San Juan Participants, or some combination thereof;

(ii) a statement of the consideration that PNM has given to restoring the Recovery System Site in accordance with surface owner plans and applicable state and local land use plans and programs, together with comments concerning the proposed use by each of the legal or equitable owners of record of the surface

of the Recovery System Site and the state and local government agencies which would have to initiate, implement, approve, or authorize the proposed use of the Recovery System Site following its restoration, unless such owners and agencies fail to make such comments within thirty (30) days, provided, however, that the foregoing requirements shall not apply in the event that the Recovery System Site is owned in fee exclusively by PNM, the San Juan Participants, or some combination thereof;

(iii) a plan for appropriate disposal of all debris, waste materials, and materials constituting a fire hazard;

(iv) a plan, with appropriate cross sections and maps, for plugging, casing, or managing bore holes, wells, and other openings on the Recovery System Site;

(v) a plan for complying with the requirements of the Clean Air Act, the Clean Water Act, and all other applicable air and water quality laws and regulations and health and safety standards, to the extent they apply to the Recovery System Site;

(vi) a plan, with appropriate cross sections and maps, for the removal or renovation for permanent use of all sedimentation ponds, diversions, impoundments, and other facilities located on the Recovery System Site, if any, to meet criteria specified in the design plan for the permanent structures and impoundments;

(vii) a plan for ensuring that waste materials are not buried or stored in proximity to a drainage course and for adequately covering of waste materials or combustible materials exposed, used, or produced during operation of the Recovery System;

(viii) a plan for protecting and stabilizing all exposed surface areas on the Recovery System Site to effectively control erosion and dust attendant to erosion; and

(ix) a plan for removing all equipment, structures, or other facilities located on the land surface associated with the Recovery System and not required for monitoring associated with the Recovery System or other post-closure activities at the Recovery System Site,

provided, however, that nothing in this Consent Decree shall require any entity to remove any subsurface structures or equipment or any facility that PNM designates for retention after closure of the Recovery System pursuant to Paragraph 27(a)(v).

28. PNM shall be allowed to self-bond as a means of providing financial assurance for the construction, operation, and closure of the Recovery System Site. As a condition to such self-bonding, PNM shall, simultaneously with the Recovery System Operations and Closure Plan, serve on Sierra Club a Financial Assurance Plan which shall:

(a) specify PNM's anticipated costs of: (i) constructing; (ii) operating; and (iii) removing the Recovery System from service, supported by itemized, written calculations and by copies of each executed or proposed contract concerning the performance of any work related to the construction or operation of the Recovery System;

(b) identify an amount of financial assurance that is sufficient to assure the completion of: (i) construction of the Recovery System as specified in the Operations and Closure Plan; (ii) operation of the Recovery System as specified in the Operations and Closure Plan; and (iii) restoration of the Recovery System Site in accordance with the Operations and Closure Plan in the event that the work must be performed at this Court's direction; and

(c) contain express provision for review and adjustment of the actual amount of financial assurance upon demonstration by PNM or Sierra Club that: (i) construction has been completed; (ii) the estimated cost of restoring the Recovery System Site has changed during the term of this Consent Decree; or (iii) PNM has fully complied with the Operations and Closure Plan following removal of the Recovery System from service pursuant to agreement of the Parties or dispute resolution under this Consent Decree.

PNM shall be allowed to self-bond so long as it has the capacity to self-bond under the provisions of 40 C.F.R. Part 264 for the operations, maintenance, and closure of the Recovery System.

29. Sierra Club shall have sixty (60) days after receipt of the proposed Operations and Closure Plan and Financial Assurance Plan to review each plan and either approve or disapprove one or both plans. Sierra Club's approval of these plans shall not be unreasonably withheld. In the event the Sierra Club fails to either approve or disapprove any plan within sixty (60) days of receipt, such plan shall be deemed approved. In the event that Sierra Club disapproves of any plan, Sierra Club shall provide the Companies with written notice of such disapproval which



shall specify, with particularity, each claimed deficiency and proposed measures, if possible, to resolve the claimed deficiencies.

30. Following approval by Sierra Club of the Operations and Closure Plan pursuant to Paragraph 29 or as the result of Dispute Resolution proceedings, the Operations and Closure Plan may be amended only: (a) by agreement of the Parties; (b) as may be required by any governmental agency with jurisdiction (subject to Sierra Club's right to insist that PNM seek administrative or judicial review of such agency action); or (c) as required by good engineering or operational practices based on actual site conditions or system operations and performance. A party proposing to amend the Recovery System Operations and Closure Plan shall provide the other Parties with the proposed amendment and a detailed statement of the reasons for the proposed amendment.

#### ***4. Construction and Operation of the Recovery System***

31. The Recovery System shall be constructed and operated in accordance with the approved Operations and Closure Plan and in a manner so that, on and after nine (9) months following commencement of its operation, the level of groundwater at the location of each pump placed in the recovery trench is maintained at or below the base of the alluvium at that location.

32. The Recovery System shall be deemed acceptable for all purposes under this Consent Decree upon the first occurrence of at least one of the following conditions:

- (a) the spatial average of the water levels in the piezometers downstream of the slurry wall is equal to or less than one (1) foot above the base of the alluvium; or

(b) the water level in the piezometer with the lowest screened interval between the slurry wall and the recovery trench is at or below the base of the alluvium at the location of the piezometer.

33. If neither the condition in subparagraph 32(a) nor the condition in subparagraph 32(b) is met and the spatial average water levels in the piezometers downstream of the slurry wall cease to exhibit continuous decline, PNM shall assess the performance of the Recovery System and take such measures as may be necessary to achieve and maintain the conditions described in subparagraphs 32(a) or 32(b).

34. The Parties acknowledge that the Recovery System is intended to, among other things, induce infiltration of Surface Water Base Flow into the alluvium. To the extent that Surface Water Base Flows continue or reoccur at the location of the slurry wall after one hundred eighty (180) days following the commencement of operation of the Recovery System, PNM shall within one hundred eighty (180) days thereafter capture, divert, or contain all Surface Water Base Flow.

35. Satisfactory management of surface water flow in direct response to precipitation or snowmelt shall be established by documenting the flow of water in a culvert to be constructed at the slurry wall in a manner that conveys all Surface Water Base Flow in the arroyo channel. The flow of water in the culvert shall be continuously measured and recorded by instrumentation designed for such purpose. In the event that Surface Water Base Flow in the arroyo channel bypasses the culvert, PNM shall take all measures necessary to correct the bypass and ensure that all Surface Water Base Flow enters the culvert.

36. Beginning no later than one (1) year after commencement of operations of the Recovery System, PNM shall manage Surface Water Base Flow so that the flow of water in the culvert constructed at the Recovery System occurs only in direct response to precipitation or snowmelt. Flow of water in the culvert shall not continue more than forty-eight (48) hours after the cessation of flow at either of two surface water monitoring stations which the Companies shall establish on the Westwater and Shumway Arroyos, respectively, immediately upstream of all industrial activities. Flows that are observed only in the culvert and not in the upstream monitors and that are shown to be directly related to localized precipitation events shall not constitute unsatisfactory management of surface water.

**5. *Removal of the Recovery System from Service***

37. Absent agreement on implementation of an Alternative Remedial Measure or set of Alternative Remedial Measures pursuant to Paragraph 45, PNM shall operate the Recovery System for a minimum of seven (7) years from the date on which the Recovery System commences operations. The Recovery System shall be operated until Sierra Club concurs in writing that the Recovery System can be removed from service, or dispute resolution results in a decision that one of the standards in subparagraphs (a) or (b) is met:

- (a) surface and alluvial groundwater monitoring for parameters set forth in this Consent Decree establishes that for a period of twelve (12) consecutive months: (i) no Surface Water Base Flow is present at the location of the Recovery System; and (ii) alluvial groundwater captured by the Recovery System occurs only in direct response to precipitation or snowmelt; or

(b) the Companies demonstrate that conditions downstream of the Recovery System, measured at the location shown on Exhibit 2, do not or will not present an imminent and substantial endangerment to health or the environment as set forth at 42 U.S.C. § 6972(a)(1)(B) and applicable case law.

38. In no case, however, shall PNM petition the Court for removal of the Recovery System from service under Paragraph 37(b) before seven (7) years from the commencement of operation of the Recovery System. The environmental conditions downstream or downgradient of the Recovery System at any location other than that indicated on Exhibit 2 shall not be used as a basis for Sierra Club to oppose any effort under Paragraph 37 by the Companies to remove the Recovery System from service or for any other purpose.

**6. *Additional Monitoring Provisions***

39. PNM shall utilize one (1) of the San Juan Generating Station coal pile run-off caissons as a water quality monitoring well to be designated as RCB-1 and sampled for the parameters specified in the existing groundwater discharge permit for the San Juan Generating Station. Monitoring in RCB-1 shall be conducted monthly for one (1) year following the commencement of the operation of the Recovery System and quarterly thereafter. PNM shall provide Sierra Club a report of the results of each monitoring event for RCB-1 within five (5) business days of receipt of the results. Sierra Club may, at its sole expense, take samples from RCB-1 once every two (2) years for the parameters specified in the existing groundwater monitoring and observation plan for the San Juan Mine. Any such sampling shall be conducted during the third quarter of the calendar year for any year in which sampling by Sierra Club is permitted. Sierra Club shall provide the Companies a report of the results of each sampling event

for RCB-1 within five (5) business days of receipt of the results. The Companies may, at their sole expense, split samples with Sierra Club. The results of any sampling obtained by Sierra Club shall not be admissible in any litigation or regulatory proceeding, shall be maintained as confidential, and shall not be distributed to third parties.

40. No later than thirty (30) days after entry of this Consent Decree, PNM shall initiate all necessary actions to promptly obtain access and necessary governmental approvals for the installation of a remote sensing monitoring well to be designated as WWA-4BC at the location specified on Exhibit 3. Within ten (10) business days following final completion of WWA-4BC, including installation of the associated remote sensing equipment, PNM shall commence continuous monitoring (to be reported as daily composite averages) for water level, pH, conductivity, and temperature. PNM shall maintain the monitoring data from WWA-4BC for not less than six (6) months. The cost of the installation of WWA-4BC and associated equipment shall be included in the cost of the Recovery System for purposes of Paragraph 64. As PNM installs and completes WWA-4BC, PNM shall allow Sierra Club's representative to observe the installation and completion of the well consistent with the Parties' practice to date.

41. PNM shall identify and locate one surface flow monitoring station on the Westwater Arroyo upstream of any potential hydrologic influence from the San Juan Generating Station, and a second surface flow monitoring station on the Shumway Arroyo upstream of any potential hydrologic influence from the San Juan Mine. These stations shall be used to monitor and measure surface flow within the respective arroyos. PNM's proposed Operations and Closure Plan for the Recovery System shall include provisions for equipment installation and monitoring of these stations.

42. As SJCC installs and completes Well SA-2 in accordance with Modification 2010-10 and 2010-14 to SJCC's SMCRA permit 2001-1 (Dec. 29, 2010), SJCC shall allow Sierra Club's representative to observe the installation and completion of the identified well consistent with the Parties' practice to date.

**B. Investigation and Evaluation of Alternative Remedial Measures**

43. No later than one hundred eighty (180) days after final completion of the Site Characterization, the Parties will meet to discuss, and agree upon, to the extent possible, an approach to be used in evaluating alternative remedial measures which would include, without limitation, the data, the model, the model assumptions, the boundary conditions, other variables, analytic methods, and effectiveness measures for the evaluation. Using this information, Sierra Club and the Companies shall thereafter each conduct an evaluation of alternative remedial measures that would permit the removal of the Recovery System.

44. No later than twenty-four (24) months after final completion of the Site Characterization, Sierra Club and the Companies shall simultaneously exchange reports setting forth the results of each Party's respective evaluation of alternative remedial measures together with proposed performance standards for each Alternative Remedial Measure (collectively, "Alternative Remedial Measures").

45. Within sixty (60) days of the exchange of reports pursuant to Paragraph 44, the Parties shall confer in person concerning their respective Alternative Remedial Measures. If the Parties agree upon an Alternative Remedial Measure or set of Alternative Remedial Measures that, if implemented, would allow PNM to remove the Recovery System from service, PNM

shall be entitled to remove the Recovery System from service upon implementation of the agreed Alternative Remedial Measure or set of Alternative Remedial Measures.

46. If the Parties do not mutually agree upon an Alternative Remedial Measure or set of Alternative Remedial Measures, PNM shall continue to operate the Recovery System in accordance with the terms of this Consent Decree until: (a) the Parties subsequently agree on removal of the Recovery System from service; or (b) dispute resolution results in a decision that allows for the removal of the Recovery System from service.

## **VI. PERMITS**

47. The Companies intend that the Recovery System will be permitted under the New Mexico Water Quality Act and associated regulations.

48. Nothing in this Consent Decree shall be construed as requiring review or approval by, or notice to, Sierra Club of any permit application or permit modification or revision application that does not concern or directly affect the operation of the Recovery System. In addition, Sierra Club shall not have any right under this Consent Decree to review, approve, or receive notice of any application for renewal, revision, modification, transfer, or assignment of any permit, license, or agreement that does not concern or directly affect the Recovery System. PNM shall provide Sierra Club with notice of Administrative Permit Amendments that concern or directly affect the Recovery System, but Sierra Club shall have no right to approve such Administrative Permit Amendment.

49. PNM shall provide Sierra Club with a copy of each Permit Application before submitting it to the pertinent permitting authority. Sierra Club shall have twenty-eight (28) days after receipt to review the Permit Application to confirm that it does not materially conflict with

the requirements of this Consent Decree, the approved Operations and Closure Plan, or the Financial Assurance Plan (hereinafter collectively “Consent Decree Requirements”). If Sierra Club contends that the Permit Application materially conflicts with the Consent Decree Requirements, Sierra Club shall provide PNM written notice, which shall specify, with particularity: (a) each respect in which Sierra Club contends that the Permit Application materially conflicts with the Consent Decree Requirements; and (b) Sierra Club’s proposed alternative language for resolving the claimed material conflict. If Sierra Club provides timely notice of a claimed material conflict, PNM shall refrain from filing the Permit Application until each of Sierra Club’s claims are resolved through negotiations or as otherwise provided in this Consent Decree. PNM shall thereafter file the Permit Application in a form consistent with the agreement between PNM and Sierra Club or any dispute resolution order or orders. If Sierra Club fails to provide PNM with notice of a claimed material conflict within twenty-eight (28) days of receiving a particular Permit Application, it shall thereafter be precluded from objecting to that Permit Application and PNM may proceed with filing the Permit Application with the pertinent permitting authority.

50. Upon filing any Permit Application, PNM shall simultaneously provide a copy to Sierra Club. After filing each Permit Application, the Companies shall promptly inform Sierra Club of: (a) each written communication that either or both of them receive from a permitting authority concerning that Permit Application; and (b) each written communication that they transmit to a permitting authority concerning that Permit Application. In addition, Sierra Club shall promptly inform the Companies of each written communication that Sierra Club or its agents, contractors, or representatives send or receive with any government agency with respect



to the permitting, operation, or closure of the Recovery System, or any issues under this Consent Decree.

51. PNM shall neither make nor agree to any alteration or addition to a Permit Application without first obtaining the written concurrence of Sierra Club in each specific alteration or addition, such concurrence not to be unreasonably withheld. PNM shall provide Sierra Club written notice of any proposed alteration or addition to a Permit Application. Sierra Club shall have fourteen (14) days to review the proposed Permit Application alteration or addition. In the event that Sierra Club fails to respond to the written notice within fourteen (14) days, Sierra Club shall be deemed to concur in the proposed alteration or addition. Upon receiving Sierra Club's concurrence, whether in fact or by failure to timely respond, PNM shall modify the Permit Application only in strict accordance with the terms of the notice of proposed alteration or addition following such concurrence.

52. PNM shall support each Permit Application as filed or as revised pursuant to this Consent Decree and it shall not indicate in any manner to any permitting authority that further revision of the Permit Application would be appropriate or acceptable to PNM, except with Sierra Club's written concurrence, which concurrence shall not be unreasonably withheld.

53. If any permitting authority refuses to approve any Permit Application as filed or revised in accordance with this Consent Decree, PNM shall timely initiate any available proceedings for administrative review of the permitting authority's decision and shall support Sierra Club's intervention and participation in such review.

54. If administrative review is unavailable with respect to any decision to deny a Permit Application as filed or revised in accordance with this Consent Decree, or if an

administrative review tribunal affirms any decision of a permitting authority to deny a Permit Application as filed or revised, PNM shall timely seek judicial review and shall support Sierra Club's intervention and participation in the proceeding.

55. PNM shall prosecute each such action for judicial review until: (a) the decision to deny a Permit Application is vacated or reversed by final, unappealable order; or (b) the highest court authorized to conduct judicial review or hear appeals from judicial review decisions affirms denial of the permit at issue.

56. If the highest court authorized to conduct judicial review or hear appeals from judicial review decisions affirms a final administrative decision denying a Permit Application or vacating a permit required for the Recovery System, PNM shall elect to either: (a) proceed under Paragraph 20; or (b) within one-hundred-twenty (120) days of the entry of such decision, present to Sierra Club a revised Permit Application.

57. The Parties shall thereafter process the proposed revised Permit Application in accordance with Paragraphs 49 through 56 as circumstances may require and, if necessary, with this Paragraph until the required permit in some agreed form is approved and, if challenged, is upheld on review.

58. After issuance of each permit or permit modification that authorizes PNM to construct or operate the Recovery System, PNM shall not without Sierra Club's written concurrence, which concurrence shall not be unreasonably withheld, apply for or acquiesce in further modification of the permit for the Recovery System, subject to the limitations of Paragraph 48.

59. During the term of this Consent Decree, SJCC shall not apply for or acquiesce in any alteration of the conditions incorporated in Modification 2010-10 and 2010-14 to SJCC's SMCRA permit 2001-1 (Dec. 29, 2010) without Sierra Club's written concurrence, which concurrence shall not be unreasonably withheld, provided, however, that if SJCC does not receive Sierra Club's written response within ten (10) business days after Sierra Club receives written notice of the proposed alteration, SJCC may proceed without Sierra Club's written concurrence. After the term of this Consent Decree while the Recovery System may be operating, SJCC shall not so apply or acquiesce without having provided at least 10 (ten) business days' prior written notice to Sierra Club.

60. During the pendency of any administrative consideration of a permit application and any challenge to any permit for the Site Characterization, construction, or operation of the Recovery System, the applicable obligations of the Companies under this Consent Decree shall be stayed until the final resolution of the consideration or challenge.

## **VII. SUPPLEMENTAL ENVIRONMENTAL PROJECTS**

61. The Companies shall fund the supplemental environmental projects ("SEPs") identified in Exhibit 4 in the total amount of \$1,000,000.

## **VIII. ENVIRONMENTAL RESTORATION PROJECTS**

62. Subject to the provisions and limitations of Paragraphs 63 and 64, the Companies shall undertake the following environmental restoration projects ("Environmental Restoration Projects") in the order set forth below:

- (a) PNM shall construct and operate the Raw Water Reservoir Recovery System. The purpose of the Raw Water Reservoir Recovery System is to reduce water

from the San Juan Raw Water Reservoir that may enter the alluvium. The specific placement, design, specification, construction, operation, and maintenance of the Raw Water Reservoir Recovery System shall be conducted in accordance with PNM's reasonable judgment and discretion to accomplish the purpose set forth above.

(b) Within one (1) year following the commencement of the operation of the Recovery System, the Companies shall undertake a ten (10) year biomonitoring program in the Shumway and Westwater Arroyos downstream of the Recovery System to the location noted on Exhibit 2 ("the Study Area"). The biomonitoring program shall be designed to identify and monitor the biotic resources in the Study Area as the Companies implement the requirements of this Consent Decree. The biomonitoring program shall be implemented through same-season annual biotic field surveys of the Study Area by a qualified environmental scientist—to be selected by the Companies in consultation with Sierra Club—and the preparation of and provision to Sierra Club of an annual report describing the results of the field survey as well as significant changes in biota, if any, from conditions identified as of the commencement date of the biomonitoring program in the Study Area. The purpose of the biomonitoring program is informative only, and shall not be used by Sierra Club for any other purpose.

(c) Upon completion of the project under Paragraph 62(a) and commencement of the project under Paragraph 62(b), and subject to the limitations in Paragraph 64, PNM shall undertake the Environmental Restoration Projects identified in Exhibit 5.

63. The Companies shall expend no less than \$1,000,000 on the projects provided for in this Section, subject to the potential upward adjustment set forth in Paragraph 64.

64. The Companies estimate that the Recovery System Cost should be no more than \$5,300,000 but may be as much as \$6,000,000. To the extent the Recovery System Cost is less than \$6,000,000 the Companies shall expend unused funds up to an additional \$1,700,000 on the Environmental Restoration Projects set forth in this Section.

65. PNM shall provide to Sierra Club written accounting statements, prepared in accordance with generally accepted accounting principles (“GAAP”), of all expenditures comprising the Recovery System Cost, and for all expenditures related to the Environmental Restoration Projects undertaken pursuant to this Section. PNM shall provide the accounting statements required by this paragraph at the following intervals: (a) six (6) months after entry of the Consent Decree; (b) one (1) year after entry of this Consent Decree; and (c) on each subsequent anniversary of the entry of this Consent Decree through termination. Sierra Club shall have the right to request in writing, up to two times per year for the first two years of the Consent Decree, the cost of a specific expenditure or expenditures in order to ascertain expenditures made by the Companies pursuant to Paragraphs 62 through 64.

## **IX. ACCESS, RECORDKEEPING, AND REPORTING**

### **A. Sierra Club’s Site Access**

66. Up to three (3) of Sierra Club’s designated representatives shall be allowed escorted access to the Recovery System Site and the Westwater Arroyo and Shumway Arroyo as specified below only in the following circumstances and for the following purposes:

(a) upon a minimum of forty-eight (48) hours written notice to each of the Companies, access to the Recovery System Site for the sole purpose of observing and evaluating site assessment and construction related to the Recovery System on each day during which such activities occur;

(b) upon a minimum of forty-eight (48) hours written notice to each of the Companies, once on one (1) day during or after any precipitation event of Sierra Club's choosing, for the purpose of observing and evaluating the impact, if any, of the said precipitation event on the construction or operation of the Recovery System and on flows to or within the Recovery System surface water culvert installed pursuant to Paragraph 35, provided that Sierra Club's representative shall have access to the Recovery System Site pursuant to this subparagraph no more than twice;

(c) upon a minimum of forty-eight (48) hours written notice to each of the Companies, once per calendar month during the first year after commencement of operation of the Recovery System, for the purpose of observing the operation of the Recovery System and the Westwater and Shumway Arroyo system from the most upstream monitoring station installed pursuant to Paragraphs 40 through 42 on each arroyo to the first piezometer downstream of the Recovery System at which either Company has the right or privilege of access;

(d) upon a minimum of forty-eight (48) hours written notice to each of the Companies, once per two (2) calendar months during the second year after commencement of operation of the Recovery System, for the purpose of observing the operation of the Recovery System and the Westwater and Shumway Arroyo system from

the most upstream monitoring station installed pursuant to Paragraphs 40 through 42 on each arroyo to the first piezometer downstream of the Recovery System installed pursuant to Paragraph 27(g)(i);

(e) thereafter during operation of the Recovery System, upon a minimum one (1) week's written notice, once every calendar quarter, for the purpose of observing and evaluating the operation of the Recovery System and the Westwater and Shumway Arroyo system from the most upstream monitoring station installed pursuant to Paragraphs 40 through 42 on each arroyo to the first piezometer downstream of the Recovery System at which either Company has the right or privilege of access; and

(f) if PNM fails to comply with its duty to operate the Recovery System in accordance with the Operations and Closure Plan, Sierra Club's right of access to the entire Recovery System Site—and if pertinent, to the Westwater or Shumway Arroyos—for three (3) months following each such failure, shall be as described in subparagraph (c), without regard to elapsed time since commencement of operation of the Recovery System, provided however, that for purposes of this subparagraph only, PNM's failure to meet any reporting deadline shall not constitute a failure to operate the Recovery System in accordance with the Operations and Closure Plan.

Sierra Club may satisfy the written notice requirements of this Paragraph by transmitting an electronic mail message in accordance with Section XVIII stating an intention to exercise access rights on a specific day or set of days, such notice also to be electronically copied to a designated email address to be provided in writing by the Companies to Sierra Club after entry of this Consent Decree.

67. During any site visit, Sierra Club's designated representatives shall have the right to take field measurements of surface water or groundwater samples collected by the Companies, using a YSI (or equivalent) meter properly calibrated to the manufacturer's specifications and undertaken for observational purposes only. Any field measurements obtained by Sierra Club's designated representatives shall not be admissible in any litigation or regulatory proceeding, shall be maintained as confidential, and shall not be distributed to any third parties.

68. All written notices for access shall include the date and time for the requested access and identify the Sierra Club representative(s) for whom access is being requested. During all periods of access, Sierra Club's designated representative(s) shall comply with all applicable health, safety, and environmental laws and regulations and the Companies' health and safety, facility procedures, and confidentiality requirements applicable to contractors at the Facilities. All access by Sierra Club's designated representative(s) to the Recovery System Site shall require escort from one or both of the Companies. Sierra Club's access rights shall terminate upon the closure of the Recovery System in accordance with this Consent Decree.

69. As a condition for access as provided under this Consent Decree, Sierra Club's designated representatives shall sign a written release and indemnity agreement acknowledging that: (a) the areas of permitted access may include construction, mining, and other industrial activities which present inherent hazards and that the designated representatives accept the risks inherent in these activities; (b) Sierra Club's designated representatives shall indemnify and hold the Companies and their respective contractors harmless for any injury or damage to person or property caused by the gross negligence or intentional acts or omissions of the designated representatives; (c) the obligation of the Sierra Club's designated representative to indemnify and



hold harmless the Companies shall not extend to negligence or intentional acts of the Companies; and (d) the Companies will neither indemnify nor hold harmless the Sierra Club's designated representative for any injury or damage to person or property caused by negligence or intentional acts of the designated representative.

70. Sierra Club's designated representatives shall conform to the following requirements when visiting the San Juan Mine.

(a) Before a Sierra Club representative will be allowed access to the San Juan Mine property, the representative must provide written evidence to SJCC safety officials of the completion of site specific hazard training (such training to consist of an approximately one-hour training to be provided on-site by SJCC safety officials pursuant to 30 C.F.R. § 48.31, at no cost to the representative or to Sierra Club).

(b) If any Sierra Club representative intends to access the property on more than five (5) occasions or has accessed the property on more than five (5) occasions in a 12-month period, such representative must, before accessing or re-accessing the property, provide to SJCC safety officials written evidence of the completion of MSHA training in accordance with 30 C.F.R. Part 48.

(c) Sierra Club's representative(s) must wear hard-toed boots at any time the representative is on mine property. SJCC safety officials can provide MSHA-certified hard hats, safety glasses, and reflective vests if necessary.

(d) The Sierra Club representative will not be allowed to drive a non-mine vehicle on the San Juan Mine property. Personal vehicles must be left in the designated visitor parking area, and SJCC safety officials will transport the Sierra Club

representative to the mine property location at which the work to be observed is to be performed.

(e) The Sierra Club representative will be provided with an area of access to the San Juan Mine property that is suitable to the purposes for which access is allowed, but which is also consistent with safety requirements. Sierra Club's representative must remain within the delineated access areas, and follow the safety-related instructions of SJCC safety officials at all times.

(f) The Sierra Club representative will be allowed to take photographs that are directly relevant to the activities being observed, but will in no case be allowed to take photographs of SJCC employees or SJCC equipment unless the equipment is incidentally in the background of an otherwise relevant photograph.

71. Sierra Club's designated representatives shall conform to the following requirements when visiting the Recovery System Site and Westwater Arroyo:

- (a) all applicable workplace safety laws and regulations;
- (b) all health, safety, and training requirements that are applicable to PNM contractors as required for access to the San Juan Generating Station as may be amended from time to time; and
- (c) all insurance requirements that are applicable to PNM contractors as required for access to the San Juan Generating Station as may be amended from time to time.

**B. Exchange of Information**

72. The Companies shall simultaneously provide Sierra Club with copies of any reports submitted to federal or state regulatory agencies in connection with: (a) the operation of the Recovery System; and (b) water quality monitoring required as a condition of SJCC's mining permit. The Companies shall provide the reports in the same format in which they are transmitted to such agencies, which shall be either in print or in an electronic format readable by commercially-available computer software.

73. The Companies will endeavor to provide Sierra Club with electronic copies of Recovery System Site Characterization data within two (2) working days of obtaining it, but they shall do so no later than five (5) working days after obtaining it.

74. During Site Characterization activities, the Parties will exchange on a weekly basis the field notes recorded by each Party's respective field representatives during such activities. The Parties will designate their respective representative charged with preparing and maintaining field notes covering the Site Characterization activities. Sierra Club's representative will provide on a weekly basis to the Companies' designated representatives copies of photographs, if any, taken by the Sierra Club representative while at the Facilities.

75. Within one (1) week from entry of this Consent Decree, SJCC will provide to Sierra Club all non-privileged field notes not provided to Sierra Club as of December 21, 2011, if any, concerning site conditions prepared by each of its employees or agents during the site assessment and well installation activities conducted pursuant to SJCC's implementation of the "second supplemental monitoring plan" identified in the Parties "Confidential Memorandum of Agreement" dated October 25, 2010.

**X. RECOVERY FOR CONSENT DECREE COSTS**

76. Sierra Club acknowledges that PNM and some or all of the San Juan Participants may seek funding approval for and/or recovery of, in customer rates or otherwise, some or all of the costs incurred under this Consent Decree (“Consent Decree Costs”). Sierra Club covenants and agrees that it shall not oppose or challenge the approval of any funding for or recovery of any Consent Decree Costs in any administrative or judicial proceeding. Sierra Club further covenants and agrees that it shall not participate in or fund any other organization or association that seeks to oppose or challenge the approval of any funding for or recovery of any Consent Decree Costs in any administrative or judicial proceeding. The restrictions herein do not extend to any administrative or judicial proceeding involving issues that do not relate to the Consent Decree Costs.

**XI. RESOLUTION OF CLAIMS**

77. This Consent Decree resolves and releases Defendants and the San Juan Participants from all civil claims that have been brought or could have been brought against the Defendants and the San Juan Participants arising under RCRA, SMCRA, CWA or any other statute or common law, from any act or omission related to: (a) the mining, use, and placement of coal and coal combustion byproducts at the Facilities; (b) the management, release, or discharge of water at or from the Facilities that may have impacted property, surface water, or alluvial or other groundwater in any location, including but not limited to the Shumway and Westwater Arroyos; and (c) any allegation that was made, or that could have been made, in the Lawsuit that occurred prior to the date of entry of this Consent Decree.

78. Sierra Club further covenants not to issue a notice of intent to sue with respect to, initiate, commence, finance, or participate in any administrative or judicial action with respect to any claim based on Laws as existing on the date of the lodging of this Consent Decree and arising from any act or omission undertaken within the reasonable scope of practices of the Companies current as of the date the Lawsuit was filed:

- (a) with respect to the placement of coal and coal combustion byproducts at the San Juan Mine;
- (b) with respect to the generation, handling, and storage of coal combustion byproducts and the handling and storage of coal at the San Juan Generating Station;
- (c) with respect to the management, release, or discharge of water at or from the Facilities to the extent the water does or is alleged to come into contact with coal or coal combustion byproducts;
- (d) with respect to any water management and water storage processes or practices employed or in existence at the Facilities as of the date the Lawsuit was filed;
- (e) with respect to any alleged impact on the hydrologic balance from water management or storage at the Facilities to the extent such impact is related to any acts or omissions as of the date the Lawsuit was filed;
- (f) with respect to any act required to be undertaken under and in accordance with the provisions of this Consent Decree; and
- (g) by a regulatory agency regarding the foregoing activities,

that occurs on or after the date of entry of this Consent Decree provided the Companies are not found, after exhaustion of all appeal opportunities, to have violated one or more material terms of this Consent Decree.

## **XII. ATTORNEYS' FEES AND COSTS**

79. Within thirty-five (35) days of entry of this Consent Decree, the Companies will pay Sierra Club \$1,650,000 in attorney and expert fees and costs incurred through entry of this Consent Decree. Sierra Club's attorneys and experts shall be solely responsible for any taxes that may be applicable to such fees and costs. The Parties agree that any agreed amounts paid to Sierra Club for attorneys' fees, consultant fees, and litigation costs under this Consent Decree were the result of the settlement of a disputed and unliquidated claim, based on the unique factors in the Lawsuit, and that such agreed amounts shall not serve as precedent for any other fees or costs for which Sierra Club may hereafter seek recovery pursuant to this Consent Decree or in any other action against PNM, PNM Resources, Inc., BHP Billiton New Mexico Coal Company, Inc. or its subsidiaries, or any of the San Juan Participants.

80. The Companies will pay Sierra Club \$500,000 in full payment of attorneys' and experts' fees incurred after entry of this Consent Decree for any and all costs and expenses associated with the implementation and monitoring of this Consent Decree. Sierra Club's attorneys and experts shall be solely responsible for any taxes that may be applicable to such fees and costs. The Companies shall pay Sierra Club \$250,000 within six (6) months of entry of this Consent Decree, and the balance of \$250,000 within eighteen (18) months of entry of this Consent Decree.

81. All payments made under this Section shall be made by electronic funds transfer (“EFT”) to an account to be identified by Sierra Club in writing within ten (10) days of entry of this Consent Decree, in accordance with current EFT procedures. The costs of such EFT shall be the responsibility of the Companies. At the time of payment, the Companies shall provide notice of payment in accordance with Section XVIII.

### **XIII. CONFIDENTIALITY PROVISIONS**

82. The Parties and their agents, contractors, consultants and designated representatives shall not, without the written consent of the other Parties, disclose any field notes, data, photographs, reports, emails, memoranda, conversations, or other information received, collected, or provided by the Parties as a result of the negotiations related this Consent Decree or any activities permitted under this Consent Decree to any regulatory agencies or third parties, and this information shall not be used for any purposes other than as specifically set forth in this Consent Decree; provided however, that the provisions of this Paragraph shall not apply to information that is in the public domain through means other than by breach of this Consent Decree. In addition, PNM may provide such information to the San Juan Participants with the understanding that any such information shall be maintained by them as confidential in accordance with the terms of this Decree.

83. Entry of this Consent Decree is conditioned on the receipt by the Companies of nondisclosure agreements executed by the Western Environmental Law Center and the Environmental Integrity Project (“EIP”), in which those entities shall adhere to the nondisclosure and confidentiality provisions in this Consent Decree concerning any Settlement Information or confidential data or information collected or provided to such entities during the activities related

to the negotiations among the parties and the entry of this Consent Decree. Each entity shall be separately responsible for compliance with the nondisclosure and confidentiality provisions set forth herein and included in the relevant nondisclosure agreement.

84. The Parties' agreements concerning settlement negotiations and the Settlement Information under the letter agreements of May 21 and 27, 2010, shall remain in effect following the entry of this Consent Decree.

#### **XIV. MODIFICATION AND TRANSFERABILITY**

85. The terms of this Consent Decree may be modified only by a subsequent written agreement signed by the Parties. The Parties may, without Court approval, mutually agree to extend any deadline under this Consent Decree by not more than sixty (60) days. Where the modification constitutes a material change to this Consent Decree, it shall be effective only upon approval by the Court.

86. If PNM or SJCC proposes to sell or assign all or part of their respective ownership interests in the Facilities or the Recovery System Site, as may be applicable, the selling or assigning entity shall provide a copy of this Consent Decree to the prospective purchaser or assignee. The selling or transferring entity shall provide written notice of the proposed sale or assignment to the other Parties at least thirty (30) days before completion of the sale or assignment. The sale or assignment of all or part of the Facilities or the Recovery System Site shall not relieve the selling or transferring entity of its obligations to perform under this Consent Decree unless agreed to by the Parties through a modification to this Consent Decree under Paragraph 85. Nothing in this Consent Decree shall be construed as: (a) requiring consent or approval of the Sierra Club or the Court for any sale or transfer of any interest in the Facilities



or Recovery System Site; or (b) limiting the rights of the Companies to assign or encumber their respective interests in the Facilities or Recovery System Site solely for purposes of securing any indebtedness or other obligation.

#### **XV. RETENTION OF JURISDICTION**

87. This Court shall retain jurisdiction of the Lawsuit after entry of this Consent Decree to enforce compliance with the terms and conditions of this Consent Decree and to take any action necessary or appropriate for its interpretation, construction, execution, modification, or adjudication of disputes. Subject to the provisions of Section XVI, during the term of this Consent Decree, any Party may apply to this Court for any relief necessary to construe or effectuate this Consent Decree. After the Consent Decree is terminated pursuant to the provisions of Section XVII, the Court shall retain jurisdiction for the limited purpose of adjudicating any dispute concerning the removal of the Recovery System from service.

88. Plaintiff and Defendants reserve all legal and equitable rights and defenses available to them to enforce or defend the provisions of this Consent Decree.

#### **XVI. DISPUTE RESOLUTION**

89. The dispute resolution procedure provided by this Section shall be available to resolve all disputes arising under this Consent Decree unless a provision of this Consent Decree expressly precludes the use of dispute resolution. With respect to any dispute arising under this Consent Decree, this Consent Decree shall be interpreted to achieve objectives hereunder in a reasonable, cost effective, and technically practical manner.

90. In the event that Sierra Club, any person or organization purporting to act on behalf of Sierra Club, or any person or organization financed by Sierra Club is alleged to have

acted contrary to the provisions of Paragraph 78 (Resolution of Claims) or Section X (Recovery for Consent Decree Costs), the Companies shall—prior to commencing any dispute resolution proceedings under this Section—provide Sierra Club written notice of, and a thirty (30) day opportunity to cure, any such alleged breach. In the event of any such notice, Sierra Club will cooperate with the Companies to have any such action withdrawn or dismissed. In no event shall any Party seek money damages for any breach of the provisions of this Paragraph, though the Court will retain its full authority to enforce the provisions of this Consent Decree by injunctive relief or otherwise. If Sierra Club has not cured the alleged breach to the satisfaction of the aggrieved Party by the expiration of the thirty (30) day period, such alleged breach shall be subject to the dispute resolution procedures of Paragraphs 91 through 97.

91. The dispute resolution procedure required herein shall be invoked by one Party giving written notice to the other Parties advising of a dispute pursuant to this Section. The written notice shall: (a) describe the nature of the dispute; (b) identify the provisions of the Consent Decree which are in dispute; (c) provide a summary of the noticing Party's legal argument concerning the dispute; and (d) provide a summary of the noticing Party's technical arguments, if any, concerning the dispute. The Parties receiving such a notice shall acknowledge receipt of the notice, and the Parties in dispute shall expeditiously schedule a meeting to discuss the dispute informally not later than fourteen (14) days following receipt of such written notice.

92. Disputes submitted to dispute resolution under this Section shall be the subject of informal negotiations among the disputing Parties within a reasonable period of time not to exceed thirty (30) days from the date of the first meeting among the disputing Parties' representatives.

93. If the disputing Parties are unable to reach agreement during the period of time set forth in Paragraph 92 and the dispute is of a technical nature, each Party shall within a reasonable period of time not to exceed thirty (30) days after the expiration of the period of time set forth in Paragraph 92 identify in writing a technical representative (the “Technical Dispute Representative”) to review any issues in dispute. Within twenty-one (21) days of their appointment under this Paragraph, the disputing Parties’ Technical Dispute Representatives shall prepare and provide to the other disputing Parties a written explanation of that Party’s position. The Technical Dispute Representatives shall meet in person within thirty (30) days of their appointment under this Paragraph and attempt to resolve the dispute informally.

94. If the disputing Parties are unable to reach agreement during the periods of time set forth in Paragraphs 91 through 93 as applicable, the Party invoking the dispute resolution proceedings under Paragraph 91 shall have the right file with the Court within thirty (30) days a Petition for Dispute Resolution, which shall: (a) include a detailed statement of the dispute; (b) identify the provisions of the Consent Decree that are in dispute; (c) provide the petitioner’s argument concerning the dispute; (d) set forth the petitioner’s proposal for the process and timing for adjudication of the dispute along with a specific request for relief that would satisfy the petitioning Party. The other disputing Parties may respond to the Petition for Dispute Resolution within thirty (30) days of filing. The petitioner shall have the right to file a reply within fourteen (14) days of the response, and in such case, the other disputing Parties shall have the right to file a sur-reply within fourteen (14) days of the reply. In each Petition for Dispute Resolution, a party may request an evidentiary hearing on the dispute and suggest that the Court refer the dispute to a magistrate judge or special master at the discretion of the Court.

95. Where the nature of the dispute is such that a more timely resolution of the issue is required, the time periods set out in this Section may be modified upon mutual written agreement of the disputing Parties or by motion of one of the Parties to the dispute.

96. This Court shall not draw any inferences nor establish any presumptions adverse to any disputing Party as a result of invocation of this Section or the disputing Parties' inability to reach agreement.

97. Any requirement of this Consent Decree that is subject to or dependent upon the resolution of a particular dispute shall be held in abeyance pending the outcome of dispute resolution.

## **XVII. TERMINATION OF CONSENT DECREE**

98. This Consent Decree shall terminate upon the first occurrence of any of the following: (a) the conditions for the removal of the Recovery System from service are met under this Consent Decree and the Supplemental Environmental Projects and Environmental Restoration Projects have been completed; or (b) ten (10) years from the date of entry of this Consent Decree. In the event that the Companies have not satisfied the conditions for removal of the Recovery System from service within ten (10) years of the date of entry of this Consent Decree, this Consent Decree shall nonetheless terminate, but the Companies shall continue operating the Recovery System until such time as the parties agree to the removal of the Recovery System from service or until an order of the Court.

99. The provisions of Paragraph 78 (Resolution of Claims) shall remain in full force and effect for as long as the Recovery System remains in service.

100. The provisions of Section XVI (Dispute Resolution) shall survive the termination of this Consent Decree only for purposes of: (a) a petition by the Companies to the Court for the removal of the Recovery System from Service; and (b) a petition by Sierra Club for specific performance of the requirements of this Consent Decree related to operation and maintenance of the Recovery System or removal from service.

### **XVIII. NOTICES**

101. Unless otherwise provided herein, whenever notifications, communications, or submissions are required by this Consent Decree, they shall be made in writing and addressed as follows:

#### **As to Sierra Club:**

Peter Morgan  
Associate Attorney  
1650 38th St., Suite 102W  
Boulder, CO 80301

Charles M. Tebbutt  
Law Offices of Charles M. Tebbutt, P.C.  
451 Blair Blvd.  
Eugene, OR 97402

#### **As to San Juan Coal Company:**

Brent Musslewhite  
Director, Environmental  
300 West Arrington, Suite 200  
Farmington, NM 87401

Charles E. Roybal  
Senior Counsel  
300 West Arrington, Suite 200  
Farmington, NM 87401

#### **As to Public Service of New Mexico:**

Michael Goen  
San Juan Generating Station, MS 96EO  
6800 North County Road  
Waterflow, NM 87421  
(for purposes of communications and notices  
pursuant to Sections IX.A and IX.B, only)

Carol Graebner  
Deputy General Counsel  
Alvarado Square, MS 1200  
Albuquerque, NM 87158  
(for purposes of all communications and  
notices except those pursuant to Sections IX.A  
and IX.B)

102. All notifications, communications, or submissions made pursuant to this Section shall be sent either by: (a) overnight mail or delivery service; (b) certified or registered mail, return receipt requested; or (c) electronic mail with a proof of delivery receipt certificate requested. All notifications, communications, and transmissions: (y) sent by overnight, certified, or registered mail shall be deemed submitted on the date they are postmarked; or (z) sent by overnight delivery service shall be deemed submitted on the date they are delivered to the delivery service. All notifications, communications, and submissions made by electronic mail shall be deemed submitted on the date electronically transmitted, and the transmitting Party shall be responsible for maintaining and producing upon request to any Party the returned electronic proof of delivery receipt certificate. The Parties shall exchange designated email addresses to be used in accordance with this Section no later than three (3) business days after entry of this Consent Decree.

103. Any Party may change either the notice recipient or the address for providing notices to it by serving the other Parties with a notice setting forth such new notice recipient or address.

#### **XIX. FORCE MAJEURE**

104. For purposes of this Consent Decree, a “Force Majeure Event” shall mean an event that has been or will be caused by circumstances beyond the control of any Party, or any of them, or their respective contractors, or any entity controlled by any of them, that delays or prevents performance of any provision of this Consent Decree despite the Party’s best efforts to fulfill the obligation. “Best efforts to fulfill the obligation” include using due diligence to anticipate any potential Force Majeure Event and to address the effects of any such event (a) as it

is occurring and (b) after it has occurred, such that the delay or non-compliance is minimized to the greatest extent possible. Such delay in or failure of performance shall not be deemed a violation of this Consent Decree during the duration of the circumstances that give rise to the Force Majeure Event.

105. The Parties agree that, depending upon the circumstances related to an event and any Party's response to such circumstances, the kinds of events listed below are among those that could qualify as Force Majeure Events within the meaning of this Section: construction, labor, or equipment delays; equipment failures; acts of God; acts of war, civil insurrection, or terrorism; and restraint by court or government agency. Depending upon the circumstances and the Companies' response to such circumstances, failure of a permitting authority to issue a necessary permit in a timely fashion may constitute a Force Majeure Event where the failure of the permitting authority to act is beyond the control of the Companies and the Companies have taken all reasonable actions to obtain the necessary permit, including, but not limited to: complying with Section VI; submitting a complete permit application; responding to requests for additional information by the permitting authority in a timely fashion; and accepting lawful permit terms and conditions after expeditiously exhausting any legal rights to appeal terms and conditions imposed by the permitting authority, provided that the Companies shall not be precluded from asserting that a new Force Majeure Event has caused or may cause a new or additional delay in complying with the extended or modified schedule. Except as limited by the terms of this Consent Decree, unanticipated or increased costs or expenses associated with the performance of the Companies' obligations under this Consent Decree shall not constitute a Force Majeure Event. Nothing in this Consent Decree shall be construed as requiring the Companies to resolve

any labor strike or labor slowdown as a condition to invoking or claiming the existence of a Force Majeure Event.

106. If any event occurs or has occurred that may delay or prevent performance of any obligation under this Consent Decree, as to which any Party intends to assert a claim of Force Majeure, the claiming Party shall assert the claim of Force Majeure to the other Parties in writing as soon as practicable, but in no event later than ten (10) business days following the date the claiming Party first knew of the claimed Force Majeure Event. In this notice, the claiming Party shall reference this Paragraph and describe the anticipated length of time that the delay or prevention of performance may persist, the cause or causes of the delay or prevention of performance, all measures taken or to be taken by the claiming Party to prevent or minimize the delay or prevention of performance, the schedule by which the claiming Party proposes to implement those measures, and the Party's rationale for attributing a delay or prevention of performance to a Force Majeure Event. The Parties shall adopt all reasonable measures to avoid or minimize such delays or prevention of performance.

107. Any Party shall notify the other Parties in writing if it does not accept the Party's claim of Force Majeure within ten (10) days of receipt of the notice asserting the claim provided under Paragraph 106. Failure by a Party to provide such timely notice shall be deemed acceptance of the claim. If the Parties agree that a delay in performance has been or will be caused by a Force Majeure Event, the Parties shall stipulate to an extension of deadline(s) for performance of the affected compliance requirement(s) by a period equal to the delay actually caused by the event. In such circumstances, an appropriate modification shall be made pursuant to Paragraph 85.



108. If a Party does not accept another Party's claim of Force Majeure, or if the Parties cannot agree on the length of the delay actually caused by the Force Majeure Event, the matter shall be resolved in accordance with Section XVI.

109. In any dispute regarding Force Majeure, the Party claiming the Force Majeure event shall bear the burden of proving that any delay in or prevention of performance was caused by or will be caused by a Force Majeure Event. The claiming Party shall also bear the burden of proving that the claiming Party gave the notice required by Paragraph 106. An extension of one compliance date based on a particular event may, but will not necessarily, result in an extension of a subsequent compliance date.

110. As part of the resolution of any matter submitted to this Court under Section XVI regarding a claim of Force Majeure, the Parties by agreement, or this Court by order, may in appropriate circumstances extend or modify the schedule for completion of work under this Consent Decree to account for the delay in the work that occurred as a result of any delay agreed to by the Parties or approved by the Court.

## **XX. GENERAL PROVISIONS**

111. **No Admission of Fact or Conclusions of Law.** By entering into this Consent Decree or by agreeing to conduct negotiations related to this Consent Decree, the Parties are not admitting any fact or conclusion of law, and this Consent Decree shall not constitute an admission, statement, or evidence of any fact, wrongdoing, misconduct, or liability on the part of the Defendants, their owners, officers, agents, consultants, or affiliated entities. Defendants specifically deny and dispute that any violations or non-compliance as alleged by Sierra Club has occurred or is occurring, and maintain that they have been and remain in compliance with

SMCRA, RCRA, the CWA and other applicable federal, state, and local environmental laws and regulations. Defendants state that they are agreeing to the obligations in this Consent Decree solely to avoid the costs and uncertainties of litigation and to improve the environment. Except where a party may challenge the interpretation or application of any condition or requirement of this Consent Decree, the Parties agree this Consent Decree may not be admitted into or used by the Parties in any legal or administrative proceeding that involve the Facilities or the Parties.

112. **No Third Party Beneficiaries.** This Consent Decree provides no direct benefits or confers any rights to persons or entities not a party to this Consent Decree.

113. **Severability.** If any provision or authority of this Consent Decree is held by a court of competent jurisdiction to be invalid or unenforceable, and if that provision or authority is severable from the remainder of this Consent Decree without frustrating the essential purpose of this Consent Decree, the remainder of this Consent Decree shall remain in force and effect. For the avoidance of doubt, any finding that the provisions in Section XI are invalid or unenforceable shall be deemed to frustrate the essential purpose of this Consent Decree.

114. **Scope of Judicial and Administrative Review.** Nothing in the terms of this Consent Decree shall be construed to confer upon this Court jurisdiction to review any decision, either procedural or substantive, to be made by any regulatory agency under the terms of this Consent Decree. Nothing in this Consent Decree alters or affects the standards for judicial review of final agency action. Nothing in the terms of this Consent Decree shall be construed to confer upon any regulatory agency jurisdiction to review any decision, either procedural or substantive, covered under the terms of this Consent Decree. Nothing in this Consent Decree alters or affects the standards or record for administrative review of applicable agency action.

115. **Headings.** Any section or paragraph heading in this Consent Decree is provided solely as a matter of convenience to the Parties and shall not be construed to alter the meaning of any provision herein.

## **XXI. INTEGRATION**

116. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement reflected in this Consent Decree, and supersedes all prior agreements and understandings among the Parties related to the subject matter in this Consent Decree.

## **XXII. SIGNATORIES AND SERVICE**

117. Each of the Parties consents to entry of this Consent Decree without trial of any issue. Each undersigned representative of the Parties certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind to this document the Party he or she represents.

118. This Consent Decree may be signed in counterparts, and such counterpart signature page shall be given full force and effect.

119. Each Party hereby agrees to accept service of process in accordance with the notice provisions set forth in Section XVIII with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and Rule 4 of the Local Civil Rules of the United States District Court for the District of New Mexico, including, but not limited to, service of a summons.

**XXIII. DISMISSAL OF BHP BILLITON, LTD. AND PNM RESOURCES, INC.**

120. It is ordered that the claims set forth in Plaintiff's Amended Complaint dated July 6, 2010, and all claims that were or that could have been brought relating to matters alleged in the Lawsuit, are hereby dismissed with prejudice to refiling as to Defendants BHP Billiton, Ltd. and PNM Resources, Inc.

**XXIV. EFFECTIVE DATE**

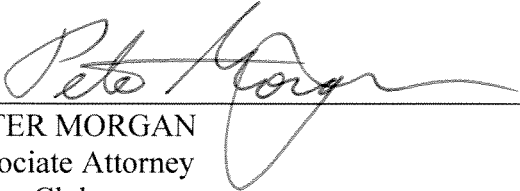
121. The effective date of this Consent Decree shall be the date upon which the Clerk enters in the civil docket a copy of this Consent Decree signed by the Court.

**XXV. FINAL JUDGMENT**

122. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to Plaintiff and Defendants. The Court finds that there is no just reason for delay, and therefore enters this judgment as a final judgment under Federal Rules of Civil Procedure 54 and 58.

[This part intentionally left blank]

**FOR PLAINTIFF SIERRA CLUB:**

  
\_\_\_\_\_  
PETER MORGAN  
Associate Attorney  
Sierra Club

Dated: March 28, 2012

**FOR DEFENDANTS PUBLIC SERVICE  
COMPANY OF NEW MEXICO and PNM  
RESOURCES, INC.:**

\_\_\_\_\_  
PATRICK J. THEMIG  
Vice President of Generation,  
Public Service Company of New Mexico

Dated: March 28, 2012

**FOR DEFENDANTS SAN JUAN COAL  
COMPANY and BHP BILLITON, LTD.:**

\_\_\_\_\_  
JAC FOURIE  
President and Chief Operating Officer,  
BHP Billiton New Mexico Coal, Inc.

Dated: March 28, 2012

\_\_\_\_\_  
**UNITED STATES DISTRICT  
COURT JUDGE**

Dated: \_\_\_\_\_

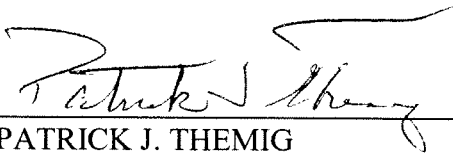
**FOR PLAINTIFF SIERRA CLUB:**

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PETER MORGAN  
Associate Attorney  
Sierra Club

Dated: March 28, 2012

**FOR DEFENDANTS PUBLIC SERVICE  
COMPANY OF NEW MEXICO and PNM  
RESOURCES, INC.:**



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PATRICK J. THEMIG  
Vice President of Generation,  
Public Service Company of New Mexico

Dated: March 28, 2012

**FOR DEFENDANTS SAN JUAN COAL  
COMPANY and BHP BILLITON, LTD.:**

---

JAC FOURIE  
President and Chief Operating Officer,  
BHP Billiton New Mexico Coal, Inc.

Dated: March 28, 2012

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**UNITED STATES DISTRICT  
COURT JUDGE**

Dated: \_\_\_\_\_

**FOR PLAINTIFF SIERRA CLUB:**

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PETER MORGAN  
Associate Attorney  
Sierra Club

Dated: March 28, 2012

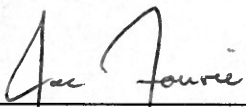
**FOR DEFENDANTS PUBLIC SERVICE  
COMPANY OF NEW MEXICO and PNM  
RESOURCES, INC.:**

---

PATRICK J. THEMIG  
Vice President of Generation,  
Public Service Company of New Mexico

Dated: March 28, 2012

**FOR DEFENDANTS SAN JUAN COAL  
COMPANY and BHP BILLITON, LTD.:**



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JAC FOURIE  
President and Chief Operating Officer,  
BHP Billiton New Mexico Coal, Inc.

Dated: March 28, 2012

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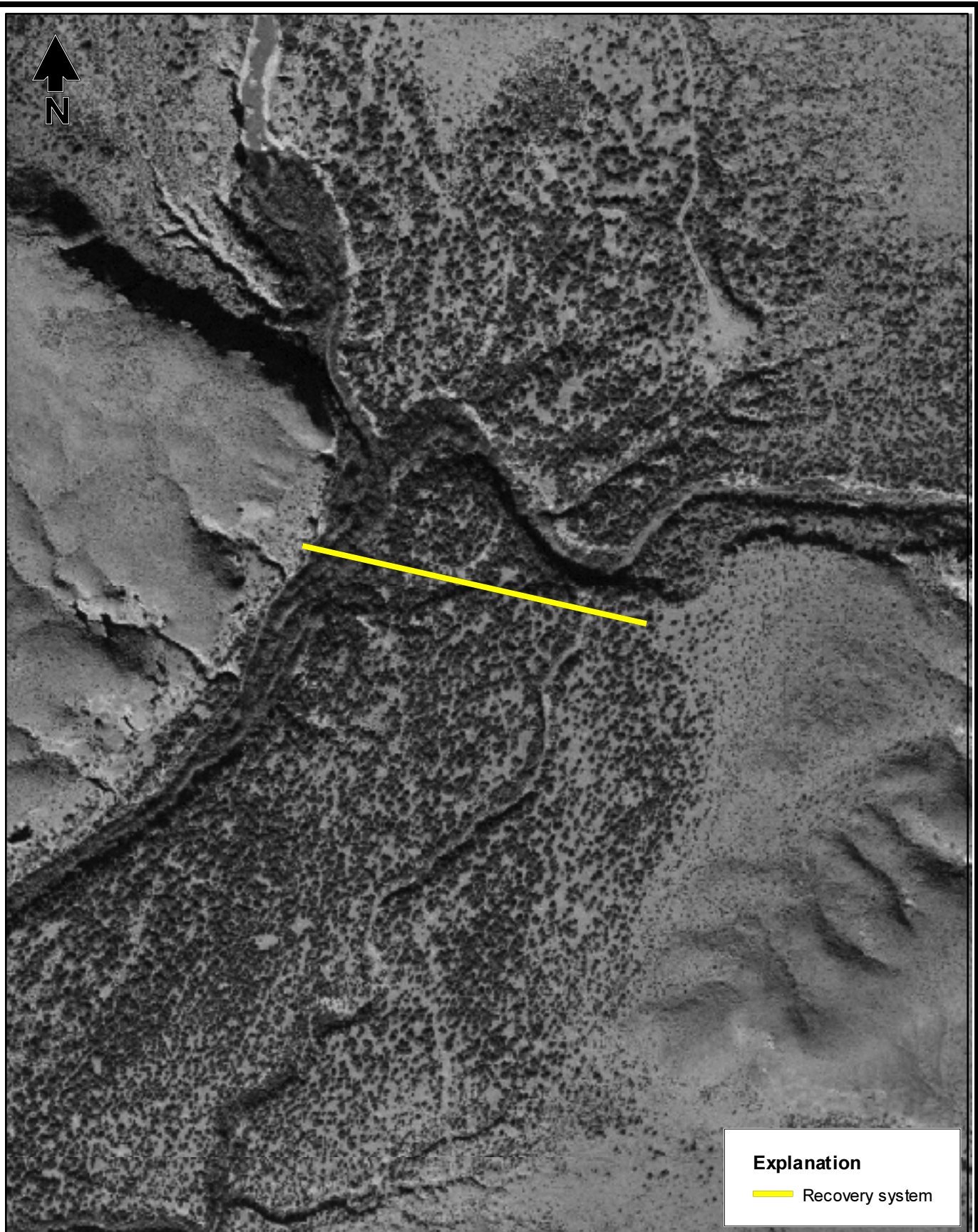
**UNITED STATES DISTRICT  
COURT JUDGE**

Dated: \_\_\_\_\_

**EXHIBIT 1**



Q:\PROJECTS\T10 0036 SAN JUAN\GIS\MXDS\SAMPLE LOCATIONS\SC\_NORTHWEST\_MONITORING\_PLAN\COMMENTS\RECOVERY\_SYSTEM\_SITE\_AREA.MXD

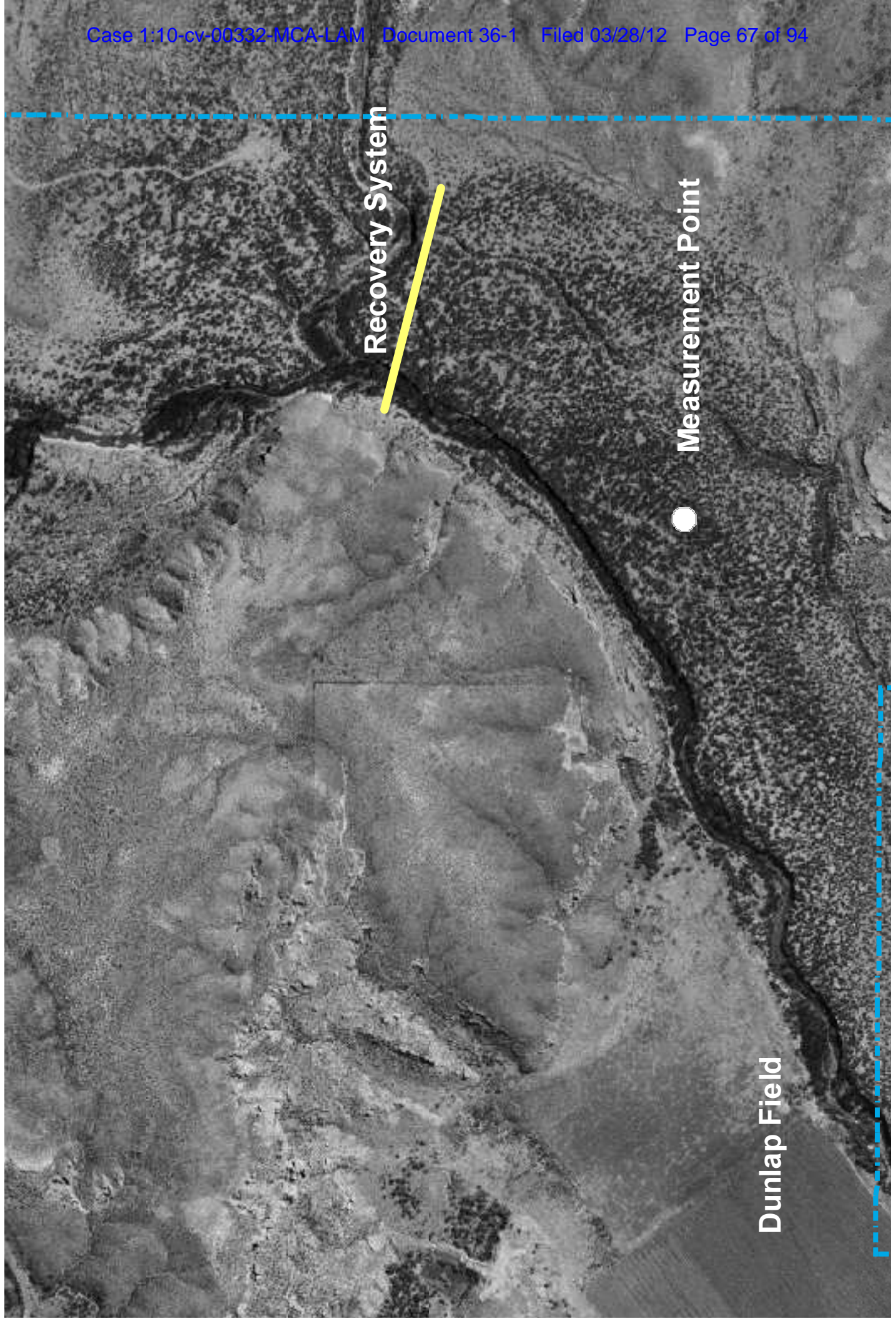


12/08/2011

**Recovery System Site Area**

**EXHIBIT 2**





Recovery System

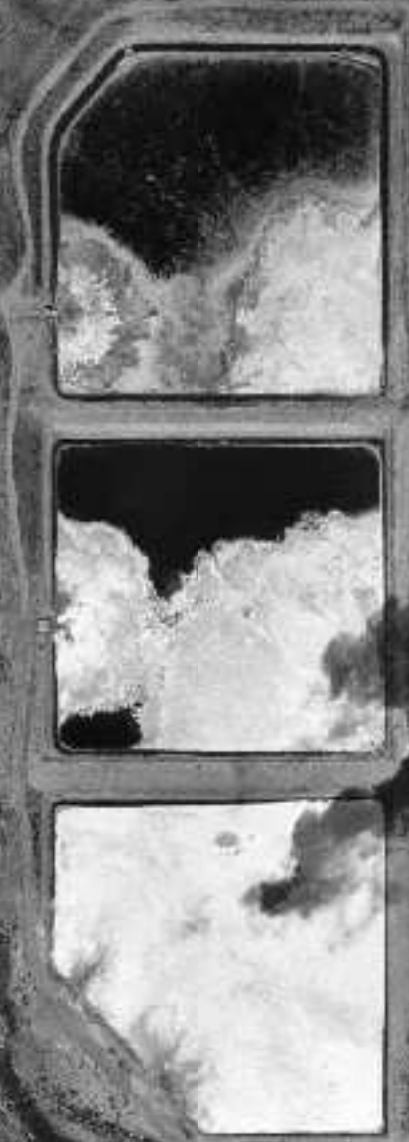
Measurement Point

Dunlap Field

**EXHIBIT 3**



WWA-4BC



**EXHIBIT 4**

### SUPPLEMENTAL ENVIRONMENTAL PROJECTS

In accordance with Consent Decree Paragraph 61, the Companies shall fund the following supplemental environmental projects (“SEPs”) in the total amount of \$1,000,000:

<b>Project Description</b>	<b>Funding Recipient</b>	<b>Amount</b>
San Juan River Ecosystem Restoration Project	The Nature Conservancy and the Navajo Nation	\$400,000
Microbial Source Tracking Study and BMP Implementation	San Juan Soil and Water Conservation District as Section 501(c)(3) funding manager for the San Juan Watershed Group and Animas Watershed Partnership (using University of New Mexico as contractor)	\$500,000
Selenium Source Study	San Juan Soil and Water Conservation District as Section 501(c)(3) funding manager for the San Juan Watershed Group and Animas Watershed Partnership (using Keller-Bliesner Engineering as contractor)	\$100,000
<b>TOTAL</b>		<b>\$1,000,000</b>

These projects are more fully described in Sections I through III, below.

For each SEP, one or more of the Companies shall enter into a contractual arrangement with the funding recipient(s) within thirty (30) days of entry of the Consent Decree, which will provide for: (1) cost accounting oversight; (2) appropriate project completion deliverables suitable to demonstrate that the SEP funds have been expended as required by the Consent Decree; and (3) an opportunity for public review and comment on project planning documents. If for reasonable cause the contract with the funding recipient(s) is not completed within thirty (30) days of entry, then the responsible Company or Companies shall notify Sierra Club in writing of the delay, the reasons for the delay, and a time within which the contract shall be executed. The Companies shall pay the recipient(s) the full amount of the project SEP within

thirty (30) days of executing the contract with a copy of the contract and payment provided to Sierra Club.

## **I. SAN JUAN RIVER ECOSYSTEM RESTORATION PROJECT**

### **A. Project Background**

The Nature Conservancy (“TNC”) and its partners are working under the guidance of the San Juan River System Conservation Action Plan (“CAP”) to restore water quality, river and floodplain habitats, and healthy flows to the San Juan River. The CAP was developed in collaboration with seventeen organizations and has led to restoration work at strategic locations along the river mainstem on the Navajo Nation. The project’s vision for the basin, developed with the seventeen groups representing in the CAP process, is for conservation of a dynamically functioning river system with healthy riparian and aquatic ecosystems supporting native fish and the southwestern willow flycatcher. The partners who participated in this planning effort aim to preserve the aquatic and riparian diversity of this great southwestern river by restoring ecological communities and natural processes, controlling invasive species, and improving water quality and connectivity for key native species.

The scope of the San Juan River Ecosystem Restoration Project, which was initiated in 2010 following completion of the CAP, includes the entire 186-mile reach of the river between Navajo Dam and Lake Powell. The project’s objectives are to (1) restore floodplain and riverine habitats for native plants and wildlife; (2) restore natural river processes that sustain these habitats; and (3) develop scientific information about historical ecological changes in the river and its watershed as the basis for long-term, sustainable conservation.



The cost of project's first phase was approximately \$600,000, of which \$370,000 was provided by the New Mexico Environment Department's River Ecosystem Restoration Initiative. The budget for the project's second phase, as described below, is \$441,600, of which \$400,000 will be funded as a SEP.

**B. Scope of Work**

**1. *Objective #1: Restore San Juan River channel morphology, floodplain habitats, riparian vegetation and water quality at strategic locations along the San Juan River's mainstem***

TNC and the Navajo Nation are currently completing a pilot river channel and habitat restoration project at six sites on the Navajo Reservation on lands under the jurisdiction of two chapter houses, in collaboration with the San Juan River Basin Recovery Implementation Program, a public-private partnership coordinated by the U.S. Fish and Wildlife Service. The current project is underway and will be successfully completed in mid-2012. The project approach is to recreate backwater and slackwater channels that have been greatly reduced in extent since the construction of Navajo Dam. The project will also mechanically remove non-native trees from each site, and replace them with native cottonwood and willow.

The project is designed to allow the river access to its historical floodplain and secondary channels and backwaters and allow sediment to disperse and settle. The results are lower turbidity, more and better nursery and spawning habitat for native fish, and recovery of native vegetation that provides habitat for a host of Neotropical migratory birds, including the endangered southwestern willow flycatcher. The project may also have beneficial impacts on water quality by fostering the development of wetlands that remove industrial contaminants and excessive sediment through biofiltration.

The project partners are now planning a second phase of active river and floodplain restoration for 2012 through 2014, expanding this effort to four to six new sites, strategically located on the mainstem of the San Juan River on the Navajo Reservation. The project will build on knowledge gained in the first phase to improve both design and implementation. The new restoration sites will be designed to be largely self-sustaining in the context of a dynamic river system, and to work well with the environmental flow releases described under the next objective.

This proposal involves the restoration of four to six sites, comprised of approximately four miles of secondary channel and backwater habitat and 6 acres of riparian vegetation, at a total cost of \$350,000, including project design, implementation, monitoring, and management.

**Methods.** At each site a combination of four restoration methods will be used, depending on site conditions:

1. Secondary channel flushing (channel sluicing)
2. Mechanical clearing/chemical treatment of invasive species
3. Secondary channel inlet re-establishment and cleaning
4. Excavation of new secondary channels

At all sites, native shrubs and trees will be replanted, and the sites will be maintained over time through repeated treatments, if necessary.

**Schedule and Budget.** Sites will be selected in the last quarter of 2012, based on the results of the assessment described under Objective #3. Design and permitting will be completed by the third quarter of 2013. Construction will begin in the third quarter of 2013 and be

completed by the end of 2014, including replanting of native vegetation and monitoring for native fish utilization. TNC expects to expend \$348,000 on this objective.

**2. *Objective #2: Design of environmental flow releases from Navajo Dam for the San Juan River ecosystem conservation***

Restoration of healthy flows—the high flow and low flow pulses that characterize a living river, and that provide environmental cues to riverine and riparian plants, animals and natural communities—is critical to ecological restoration of the San Juan River, whose flows have been heavily regulated since completion of the Navajo Dam in 1961. Flow alteration by dams has cascading ecological effects, including channel simplification and invasion by non-native plants and animals. Many of these effects are reversible through restoration natural peaks and troughs in a river's natural flow cycle. Partial restoration of the San Juan's natural flows by the Bureau of Reclamation since the early 2000s has been ineffective in meeting even the most modest ecological goals. New environmental flow recommendations are badly needed to restore river processes and functions.

The Nature Conservancy has been asked to provide strategic and technical support to the San Juan River Basin Recovery Implementation Program (SJ RIP) in developing new flow recommendations. TNC's freshwater conservation scientists will work closely with the U.S. Fish and Wildlife Service, the Bureau of Reclamation, the SJ RIP, and San Juan River Basin stakeholders to design and implement a time-tested process for developing new e-flow recommendations that will subsequently be integrated into the operation of Navajo Dam. The SJ RIP plans to complete these flow recommendations by the end of 2013, with experimental implementation to begin in 2014.

**Methods.** Conservancy scientists from Colorado, New Mexico, and our North America Freshwater Program will work with counterparts in the U.S. Fish and Wildlife Service and Bureau of Reclamation to:

1. Design an adaptive management framework for a new environmental flow program, identifying critical assumptions and hypotheses and designing science-based monitoring approach.
2. Design and implement flow-ecology workshops in which biologically effective components of healthy flows are identified and prescribed.
3. Document and explain new environmental flow recommendations for operation of Navajo Dam, to be tested and implemented subsequently through the SJRIP partnership.

**Schedule and Budget.** The Conservancy plans to work with the SJRIP to complete new flow recommendations by the end of 2013, with experimental implementation to begin in 2014. TNC expects to expend \$27,000 on this objective.

3. ***Objective #3: Assess changes in the San Juan River channel and floodplain since completion of Navajo Dam, and strategically identify sites along the river mainstem where channel, floodplain, and habitat conservation are feasible and sustainable (in combination with environmental flows)***

Restoration of river structure, function, processes and habitats at a scale large enough to make a difference requires strategic focus, a multidisciplinary approach, and multiple tools. Neither environmental flow restoration nor physical channel and floodplain restoration, the approaches described under Objective #1 and Objective #2 above, will succeed in isolation. Even when combined, these approaches may not succeed if they do not take into account historical

ecology and fluvial geomorphology, and if they are not guided by a science-based strategic plan. This project will be the first-ever assessment of 20<sup>th</sup> century changes in river channel and floodplain structure, and will be used to pragmatically identify suitable sites for the second phase of river restoration activity described under Objective #1.

**Methods.** TNC will conduct this assessment in consultation and cooperation with Natural Heritage New Mexico, University of New Mexico's Earth Data Analysis Center, Colorado State University, and members of the SJRIP. Steps include:

1. Locating and archiving aerial and satellite imagery from the mid-1950s to present.
2. Digital classification and mapping of native and non-native vegetation and river and floodplain landforms.
3. Identification of patterns of change, and assessment of ecological cause and effect in river and floodplain vegetation and landforms.
4. Identification of sites suitable for restoration due to their landscape position, current and past condition, and potential for persistence based on river geomorphological dynamics.

**Schedule and Budget.** The Conservancy plans to complete this assessment and identify sites by the last quarter of 2013, in order to provide restoration site recommendations for the habitat restoration phase. TNC expects to expend \$25,000 on this objective.

## **II. MICROBIAL SOURCE TRACKING STUDY AND BEST MANAGEMENT PRACTICES IMPLEMENTATION**

### **A. Project Background**

In 2002 and 2010, the New Mexico Environment Department (“NMED”) found reaches of the Animas, La Plata, and San Juan Rivers and several tributaries to have *E. coli* levels exceeding the limits for safe human contact. This finding led to impairment listings for each of the three rivers on the Clean Water Act Section 303(d) list. A microbial source tracking (“MST”) study is an important first step in remedying bacteria pollution in these systems as it will identify the animal group source(s) responsible for pollutant loading.

### **B. Scope of Work**

The MST study will be prepared and conducted according to generally accepted microbial sampling and analysis protocols. This project will be administered by the San Juan Watershed Group (“SJWG”) in consultation with the Animas Watershed Partnership (“AWP”). Dr. Geoffrey Smith, Professor of Environmental Microbiology at New Mexico State University and proprietor of GBS Environmental, will serve as the technical lead for the MST study. Dr. Smith has been the lead on several MST studies for other New Mexico streams listed for excessive *E. coli* levels, and will oversee all data analysis and final reporting. The results from this study will be disseminated to the public through public meetings and SJWG hosted website.

The results from the MST study will be used by SJWG, AWP, and other stakeholders to develop and target best management practices (“BMPs”) and to prioritize remedial actions to be undertaken as a component of the SEP.

**C. Budget**

It is expected that \$240,000 will be expended for the microbial source tracking study, and \$90,000 will be expended for GIS system updates and public outreach. It is expected that \$170,000 will be expended on implementing prioritized remedial actions recommended by the study.

**D. Additional Funds Available**

To the extent that funds designated for the selenium source study in Section III, below, are not fully expended, any excess funds will be used to implement additional best management practices under this Section.

**III. SELENIUM SOURCE STUDY**

**A. Project Background**

There is increasing concern over water quality in the San Juan River and its potential effects on fish, wildlife and human health. Application of irrigation to selenium-rich soils, such as those that occur within the NAPI, Hogback, and Cudei Irrigation Districts, can dissolve and mobilize selenium and create hydraulic gradients that result in the discharge of selenium-contaminated groundwater into irrigation drains and natural waterways. The majority of water used for irrigation of non-commercial agricultural land in the San Juan Basin is conveyed through unlined infrastructure and is applied using flood irrigation practices. These conveyance and irrigation practices have inherent low efficiencies which enhance mobilization of selenium and other soluble salts. Effective tools are available to increase efficiencies and reduce selenium and other pollutant loading to the San Juan River. However, there is limited quantitative data available on the irrigation practices, soils, conveyances, and returns that are the largest pollutant

sources. This study would identify selenium loading sources within the Hogback and Cudei Irrigation districts.

The results from this study will be used to identify sources of selenium loading resulting from irrigation practices and erosion from agricultural land use changes to establish a baseline accounting of selenium loading and prioritize the implementation of efficiency improvement and pollutant loading reduction projects from irrigation practices.

## **B. Scope of Work**

### ***1. Task 1—Organize Stakeholder Meeting***

As the initial study task, organization of a stakeholder meeting will be conducted in order to present the objectives of the source study and to identify individuals, agencies and entities that are knowledgeable resources for the study that possess data relevant to the completion of the study. Stakeholders will include governmental agencies, Navajo Nation, irrigation districts, SHWG, SJBRIP, and other non-governmental entities or water user groups that participate in forums involving area water quality and quantity. Stakeholders will be regularly updated on the progress of the study and informed of any data shortcomings or obstacles.

### ***2. Task 2—Existing Data Review and Compilation***

This task will involve the review of existing information and analytical data available within the study area. Selenium has been measured in surface water, groundwater, sediment, soils, and biota collected from various locations within the study area. These data will be compiled into a database for the study area in a tabular format. The table will, at a minimum, include the data source, a brief description of the data, matrix, and the sampling location identifiers for that dataset. Much of this data is expected to be on file with the U.S. Fish and



Wildlife Service (USFWS), the Natural Resources Conservation Service (NRCS), the Bureau of Indian Affairs (BIA), the NMED, the New Mexico State Engineers Office, the U.S. Geological Survey (USGS), the Environmental Protection Agency (EPA), the Navajo Nation Environmental Protection Agency (NNEPA), and from a variety of other governmental and non-governmental sources.

**3. *Task 3—Review, Compile, and Organize Spatial Analysis Data Relevant to the Identification and Mapping of Selenium Sources***

In conjunction with the data review, a review and compilation of relevant GIS information within the study area will be conducted. There is a vast amount of spatial data available for the San Juan River Watershed. The review would identify relevant base layers including aerial imagery, digital elevation models, GAP vegetation data including agricultural fields, and topographical maps. Hydrology data would include the National Hydrologic Dataset; USGS stream gauges, watersheds for the San Juan River Basin, precipitation data, and water quality data from various state, federal, and tribal agencies.

Soil and geology map types for the San Juan River Basin NRCS would be compiled highlighting those types noted for high selenium content, such as those derived from cretaceous aged geologic materials, or high erosion potential. There will be components of the analytical data review that will not have corresponding spatial data and that will be identified in the task along with any notable data gaps. All relevant data would be compiled in a GIS geodatabase and map template for use in subsequent tasks modeling likely point and non-point sources of selenium.

**4. Task 4—Development of a Study Plan**

Compile all data from tasks 1 through 3 and develop a comprehensive study plan for identifying the sources of selenium loading in the San Juan River. A comprehensive study cannot be developed adequately without the results from Tasks 1 through 3. Once those tasks are complete, a study plan would be developed and data collection tasks such as those outlined in Task 5 would be identified along with the corresponding budget for each task. The study plan may expand upon the data collection outlined in Task 5. The ultimate goal of the study plan is to provide sufficient information for the development of a numerical loading model in Task 6. Under this task the contractor would prepare a study plan based on the available data identified in Tasks 1 through 3. The plan would include a description of data collection and data analysis anticipated be completed under Task 5. Approval of the study plan would be the responsibility of the San Juan Watershed Group.

**5. Task 5—Data Collection and Analysis**

This task would likely include the tasks listed below and potentially others identified in the study plan (Task 4): (1) build a conceptual transport model to the receptor water way (San Juan River), identifying the potential largest contributors; (2) map the hydrologic (surface and ground water) basins in the study area; (3) use existing NRCS and USGS studies to assign potential Se concentrations to regional soils/formations; (4) field verify the irrigation and cropping practices on the ground; and (5) devise a field investigative program to corroborate/fill in the gaps of the conceptual model at key locations.

**6. Task 6—Develop a Numerical Loading Model**

Develop a numerical loading model of the whole system that quantifies the Se loading from all the sources in the conceptual model. Calibrate it to measured Se concentrations in the receiving water (San Juan River). This would be done in such a manner that not every loading source in the system would have quantifiable data, but use the known information to identify the potential at the unknown sources.

**7. Task 7—Prepare Source Study Report**

The report will include a description and mapping of selenium inventory in the study area including land use changes and selenium mobilization. The report will include an inventory and description of mechanisms of selenium movement through the system; sources and loads; an evaluation of the data, including identification of data gaps and recommendations.

**C. Budget**

It is expected that \$100,000 will be expended on the selenium source study. Once a detailed cost proposal is generated, the individual tasks will be managed (and in some cases, as may be necessary, eliminated) to conform to the SEP budget.

**EXHIBIT 5**

## **ENVIRONMENTAL RESTORATION PROJECTS**

The Environmental Restoration Projects hereunder may augment or supplement one or more of the Supplemental Environmental Projects set forth in Exhibit 4. Subject to the provisions and limitations of Paragraphs 62, 63, and 64, the following Environmental Restoration Projects will be funded in the following order and for the following dollar amounts.

### **I. SAN JUAN RIVER SYSTEM CONSERVATION ACTION PLAN**

#### **A. Project Background**

The Nature Conservancy (“TNC”) and the Navajo Nation are working under the guidance of the San Juan River System Conservation Action Plan (“Plan”) to restore water quality, floodplain habitats, and riparian vegetation at strategic locations on the San Juan River. The Plan was developed in collaboration with seventeen organizations and has led to restoration work on the Navajo Nation. The project’s scope is basin-wide and may be expanded to include the entire mainstem of the San Juan River between the Navajo Dam and Lake Powell. TNC estimates that the total project cost is \$700,000, of which \$370,000 is being provided by the New Mexico River Ecosystem Restoration Initiative. Any contributions to the unfunded amount of the budget will help complete this project.

#### **B. Project Funding and Scope**

This project will be funded in the amount of **\$250,000**.

TNC, the Navajo Nation, the US Fish and Wildlife Service, and the United States Bureau of Reclamation are currently undertaking a project at six sites on the Navajo Reservation on lands under the jurisdiction of two Navajo Nation chapter houses. This project will promote

restoration of the San Juan River to its historical floodplain and secondary channels and backwaters and allow sediment to disperse and settle. The objectives of this project include lower turbidity and more and better nursery and spawning habitat for native fish. The project may have a positive impact on mitigating pollution by creating backwater areas where toxic elements would be deposited (rather than flowing downstream) and potentially cleaned by the biofiltration of the wetlands in this area. The current project at the six sites is underway. The project would involve expanding these existing river restoration and water quality activities to up to four additional sites on the Navajo Nation and/or Bureau of Land Management and private lands. The project represents an extension of an existing project and TNC and its partners are prepared to identify the next sites and work with the same contractors to complete the project expansion within three years.

**C. Project Performance Metrics**

Assessment of this project will include a written report to the Parties addressing the following performance metrics:

1. linear feet of side channel and backwater habitat created;
2. acres of Russian olive and salt cedar removed; and
3. acres of floodplain made newly accessible to the San Juan River.

**II. LA PLATA RIPARIAN RESTORATION AND OUTREACH PROJECT**

**A. Project Background**

The New Mexico State Land Office (“SLO”) manages several thousand acres of land in the San Juan Basin. This project involves the existing La Plata Riparian Restoration and

Outreach Project that can be enhanced with additional funding. The SLO is currently working with the San Juan Soil and Water Conservation District, the New Mexico Department of Game and Fish, and the United States Bureau of Land Management to reduce the local sediment input, eliminating exotic species, and restoring hydrologic connection with preexisting side channels and wetlands using funding from the New Mexico River Ecosystem Restoration Initiative.

**B. Project Funding and Scope**

This project will be funded in the amount of **\$100,000**.

This project involves efforts by the SLO to reconnect an historic oxbow to the La Plata River, create wetland habitat, and natural biofiltration of water to improve water quality. Restoration techniques will include bank lowering at the oxbow input to allow inundation at lower water levels, and excavating scallops within the oxbow to allow constant groundwater and wetland features. The project is intended to improve water quality by increasing wetland habitat which acts as a filter for sediment and other pollutants. Reconnecting the oxbow to the river is intended to create a longer meandering river path that slows water velocity and increases sediment deposition while also reducing sediment load downstream. The project may include educational initiatives by the SLO in ecological restoration and monitoring.

**C. Project Performance Metrics**

Assessment of this project will include a written report to the Parties addressing the following performance metrics:

1. number of linear feet of oxbow reconnected to floodplain; and
2. number of acres of new wetlands created.

### **III. SAN JUAN RIVER RIPARIAN RESTORATION**

#### **A. Project Background**

The SLO is working to restore natural channel morphology to San Juan River floodplains, eliminate exotic species and restore side channels to create 10 acres of wetlands and enhance water quality.

#### **B. Project Funding and Scope**

This project will be funded in the amount of **\$250,000**.

This project will involve constructing a side channel and moist soil depressions to facilitate the formation of marshes to encourage natural recruitment of native vegetation in the San Juan River floodplain. Project activities will include restoring the native vegetative component of the riparian ecosystem, including cut-stump treatment of exotic plant species along the river bank (Russian olive, Siberian elm, and salt cedar) and revegetation with native plant species. Water quality will benefit due to the creation of wetland habitat, which will act as a filter for upstream agricultural inputs and other non-point pollutants.

#### **C. Project Performance Metrics**

Assessment of this project will include a written report to the Parties addressing the following performance metrics:

1. number of acres of new wetland created;
2. number of linear feet of side channel created;
3. number of salt cedar and Russian olive stems cut and/or rootballs removed; and
4. number of cottonwoods trees and willows planted.



#### **IV. SAN JUAN WATERSHED RIPARIAN BUFFER PROJECT**

##### **A. Project Background**

The San Juan Watershed Group (“SJWG”) was formed in 2001 to study and address water pollution from nutrients, fecal coliform bacteria, sedimentation, temperature, dissolved oxygen and selenium in various stream segments in the San Juan watershed. SJWG’s mission is “to protect current and future uses of surface waters in the San Juan Watershed through identification of water quality concerns and by seeking solutions for problems defined.” SJWG members include local, state, tribal and federal governments, environmental and other non-governmental organizations (including the San Juan Citizens Alliance), private industry, agricultural producers and concerned citizens. The SJWG has been working with landowners to install sprinkler irrigation to replace flood irrigation. Flood irrigation on grazed fields may result in excess water returning to the river with high bacteria levels. Sprinkler and drip irrigation helps eliminate runoff from farm fields and the discharge of bacteria. The SJWG has only \$54,000 over the next 3.5 years in its current budget which will be depleted by funding 8 private landowners that have already applied and qualify for funding. The SJWG works with the Natural Resource Conservation Service’s EQUIP program which provides matching funds but the future of this federal funding is uncertain and even at current levels is inadequate to meet the substantial demand by private landowners.

##### **B. Project Funding and Scope**

This project will be funded in the amount of **\$60,000**.

The primary focus of this project involves converting from flood irrigation to either sprinkler or drip irrigation in farm fields. A secondary focus of the project is to create riparian buffer zones with no grazing next to rivers to promote biofiltration and reduce sediment and nutrients. The SJWG anticipates eight to ten landowner applicants per year.

Assessment of this project will include a written report to the Parties addressing the following performance metrics:

1. number of acres of fields converted from flood irrigation to sprinkler or drip irrigation;
2. number of acres converted to riparian buffer zones; and
3. monitoring *E. coli* bacteria to document actual bacterial loading reductions to the river.

## **V. SAN JUAN RIVER BACTERIA MITIGATION PROJECT**

### **A. Project Background**

The San Juan River is polluted with fecal coliform bacteria which may affect the health of people who swim, raft, and fish the river. Due to stakeholder disagreements on the sources of bacteria (livestock, wildlife, human), little action has been undertaken to address the issue. A watershed-scale effort is being led by SJWG including New Mexico, Colorado, and the Southern Ute Tribe to identify potential bacterial sources and begin addressing the issue.

### **B. Project Funding and Scope**

This project will be funded in the amount of **\$75,000**.

Volunteers will be used collect samples from pertinent locations which will be sent to a qualified laboratory for bacterial analyses. Following identification of potential bacteria sources, source reduction strategies will be developed and implemented to reduce bacteria from reaching the San Juan River.

**C. Project Performance Metrics**

Assessment of this project will include a written report to the Parties addressing the following performance metrics:

1. number of volunteers collecting samples;
2. number of samples analyzed; and
3. identification of bacteria source reduction practices implemented.

**VI. SAN JUAN RIVER FISH PASSAGE IMPROVEMENT PROJECT**

**A. Project Background**

The San Juan River Basin Recovery Implementation Program (“BRIP”) was established in 1992 to protect and recover the Colorado pike minnow and the razorback sucker in the San Juan River Basin. The U.S. Department of the Interior Bureau of Reclamation, in collaboration with the BRIP, designed and constructed a fish passage facility to facilitate fish migration around the San Juan River intake. This facility became operational in 2004. The operation of the fish passage facility, along with other BRIP program efforts, provides benefits to native fish in the San Juan River. The Navajo Nation Fish and Wildlife Service is responsible for the operation of the fish passage facility. The Navajo community, Nenahnezad Chapter, is the adjacent community that works in cooperation with the fish passage facility.

**B. Project Funding and Project**

This project will be funded in the amount of **\$40,000**.

This project consists of improvement to the existing road from the Nenahnezad Chapter to the fish passage facility and areas immediately surrounding the fish passage facility. The improvements will include grading of the existing dirt road, installation of a streetlight near the entrance to the fish passage facility, installation of an access gate at the entrance of the facility and drainage improvements near the fish pool facility.

**C. Project Performance Metrics**

Assessment of this project will include a written report to the Parties addressing the following performance metrics:

1. area and nature of road improvements;
2. area and nature of drainage improvements;
3. streetlight installation; and
4. access gate installation.

**VII. RECOVERY SYSTEM EXCESS FUNDING AND DEDUCTION FOR FUNDING RECOVERY SYSTEM CLOSURE AND BIOMONITORING**

In the event that there remain excess funds over the cost of the Recovery System pursuant to Paragraph 64, the Companies, with the approval of Sierra Club, may increase funding for all or some of the Environmental Restoration Projects listed on Exhibit 5. The Companies shall provide a written proposal for any increased funding for an Environmental Restoration Project to Sierra Club. If Sierra Club agrees, or if there is no objection to the written proposal within thirty (30) days of receipt, the Companies shall provide the additional Environmental Restoration

Project funding as set forth in the proposal. If Sierra Club objects to the written proposal, the reasons for objection shall be stated in writing. The Companies shall thereafter have forty-five (45) days to submit a revised or alternative written proposal for the additional Environmental Restoration Project funding.

If the Companies do not increase funding for the Environmental Restoration Projects listed on Exhibit 5, or if after increasing such funding there still remains excess funding pursuant to Paragraph 64, the Companies shall propose new Environmental Restoration Projects for funding. In order to be considered as an Environmental Restoration Project eligible for funding, the following criteria shall be met:

1. An eligible project must involve improvements to or restoration of environmental or natural resources located within the San Juan Basin; and
2. An eligible entity must be either (a) an existing non-profit organization with an established record of implementing or overseeing projects related to environmental stewardship, improvement or restoration in the San Juan Basin; or (b) a federally recognized Native-American tribe or pueblo with a geographical connection to the San Juan Basin. Notwithstanding the foregoing, any eligible entity may purchase goods and services from for profit entities as necessary to carry out any Environmental Restoration Project.

The Companies shall provide a written proposal for any new Environmental Restoration Project to Sierra Club and SJCC. If Sierra Club agrees, or if there is no objection to the written proposal within thirty (30) days of receipt, the Companies may proceed with the new Environmental

Restoration Project as set forth in the proposal. If Sierra Club objects to the written proposal, the reasons for objection shall be stated in writing. The Companies shall thereafter have forty-five (45) days to submit a revised or alternative written proposal for an Environmental Restoration Project. The review process for any new or revised written proposal shall be as set forth above.

In calculating whether there remain excess funds over the cost of the Recovery System pursuant to Paragraph 64, reasonable amounts shall be deducted to cover the reasonable estimated costs of the closure of the Recovery System and any remaining tasks associated with the biomonitoring programs under Paragraph 62(b).

#### **VIII. CONDITIONS FOR FUNDING**

Funding for any Environmental Restoration Project is expressly conditioned on the agreement, in writing, of the designated funding recipient to accept the funding and to implement the Environmental Restoration Project as proposed.