

KERN RIVER GAS TRANSMISSION COMPANY

California Energy Commission

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TN # 66880

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PRELIMINARY PLAN OF DEVELOPMENT



Proposed Hidden Hills Lateral Project

June 2012

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Additional appendices that may be included in the final Plan of Development:

- Environmental Compliance Management Plan
- Project-specific Upland Erosion Control, Revegetation and Maintenance Plan
- Project-specific Wetland and Waterbody Construction and Mitigation Procedures
- Hydrostatic Test Plan
- Reclamation Plan
- Spill Prevention, Control and Countermeasure Plan
- Blasting Plan
- Fire Prevention and Suppression Plan
- Biological Resource Mitigation Plan
- Noxious Weed Control Plan
- Unanticipated Discoveries Plan for Cultural Resources
- ATV / OHV Barrier Plan
- Dust Control Plan

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List of Acronyms

AC	alternating current
API	American Petroleum Institute
BLM	Bureau of Land Management
BWPC	Bureau of Water Pollution Control
CDFG	California Department of Fish and Game
CP	cathodic protection
CFR	Code of Federal Regulations
CWA	Clean Water Act
DAC	data acquisition and control
ECMP	Environmental Compliance Management Plan
EI	Environmental Inspector
FERC	Federal Energy Regulatory Commission
FERC Plan	FERC Upland Erosion Control, Revegetation and Maintenance Plan
FERC Procedures	FERC Wetland and Waterbody Construction and Mitigation Procedures
HHSEGS	Hidden Hills Solar Electric Generating System
Kern River	Kern River Gas Transmission Company
KOP	key observation point
LRWQCB	Lahontan Regional Water Quality Control Board
MP	milepost
MMSCFD	million standard cubic feet per day
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NHD	National Hydrography Dataset
NAC	Nevada Administrative Code
NBMG	Nevada Bureau of Mines and Geology
NDEP	Nevada Department of Environmental Protection
NDOW	Nevada Department of Wildlife
Plan	Upland Erosion Control, Revegetation and Maintenance Plan
POD	Plan of Development

Procedures	Wetland and Waterbody Construction and Mitigation Procedures
Project	Hidden Hills Lateral Project
PL	Public Law
ROW	right-of-way
SWPPP	Storm Water Pollution Prevention Plan
UPS	uninterrupted power supply
US	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	United States Department of Transportation
USGS	United State Geologic Survey
VSAT	very small aperture terminal

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1. PLAN OF DEVELOPMENT OVERVIEW

1.1 INTRODUCTION

Kern River Gas Transmission Company (Kern River) operates an existing interstate natural gas pipeline system extending from southwestern Wyoming to southern California. Kern River is proposing to construct, own, and operate new lateral pipeline facilities serving the Hidden Hill Solar Electric Generating System (HHSEGS) in Inyo County, California. The proposed Hidden Hills Lateral Project (Project) consists of approximately 32.4 miles of 12-inch-diameter pipeline lateral, which would extend from the existing Kern River mainline near the existing Goodsprings compressor station to the proposed HHSEGS. The HHSEGS is being developed by Hidden Hills Solar I, LLC and Hidden Hills Solar II, LLC, the owners of the separate solar plants, and Hidden Hills Solar Holdings, LLC, the owner of the shared facilities required by the two solar plants. BrightSource Energy, Inc., a Delaware-based corporation, is the parent company of the limited liability companies. As proposed, the pipeline would originate in Goodsprings, Nevada, near milepost (MP) 563.2 on the Kern River mainline, and be routed generally northwest through the Spring Mountains to a new meter station for the proposed HHSEGS. A new tap assembly and pig launcher would be constructed within and immediately adjacent to Kern River's existing mainline right-of-way (ROW) on federal land, two mainline valves would be constructed within the Project ROW on federal land, and a new meter station and pig receiver would be constructed in Inyo County, California on private land within the proposed HHSEGS site. This lateral pipeline and associated meter station would have a design capacity of 13 million standard cubic feet per day (MMSCFD) and a minimum capacity of 0.16 MMSCFD. No new compressor stations or modifications to existing compressor stations are proposed as part of this Project.



The majority of the Project is located on land managed by the Bureau of Land Management (BLM) Las Vegas Field Office. Table 1.1-1 provides a summary of land ownership for the Project. Figure 1.1-1 provides a general overview of the proposed facilities along the existing Kern River pipeline system. Figure 1.1-2 provides a general location of proposed pipeline facilities including the land ownership. Figure 1.1-3 provides the locations of the major route alternatives and minor route variations being considered.


Table 1.1-1
Land Ownership along Proposed Hidden Hills Lateral

Ownership	Linear Crossing (mi)	Permanent ROW (ac)	Temporary Workspace (ac)
Bureau of Land Management	32.4	196.6	981.9
Private Lands	0.0	0.1	0.9
Totals	32.4	196.7	982.8

This Preliminary *Plan of Development (POD)* presents the construction plans and specifications to be implemented by Kern River during construction of the Project. This Preliminary *POD* is being submitted to supplement Kern River's BLM ROW Grant Application in accordance with Section 185(h) of the Mineral Leasing Act. The *POD* is a living document during the planning of the Project, and will be updated as design and permitting of the Project proceeds.

1.2 FEDERAL AND STATE AGENCY INVOLVEMENT

Kern River filed an application with the BLM pursuant to Section 28 of the Mineral Leasing Act of 1920, as amended, May 30, 2012, for  grant of ROW for the proposed Project facilities on BLM land. In accordance with the National Environmental Policy Act (NEPA), the BLM is preparing an Environmental Impact Statement to evaluate the potential impacts of the Project on the environment. In addition to complying with the NEPA process, Kern River will also apply for all other applicable  eral, state and local approvals required to construct and operate the Project. Following the BLM's issuance of a record of decision, Kern River will apply for a Certificate of Public Convenience and Necessity from the Federal Energy Regulatory Commission (FERC).

Various  federal and state laws provide protection of surface resources that may be potentially affected by the Project. Cultural resources are protected by the Antiquities Act of 1906, (Public Law [PL] 59-209), the National Historic Preservation Act (NHPA) of 1966 (PL 89-665), as amended, and its regulations (Title 36 of the Code of Federal Regulations [CFR] Part 800), the Archaeological and Historical Preservation Act of 1974 (PL 93-291), the Archaeological Resources Protection Act of 1979 (PL 96-95), and its regulations (43 CFR 7), the American Indian Religious Freedom Act (42 United States Code [USC] 1996), and the Native American Graves Protection and Repatriation Act of 1990.

Threatened and endangered flora and fauna species are protected under the Endangered Species Act (ESA) of 1973, as amended (PL 94-325). Additionally, the Migratory

Bird Treaty Act (16 USC 703-71L) and the Bald and Golden Eagle Protection Act (16 USC I.S.C. 668a-668b) protect other sensitive avian species potentially occurring within the proposed Project area. The State of Nevada maintains a list of protected flora (Nevada Administrative Code [NAC] 527.010; NRS 527.50-527.120) and fauna (NAC 503.030-503.080). Permits are issued by the Nevada Department of Wildlife (NDOW) for the handling of the protected desert tortoise and Gila monster. The state of California also maintains a list of threatened and endangered species under the California Endangered Species Act. The California Department of Fish and Game (CDFG) issues permits allowing for the take of a state-listed species incident to an otherwise lawful activity.

The United States Army Corps of Engineers (USACE) has regulatory authority over the discharge of dredge or fill materials into waters of the United States (US), including wetlands, under Section 404 of the Clean Water Act (CWA), and authorizes the construction of utility lines in waters of the US under Nationwide Permit 12. In a January 12, 2012, meeting between the Sacramento District of USACE and BrightSource Energy, Valley Electric Association, and their consultants (M.J. Klinefelter, Electrical Consultants, Inc., and CH2M Hill), USACE Sacramento District indicated that based on previous jurisdictional determinations, waters within the Roach, Jean, and Eldorado watersheds are not currently being regulated by USACE, while waters that potentially cross state lines, including all watercourses in the Mesquite Valley, Pahrump Valley, and Stewart Valley watersheds, are subject to regulation under Section 404 of the CWA. The Roach, Jean, and Eldorado watersheds are located on the southeast side of the Spring Mountains, and the Mesquite Valley, Pahrump Valley, and Stewart Valley watersheds are located on the northwest side of the Spring Mountains. Nevada Division of Environmental Protection (NDEP), Bureau of Water Pollution Control (BWPC), issues permits for work in waterways in the Nevada portion of the Project. The Lahontan Regional Water Quality Control Board (LRWQCB) issues Waste Discharge Permits for storm water discharges associated with construction in the California portion of the Project area. The state of California maintains a Lake or Streambed Alteration permit program for activities in and around stream channels. This program is administered by the CDFG through an application process similar to that of the USACE under the CWA. To ensure that potential erosion impacts from construction of the Project are minimized, a *Storm Water Pollution Prevention Plan (SWPPP)* will be prepared for the Project, and any necessary storm water discharge permits will be obtained from the NDEP BWPC and the LRWQCB. The *SWPPP* will be included in the contractor's specifications and will be implemented during the construction process.

Kern River will secure additional state and county permits, as appropriate. Construction will not commence at a specific site until all necessary environmental permits are secured for that particular Project area. Potential federal, state, and local permits, authorizations, or clearances for the construction of the project are listed in Table 1.2-1.

Table 1.2-1
List of Potential Federal, State, and Local Permits, Approvals and Consultations for the Hidden Hills Lateral Project

Agency	Permit, Approval, or Consultation / Authority	Agency Action	Anticipated Review Time	Agency Contact and Phone Number
FEDERAL				
Federal Energy Regulatory Commission				
	Certificate of Public Convenience and Necessity	Determine whether the construction and operation of the Project is in the public interest. Consider certification of the Project.	10 months	To Be Determined
Advisory Council on Historic Preservation				
	Section 106 Consultation, National Historic Preservation Act (NHPA)	Has the opportunity to comment; cultural resource reporting/ surveys are coordinated through the State Historic Preservation Office (SHPO).	30 days	Nancy Brown 202-606-8582 nbrown@achp.gov
U.S. Department of the Army Corps of Engineers				
	Nationwide Permit 12, Section 404, Clean Water Act	Consider confirmation of Nationwide 12 applicability for the placement of dredge or fill material into all waters of the United States.	The Corp must determine if the preconstruction notification is complete within 30 days of submittal. Once the preconstruction notification is complete, the Corp has 45 days to issue a determination. If the applicant has not heard from the Corp within the 45 days and the notification is complete, the applicant can proceed with the activity, unless the activity may impact ESA listed species or NRHP historic properties.	Clark County, NV is under the Sacramento District: Pat McQueary Sacramento Regulatory District 321 North mall Drive, Suite L-101 St. George, Utah 84790 Phone: (435) 986-3979 Email: patricia.l.mcqueary@usace.army.mil Inyo County, CA is under the Las Angeles District: Los Angeles Regulatory Office 915 Wilshire Blvd, Suite 1101 Los Angeles, CA 90017 (213) 452-4285
U.S. Department of the Interior				
U.S. Fish and Wildlife Service	Section 7 Consultation	Consider lead agency finding of impact on federally listed or proposed species. Provide Biological Opinion if the Project is likely to adversely affect federally listed or proposed species or their habitats.	Fish and Wildlife Service will issue a Biological Opinion within 135 days from submittal of Biological Assessment	U.S. Fish and Wildlife Service Southern Nevada Field Office 4701 North Torrey Pines Drive Las Vegas, Nevada 89130 (702) 515-5230
	Fish and Wildlife Coordination Act	Provide comments to prevent loss of and damage to wildlife resources.	To be reviewed in conjunction with the agency review of the BLM EIS and FERC Certification process	U.S. Fish and Wildlife Service Southern Nevada Field Office 4701 North Torrey Pines Drive Las Vegas, Nevada 89130 (702) 515-5230
Bureau of Land Management	Right-of-Way Grant (Standard Form 299)	Consider granting a right-of-way through BLM lands.	BLM ROD expected December 2012	BLM Southern Nevada District Office 4701 North Torrey Pines Las Vegas Nevada 89130 702-515-5000
	Temporary Use Permit (Standard Form 299)	Consider granting a Temporary Use Permit for the use of BLM land outside of the right-of-way grant for temporary purposes (access roads, work spaces, etc.).	BLM ROD expected December 2012	BLM Southern Nevada District Office 4701 North Torrey PinesLas Vegas Nevada 89130 702-515-5000
	Antiquities and Cultural Resource Use Permit under the Archeological Resource Protection Act (ARPA)	Consider issuing a permit to conduct archeological surveys on BLM land.	1 to 4 weeks depending on field office	Kathleen Sprowl BLM Southern Nevada District Office 4701 North Torrey Pines Las Vegas Nevada 89130 702-515-5000
	Paleontological Resources Use Permit	Consider issuing a permit to conduct paleontological surveys on BLM land.	1 to 4 weeks depending on field office	Kathleen Sprowl BLM Southern Nevada District Office 4701 North Torrey Pines Las Vegas Nevada 89130 702-515-5000

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Agency	Permit, Approval, or Consultation / Authority	Agency Action	Anticipated Review Time	Agency Contact and Phone Number
	BLM Yucca/ Cactus Harvesting Tags for Public Sale	Issue yucca and/or cactus tags if there will be a public sale of yucca and/or cactus from the ROW on BLM land.	Notify BLM 6 months before tags are needed; cannot hold public sale until ROW has been cleared of desert tortoise.	Fred S. Edwards Botanist Bureau of Land Management Las Vegas Field Office 4701 N. Torrey Pines Dr. Las Vegas, NV 89130 phone: (702) 515-5022 email: Fred_S_Edwards@blm.gov
U.S. Department of Justice				
Bureau of Alcohol, Tobacco and Firearms	Explosive User's Permit	Consider issuing a permit to purchase, store, and use explosives for site preparation during pipeline construction.	At least 90 days prior to time the permit is required.	Questions: Federal Explosives Licensing Center (877) 283-3352 Submit application to: Bureau of Alcohol, Tobacco, Firearms, and Explosives PO Box 409567 Atlanta, GA 30384-9567
U.S. Environmental Protection Agency				
Region 9	CWA Review under Section 401, CWA, Water Quality Certification	In conjunction with state, consider issuance of water use and crossing permits.	To be reviewed in conjunction with the agency review of the BLM EIS, USACE, and state permitting.	U.S. EPA Region 9 75 Hawthorne Street San Francisco, CA, 94105
	CWA Review under Section 402, CWA, National Pollutant Discharge Elimination System (NPDES)	In conjunction with state, review, and issue NPDES permit for discharge of hydrostatic test water.	To be reviewed in conjunction with the agency review of the BLM EIS and state permitting.	U.S. EPA Region 9 75 Hawthorne Street San Francisco, CA, 94105
	CWA Review under Section 404, CWA	Review CWA, Section 404 applications for wetland dredge-and-fill applications for the USACE with 404(c) veto power for wetland jurisdictional determinations and permits issued by the USACE.	To be reviewed in conjunction with the agency review of the BLM EIS, USACE, and state permitting.	U.S. EPA Region 9 75 Hawthorne Street San Francisco, CA, 94105
	CWA Review under Stormwater Discharge Permit	In conjunction with state, review and issue stormwater permit for activities associated with pipeline and aboveground facilities construction.	To be reviewed in conjunction with the agency review of the BLM EIS and state permitting.	U.S. EPA Region 975 Hawthorne StreetSan Francisco, CA, 94105
STATE OF NEVADA				
Nevada Department of Conservation and Natural Resources				
Natural Heritage Program	Consultation/ Data Review under 18 CFR 380.12(e)(8)	Review project area for occurrence records of threatened, endangered, rare and at-risk plants and animals.	1 to 2 weeks (depends on size of request)	Eric Miskow, Biological Data Manager Nevada Natural Heritage Program Richard H. Bryan Building 901 South Stewart Street, suite 5002 Carson City, Nevada 89701-5245 Phone: (775) 684-2905 Fax: (775) 684-2909 Email: emiskow@heritage.nv.gov
State Historic Preservation Office (SHPO)	Consultation under Section 106 of the NHPA	Review and comment on activities potentially affecting cultural resources. Work cannot begin until the SHPO concurs with the lead federal agency's eligibility recommendations contained in the cultural resources inventory report.	SHPO will review documents and send comments to lead Federal agency within 30 days of receipt of eligibility recommendation from the lead agency; however, further agency to agency consultation may be required if cultural/historical resources are found	Ronald M. James, State Historic Preservation Officer and Historian 901 S. Stewart Street, Suite 5004 Carson City, NV 89701-4285 Phone: 775.684.3440 Fax: 775.684.3442 Email: rjames@shpo.nv.gov

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Agency	Permit, Approval, or Consultation / Authority	Agency Action	Anticipated Review Time	Agency Contact and Phone Number
Division of Environmental Protection, Bureau of Water Pollution Control	NPDES Storm Water Permit under Section 402 of the CWA	Consider authorizing storm water discharges associated with construction under the Construction Stormwater General Permit NVR100000. If activity discharges to surface waters, a NPDES Permit Application Supplemental would be required.	Recommend submitting a draft SWPPP one month prior to start of construction. Submit the Notice of Intent (NOI) at least 2 days prior to site disturbance; activity is provisionally covered under NVR100000 until an authorization letter is received from NDEP approximately 2 weeks after submittal.	Main BWPC Office 901 South Stewart Street, Suite 4001 Carson City, Nevada 89701-5249 Phone (775) 687-9418 Fax: (775) 687-4684
	Temporary Permit for Working in Waterways (Formerly Rolling Stock Permit)	Consider issuing a temporary permit for working in waterways.	1 month	Jeryl Gardner Nevada Division of Environmental Protection, Bureau of Water Pollution Control 901 South Stewart Street, Suite 4001 Carson City, NV 89701-5249 Phone: (775) 687-9423
	Temporary Discharge Permit for All Purposes Except Working in Waterways	Consider issuing a temporary permit for test waste water and trench water discharges.	1 month	Main BWPC Office 901 South Stewart Street, Suite 4001 Carson City, Nevada 89701-5249 Phone (775) 687-9418 Fax: (775) 687-4684
	Water Quality Certification under Section 401 of the CWA	Consider issuing water quality certification for permits authorized under Section 402 and 404 of the CWA.	NDEP recommends that the 401 application be submitted as soon as possible prior to the start of the project. A formal letter or email will be issued Certifying the project, Waiving the 401, or Denying the certification typically within 60 days of receipt of the application. If circumstances (e.g. incomplete application and obtaining additional information) require a period of time longer than 60 days for review, NDEP will contact the project proponents to discuss a new time frame, which may be extended up to 1 year.	Jean Stone Nevada Division of Environmental Protection, Bureau of Water Pollution Control 901 South Stewart Street, Suite 4001 Carson City, NV 89701-5249 Phone: (775) 687-9456 Email: jstone@ndep.nv.gov
Division of Water Resources	New Water Appropriation Permit or Temporary Change Permit	Consider issuing a permit for water use (surface or groundwater) for hydrostatic testing and dust suppression during construction (permit good for 1 year).	1 month	Steve Shell 901 S. Stewart St., Suite 2002 Carson City, NV 89701 Phone: (775) 684-2800 Fax (main): (775) 684-2811 Fax (Engineering): (775) 684-2810 Email: sshell@water.nv.gov
	Waiver for Temporary Dewatering Wells	Consider issuing a waiver for temporary wells used for construction dewatering.	2 weeks	Steve Shell 901 S. Stewart St., Suite 2002 Carson City, NV 89701 Phone: (775) 684-2800 Fax (main): (775) 684-2811 Fax (Engineering): (775) 684-2810 Email: sshell@water.nv.gov
Division of Forestry	Consultation under 18 CFR 380.12(e)(8)	Comment on the proposed project's potential to impact state-listed species and potential means to minimize impacts.	Will comment during BLM EIS process and FERC EA process	Adria DeCorte NV Division of Forestry Southern Region Headquarters 4747 West Vegas Drive Las Vegas, NV 89108-2135 Phone: (702)486-5123 ext. 228 adecorte@forestry.nv.gov

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Agency	Permit, Approval, or Consultation / Authority	Agency Action	Anticipated Review Time	Agency Contact and Phone Number
	Yucca/ Cactus Harvesting (Salvage and Removal) Registration and Tags	Consider issuing a permit for the removal of yucca/ cacti on non-Federal lands.	Submit registration form 1 week ahead of time; provide 24 hour notice to pick up tags	NV Division of Forestry Southern Region Headquarters 4747 West Vegas Drive Las Vegas, Nevada 89108 Phone (702) 486-5123 Fax (702) 486-5186
Nevada Department of Tourism and Cultural Affairs				
Division of Museums and History	Nevada Antiquities Permit (archaeological survey permit)	Consider issuing a permit to conduct archeological and paleontological surveys.	30 days	Permittee qualifications:Eugene M. Hattori, Ph.D., RPA Curator of Anthropology Email: ghattori@nevadaculture.org Ph: 775.687.4810 ext. 230 Status of application:Maggie Brown Curatorial Assistant Email: mbrown@nevadaculture.org Ph.: 775.687.3002 or 775.687.4810 ext. 228 Anthropology Program Nevada State Museum 600 North Carson Street Carson City, NV 89701-4004
Nevada Department of Wildlife				
	Consultation under 18 CFR 380.12(e)(8)	Comment on the proposed project's potential effects to wildlife, fisheries, and state-listed species and potential means to minimize impacts.	Will comment during BLM EIS process and FERC EA process	Headquarters 1100 Valley Road Reno, NV 89512 Phone: (775) 688-1500
	Special Purpose Permit for the Capture, Removal, or Destruction of Protected Species (fauna)	Consider issuing a permit for handling of desert tortoise and Gila monsters.	4 weeks	Cris Tomlinson Southern Region Office 4747 Vegas Drive Las Vegas, NV 89108 Phone: (702) 486-5127 ext. 3700 Fax: (702) 486-5133 Email: ctomlinson@ndow.org
Nevada Department of Transportation				
	Permanent Encroachment/ Right-of-Way Occupancy Permit	Consider issuing a revocable permit for use (including utility installation) of a year or longer of State right-of-ways and areas maintained by the State.	1 month upon receipt of a complete application	Stewart Pratt District 1 - Las Vegas 123 E. Washington Avenue, Las Vegas, NV 89101 Phone: (702) 385-6582 Email: cpratt@dot.state.nv.us
	Temporary Occupancy Permit	Consider issuing a permit for temporary construction access/ traffic control on a State roadway or State right-of-way.	At least 2 months (longer if there will be detailed traffic control plans and/or contractual agreements with law enforcement and other government agencies)	District 1 - Las Vegas 123 E. Washington Avenue, Las Vegas, NV 89101 Phone: (702) 385-6500
STATE OF CALIFORNIA				
California Department of Fish and Game				
	Lake and Streambed Alteration Notification and Agreement	Consider if an Agreement is required for any activity that could substantially divert or change flow, change or use any material from, or deposit material into any river, stream, or lake, including ephemeral washes. If an Agreement is required, CDFG may conduct a site inspection and will develop an Agreement with measures to protect fish/wildlife to be submitted to the applicant and finalized.	Application is not considered complete until CEQA process has been completed. 30 days to review Notification to determine if it is complete 60 days after Notification is deemed complete to issue a draft Lake or Streambed Alteration Agreement to the applicant for the activity (if required) Applicant then has 30 days to accept the Agreement or to notify CDFG that they disagree with the measures; CDFG will meet with applicant within 14 days to resolve disagreement	Inland Deserts Regional Office 3602 Inland Empire Boulevard Suite C-220 Ontario, CA 91764 Phone: (909) 484-0167 Fax: (909) 481-2945

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Agency	Permit, Approval, or Consultation / Authority	Agency Action	Anticipated Review Time	Agency Contact and Phone Number
	Incidental Take 2081 Permit	Pursuant to the California Endangered Species Act, consider issuance of permit allowing take of a state-listed species that is incidental to an otherwise lawful activity.	Permit cannot be issued until CEQA process has been completed. 6 months after application is complete (this is an estimate since CDFG does not have strict timeline)	Inland Deserts Regional Office 3602 Inland Empire Boulevard Suite C-220 Ontario, CA 91764 Phone: (909) 484-0167 Fax: (909) 481-2945
	Consultation under 18 CFR 380.12(e)(8)	Comment on the proposed project's potential effects to wildlife, fisheries, and state-listed species and potential means to minimize impacts.	Will comment during BLM EIS process and FERC EA process	Inland Deserts Regional Office 3602 Inland Empire Boulevard Suite C-220 Ontario, CA 91764 Phone: (909) 484-0167 Fax: (909) 481-2945
California State Parks				
Office of Historic Preservation/ SHPO	Clearance under Section 106 of the NHPA	Confirm that project complies with Section 106 and provisions of the CEQA.	SHPO will review documents and send comments to lead Federal agency within 30 days of receipt of eligibility recommendation from the lead agency; however, further agency to agency consultation may be required if cultural/historical resources are found	Office of Historic Preservation 1725 23rd Street, Suite 100 Sacramento, CA 95816 PH: 916-445-7000 FAX: 916-445-7053
California Department of Transportation (Cal Trans)				
	Standard Encroachment Permit (Application TR-0100)	Consider issuance of a permit for encroachment onto State Highway right-of-way (required if we cross/enter ROW of Old Spanish Trail Highway).	60 days, once submittal is deemed complete (not considered "complete" unless all other statutory requirements, including CEQA, have been complied with)	District 9 Encroachment Permit Office 500 South Main Street Bishop, CA 93514 (760) 872-0674 (760) 872-5215 FAX
	Transportation Permit	Authorize travel of oversize/overweight/special class vehicles on Caltrans ROW	1 week	Transportation Permits Office 1823 14th Street Sacramento, CA 95811-7119 Main number: (916) 322-1297
California Environmental Protection Agency				
State Water Resources Control Board (SWRCB), Lahontan Regional Water Quality Control Board (LRWQCB)	CWA Section 401 Water Quality Certification	Confirm that the proposed activity will comply with state water quality standards (for waters of the U.S. and waters of the State).	LRWQCB will review the individual application for completeness within 30 days of receiving application. Within 60 days of receiving a complete application, LRWQCB will issue or deny the 401 Certification.	Lahontan Regional Water Quality Control Board Victorville Office 14440 Civic Drive, Suite 200 Victorville, CA 92392 760) 241-6583
	Statewide General Waste Discharge Requirements for Dredge or Fill Discharges to Waters Deemed by the USACE to be Outside of Federal Jurisdiction (WQO-2004-0004-DWQ)	Consider issuance of a permit for dredge and fill activities in waters of the State that are not under Federal jurisdiction (would not be needed if an NPDES permit is obtained; only one or the other is needed)	30 days to review application and notify applicant as to whether or not the application is complete. 30 day review cycle begins again when new information/ revised application is received. Once the application is deemed complete, 45 days to issue permit.	Jan Zimmerman Lahontan Regional Water Quality Control Board Victorville Office 14440 Civic Drive, Suite 200 Victorville, CA 92392 Phone: (760) 241-7376 Email: jzimmerman@waterboards.ca.gov
	NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (WQO 2009-0009-DWQ)	Consider issuing a Waste Discharge Identification (WDID) number for discharges of pollutants from construction activities resulting in one or more acres of land disturbance.	Recommend submitting a draft SWPPP one month prior to start of construction. A DWID number will be issued by email automatically by SMARTS once the system deems the application complete	Lahontan Regional Water Quality Control Board Victorville Office 14440 Civic Drive, Suite 200 Victorville, CA 92392 760) 241-6583 Application must be submitted through the State Water Quality Board online Stormwater Multi- Application Report Tracking System (SMARTS)

Table 1.2-1
List of Potential Federal, State, and Local Permits, Approvals and Consultations for the Hidden Hills Lateral Project

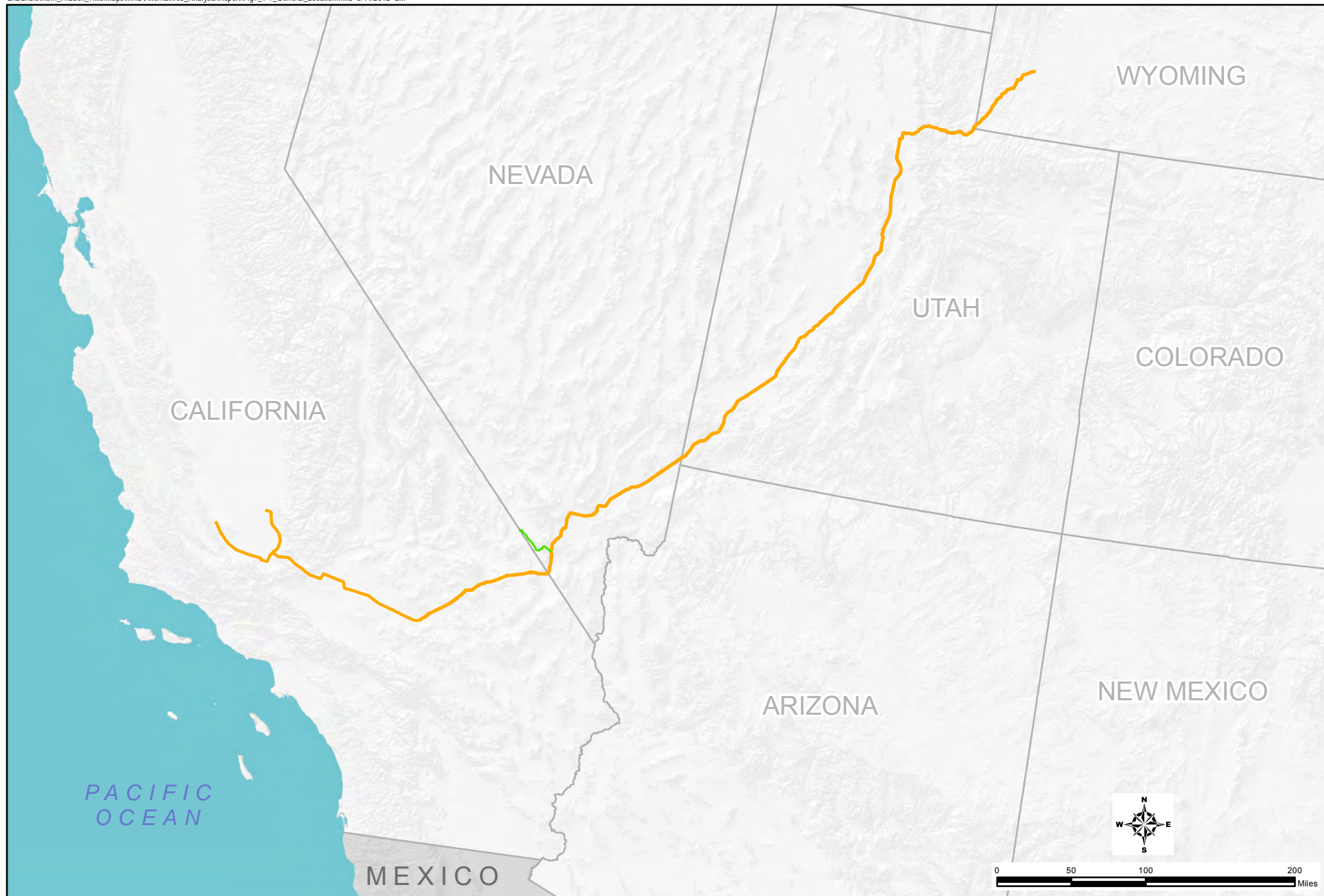
Agency	Permit, Approval, or Consultation / Authority	Agency Action	Anticipated Review Time	Agency Contact and Phone Number
	General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality (WQO-2003-0003-DWQ)	Consider issuing a Notice of Applicability for discharges to land with a low threat to water quality (e.g. clear water discharge from hydrostatic testing, well boring waste discharge, small/temporary dewatering)	45 days once application is deemed complete (45 days does not include additional processing time that would be needed if LRWQCB has to request additional information or revisions to the application)	Jay Cass Lahontan Regional Water Quality Control Board Victorville Office 14440 Civic Drive, Suite 200 Victorville, CA 92392 Phone: (760) 241-2434 Email: jcass@waterboards.ca.gov
LOCAL PERMITS				
Clark County, Nevada				
Clark County Department of Air Quality	Dust Control Permit for Construction Activities	Consider issuing a dust control permit for soil disturbing projects.	Within 10 days if application is complete, including a Dust Mitigation Plan, Dust Mitigation Plan Supplement, and any other applicable forms.	Department of Air Quality4701 W. Russell Road, Suite 200- Second FloorLas Vegas, NV 89118 Phone: (702) 455-1524
Clark County Department of Comprehensive Planning	Special Use Permit - Temporary Construction Storage (SLUCM 6370) under Clark County Code Title 30	Consider issuing a Special Use Permit for a construction storage yard (Title 30 Land Use Application).	10 weeks	Chuck O'Neil Planner Clark County Comprehensive Planning 500 S. Grand Central Parkway, P.O. Box 551744, Las Vegas, NV 89155-1744 Appointment Line: (702) 455-4972 Main Line: (702) 455-4314 Fax: (702) 455-3271 Email: cro@ClarkCountyNV.gov
	Conditional Use Permit for a Temporary Construction Trailer under Clark County Code Title 30	Consider issuing a Conditional Use Permit for a temporary construction trailer.	Would be processed parallel to the Special Use Permit for the temporary construction yard (see above).	Chuck O'Neil Planner Clark County Comprehensive Planning 500 S. Grand Central Parkway, P.O. Box 551744, Las Vegas, NV 89155-1744 Appointment Line: (702) 455-4972 Main Line: (702) 455-4314 Fax: (702) 455-3271 Email: cro@ClarkCountyNV.gov
Clark County Department of Development Services/ Building Department	Grading Permit	Consider issuing a permit for any ground disturbing activity on private land (clearing vegetation, rough grading, stockpiling, excavation, filling, or altering the natural ground surface or its elevation) in Clark County.	Typically within 21 days, though could be longer for projects with large/complex scopes	Building Department 4701 W. Russell Rd. Las Vegas, NV 89118-2231 Phone: (702)455-3000
Clark County Department of Public Works	Encroachment Permit	Consider issuing an encroachment permit for any work within the public right-of-way of unincorporated Clark County.	2 days if application is complete, including an approved Traffic Control Plan	Construction Management, Department of Public Works 500 S Grand Central Pky 1st Floor Las Vegas, NV 89155 Phone: (702) 455-6000
	Traffic Control Plan (TCP)	Consider approving a Traffic Control Plan to ensure highway safety and orderly movement of road users encountering the proposed work associated with the Encroachment Permit.	2 days if application and plan is complete	Construction Management, Department of Public Works 500 S Grand Central Pky 1st Floor Las Vegas, NV 89155 Phone: (702) 455-6000
Inyo County, California				
Great Basin Unified APCD	General Permit/ Authority to Construct (ATC) and Permit to Operate (PTO)	Consider issuing an ATC permit and PTO for any permanent equipment at meter station that may cause the issuance of air contaminants	30 days to determine if ATC application is complete; once application is complete, 180 days to issue ATC Permit; PTO issued after inspection	Great Basin Unified Air Pollution Control District 157 Short Street Bishop, CA 93514-3537 Phone: (760) 872-8211 Fax: (760) 872-6109

Table 1.2-1
List of Potential Federal, State, and Local Permits, Approvals and Consultations for the Hidden Hills Lateral Project

Agency	Permit, Approval, or Consultation / Authority	Agency Action	Anticipated Review Time	Agency Contact and Phone Number
	Secondary Source Permit	Consider issuing a permit for construction activities. A permit is required unless the Air Pollution Control Officer deems construction activities emit an insignificant amount of air contaminants.	30 days to determine if application is complete; once application is complete, 180 days to take final action on the permit.	Great Basin Unified Air Pollution Control District 157 Short Street Bishop, CA 93514-3537 Phone: (760) 872-8211 Fax: (760) 872-6110
Inyo County Environmental Health Services	Well Permit	Consider issuing a permit for any wells drilled (e.g. deep anode bed well, well to obtain water for dust control)	2 weeks	Marvin Moskowitz Inyo County Environmental Health Department Inyo County Annex, 168 N. Edwards St. P.O. Box 427 Independence, CA 93526 Phone: (760) 878-0264; 878-0238 Fax: (760) 878-0239 Email: mmoskowitz@inyocounty.us
Inyo County Planning Department	California Environmental Quality Act (CEQA)	Review project for CEQA compliance. Prepare an Initial Study, then a Negative Declaration or Environmental Impacts Report/ Notice of Determination as deemed necessary by the Planning Department.	18 months If the County allows NEPA documents to be substituted for CEQA documents under CEQA guideline 15221, then the 18 month timeline could begin when BLM issues their DEIS.	Inyo County Planning Department P. O. Drawer L 168 N. Edwards Street Independence, California 93526 Phone Number: (760) 878-0263 Fax Number: (760) 878-0382
	General Plan Amendment (GPA) and Zone Reclassification	Consider amending the Inyo County General Plan and Land Use Ordinance for the project area to a land use designation consistent with a meter station and construction yard (<i>Note: Charleston View area is designated as Open Space and Recreation and Resort/Recreation which may be inconsistent with meter station/ construction yard; Inyo County has asked BrightSource to file a GPA application to re-classify their project area as General Industrial (GI), so this may already have been done for us [GI is more consistent with a meter station and construction yards, though a CUP may still be required]</i>)	Anticipated review time will be in conjunction with BrightSource process	Inyo County Planning Department P. O. Drawer L 168 N. Edwards Street Independence, California 93526 Phone Number: (760) 878-0263 Fax Number: (760) 878-0382
	Conditional Use Permit (CUP)	Consider issuing a CUP for land uses that do not precisely fit into existing zones and/or if a building (e.g. meter station) is to exceed its Floor Area Ratio (gross building square footage to net square footage of the lot)	Typically within 4 months; however, permit approval time is tied to CEQA	Tanda Gretz Inyo County Planning Department P. O. Drawer L 168 N. Edwards Street Independence, California 93526 Phone Number: (760) 878-0263 Fax Number: (760) 878-0382 Email: tgretz@inyocounty.us
	Conditional Use Permit (CUP) for Water Transfer under 18.77/1004 of Inyo County Code	Planning Department to consider issuing a CUP for any groundwater extracted in Inyo County and transferred out of the county or out of its original basin (e.g. water extracted for dust control and applied out of county and/or basin). Water Department and Water Commission to evaluate hydrogeological and environmental impacts, develop mitigation measures, conditions, monitoring requirements etc. and present proposed findings to the Planning Department.	Agency review time will be tied to the CEQA process (the Department indicated that application processing times are hard to predict for water withdrawals and will depend on environmental requirements as dictated by the nature of the site, use, and water withdrawal amounts)	Tanda GretzInyo County Planning DepartmentP. O. Drawer L168 N. Edwards StreetIndependence, California 93526Phone Number: (760) 878-0263 Fax Number: (760) 878-0382Email: tgretz@inyocounty.us

Table 1.2-1
List of Potential Federal, State, and Local Permits, Approvals and Consultations for the Hidden Hills Lateral Project

Agency	Permit, Approval, or Consultation / Authority	Agency Action	Anticipated Review Time	Agency Contact and Phone Number
Inyo County Public Works Department	Inyo County Grading Permit	Public Works Department to consider approving grading plan and issuing a grading permit.	2 weeks if application is complete/ does not require revisions	Paul Hancock, Engineer Assistant Inyo County Public Works P.O. Box Q Independence, CA 93526 Voice: 760-878-0208 Cell: 760-937-6072 Email: phancock@inyocounty.us



- Proposed Pipeline
- Existing Kern River Gas Transmission Pipeline

FIGURE 1.1-1
GENERAL LOCATION
 HIDDEN HILLS LATERAL PROJECT



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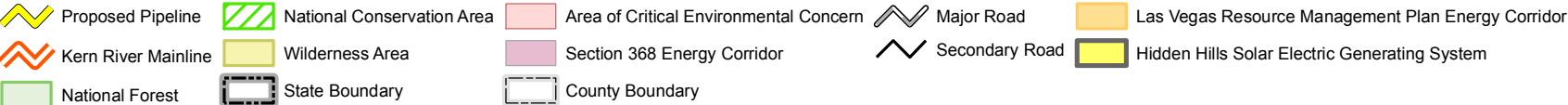
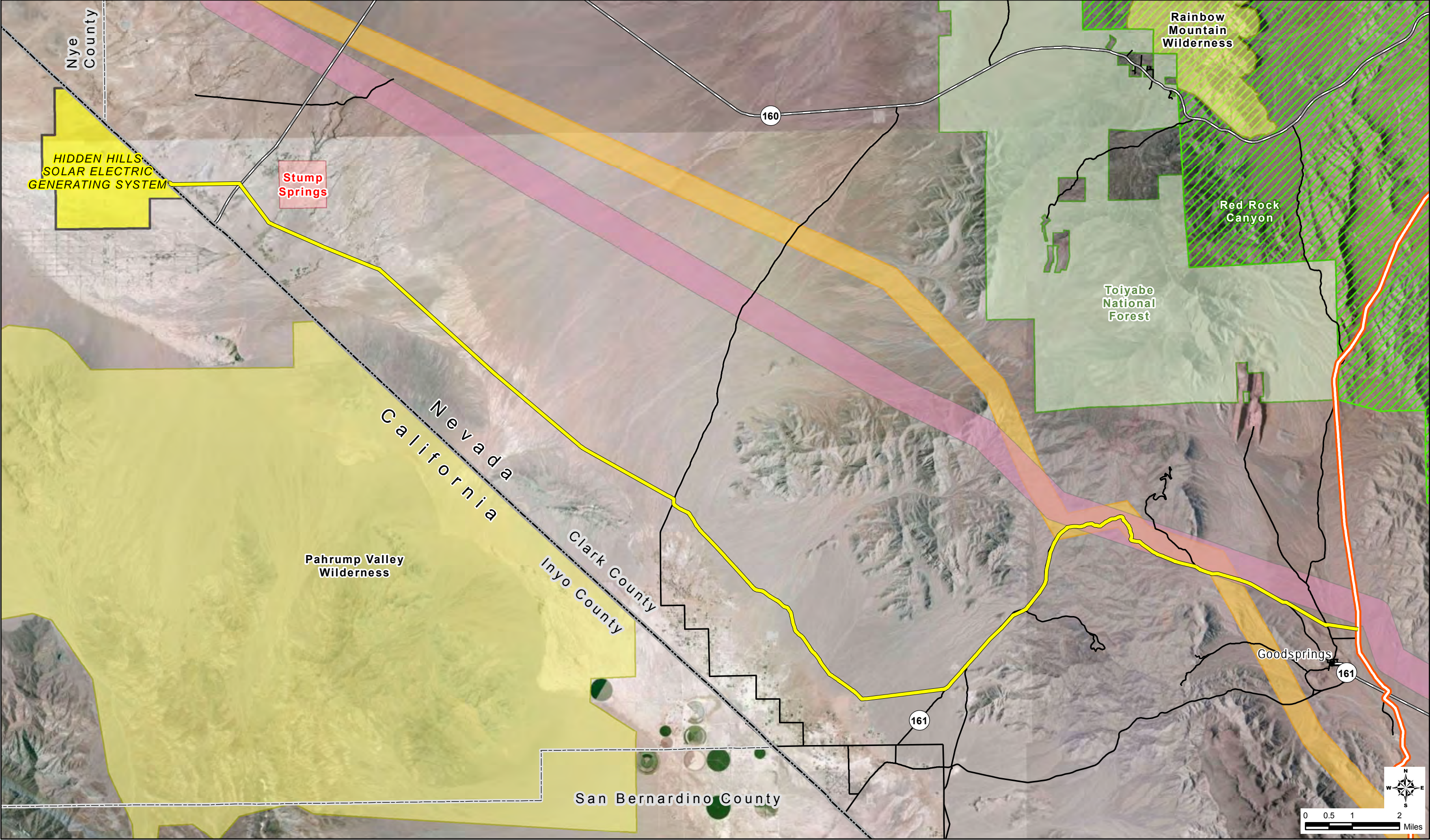
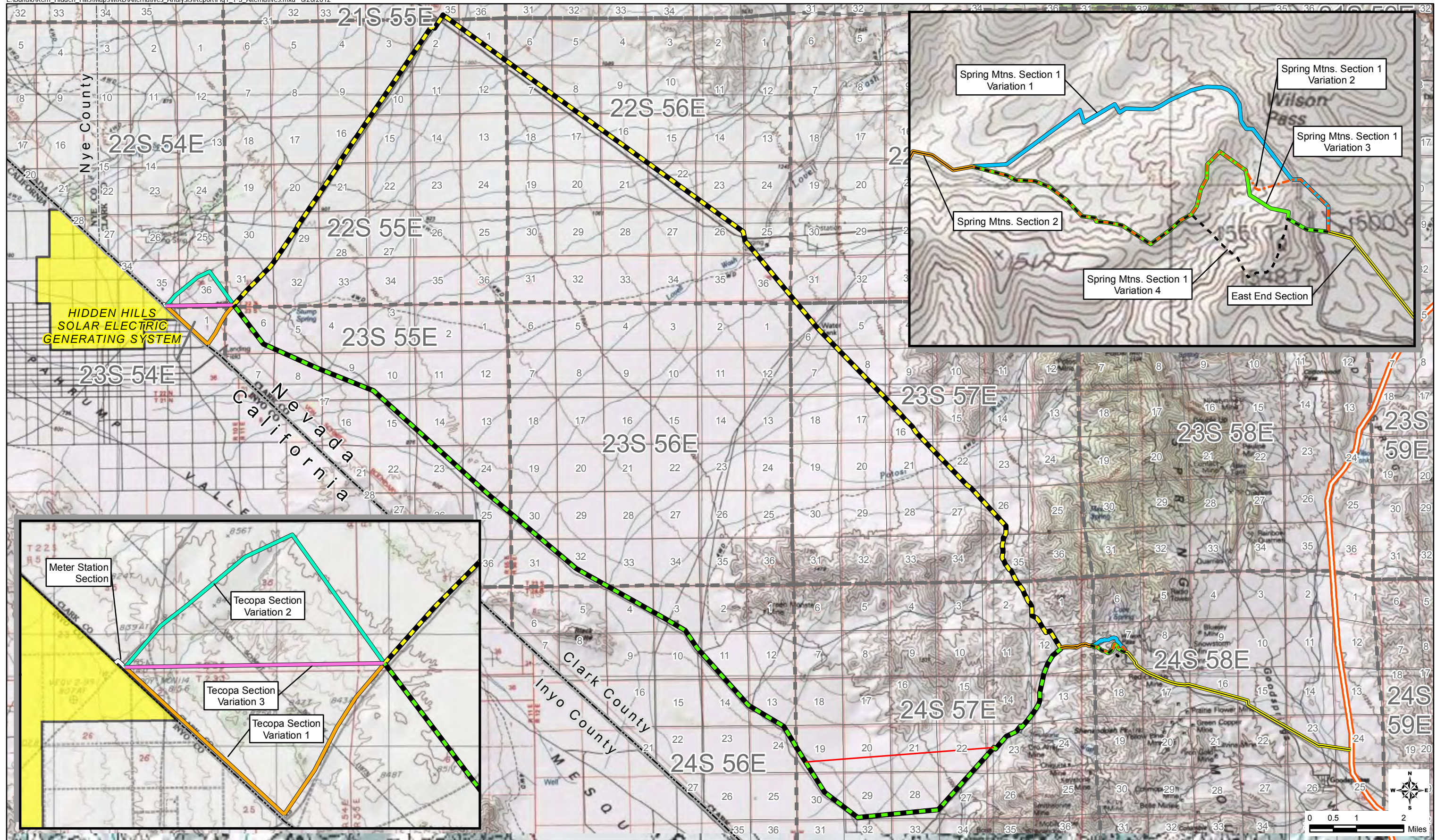


FIGURE 1.1-2
REGIONAL LOCATION
HIDDEN HILLS LATERAL PROJECT



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- | | | | | | |
|---|---|------------------------------|------------------------------|---------------------|---|
| East End Section | Spring Mountain Section 1 - Variation 3 | South Alternative | Tecopa Section - Variation 2 | Kern River Mainline | Section Boundary |
| Spring Mountain Section 1 - Variation 1 | Spring Mountain Section 1 - Variation 4 | Variation S2 | Tecopa Section - Variation 3 | Township Boundary | State Boundary |
| Spring Mountain Section 1 - Variation 2 | North Alternative | Tecopa Section - Variation 1 | Meter Station Section | County Boundary | Hidden Hills Solar Electric Generating System |

FIGURE 1.1-3
ROUTE ALTERNATIVES AND VARIATIONS
HIDDEN HILLS LATERAL PROJECT


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2. PURPOSE AND NEED

HHSEGS requires natural gas to maximize power plant efficiency by keeping the heat-transfer fluid warm during the night and providing a morning temperature boost. The proposed Project will provide the natural gas required by HHSEGS. 

3. FACILITIES DESCRIPTION

3.1 PIPELINE FACILITIES – LATERAL

As noted above, Kern River proposes to install a 12-inch-diameter lateral pipeline from its existing interstate transmission system to HHSEGS in southern California. The proposed Project will provide natural gas supply service to HHSEGS power plant. The MP referencing used in this application to describe the Hidden Hills Lateral begins with MP 0.0 at Kern River's existing mainline system (MP 563.2) just north of Goodsprings, Clark County, Nevada and ends at MP 32.4 at the proposed HHSEGS meter station in Calvada Springs, Inyo County, California. The lateral line will consist of approximately 32.4 miles of 12-inch-diameter pipeline, a new tap assembly and pig launcher, two manual valve stations, and a new meter station and pig receiver (described below). The pipe will have a wall thickness of between 0.281 inch and 0.312 inch depending on the type of pipe used for the Project, and will have a pressure rating of 1440 pounds per square inch gauge. Figure 1.1-2 provides an overview of the Project. The tables in Appendix A present the legal land description of the Hidden Hills Lateral. 

3.2 MINOR ABOVEGROUND FACILITIES

Minor aboveground facilities associated with the Project include a mainline tap and pig launcher, two valve stations, and a meter station and pig receiver. The mainline tap and pig launcher as well as the valve stations will be located on BLM land, while the meter station and pig receiver will be located on private land within the HHSEGS project site. The land requirements of the minor aboveground facilities are listed in Table 4.2-1 below.

3.2.1 Mainline Tap

A new mainline tap assembly and pig launcher barrel will be installed near MP 563.2 along Kern River's mainline facilities on land managed by the BLM. Construction at the tap/pig launcher area will include hot tapping of both 36-inch-diameter Kern River mainlines and the installation of a pig launcher, including interconnecting valves and piping. The tap will be designed and operated in accordance with Kern River specifications and will utilize a qualified hot-tap connector. The tap/pig launcher area would be enclosed in an area of approximately 100 feet by 125 feet and surrounded by a desert tortoise proof 6-foot-tall chain-link fence with three strands of barbed wire (approximately 7-feet high total). Drive gates and man gates will be provided for access to the site. The site will be covered with ¾-inch crushed rock. Access would be via the existing Kern River mainline and transmission line roads.

3.2.2 Valve Stations

Two aboveground valve stations will be installed along the lateral at MP 15.8 and MP 27.8 on BLM land. The valve stations will include a 12-inch diameter welded ball valve (buried) and riser piping (aboveground) used for purging and blowdown of the pipeline segments. The valves station would be approximately 75-feet by 75-feet and similarly provided with a desert-tortoise-proof fence and crushed rock surfacing. The valve station spacing meets or exceeds the general requirements of Title 49 of the CFR, Part 192, paragraph 192.179.

3.2.3 Meter Station

A meter station will be constructed on the HHSEGS project site, located on private land just across the California/Nevada border in Calvada Springs, Inyo County, California.

The meter station will be constructed to measure instantaneous flow and calculate total (cumulative) flow using two metering elements selected in accordance with American Gas Association and Kern River standards. The larger metering element is used to measure the higher gas flow associated with providing start-up boiler fuel. The smaller metering element is used to measure the lower gas flow associated with operation of the night preservation boiler and to provide domestic fuel. Flow can be regulated using a flow control valve.

An inlet filter/separator will be installed to remove free liquids and particulates, if any, prior to measurement and delivery to HHSEGS. A condensate tank is provided to accumulate liquids that are removed in the filter/separator. The tank will be double-walled and aboveground. The meter station will also include a pig receiver for periodic pigging of the lateral.

The meter station site, including the pig receiver facilities, will be approximately 300 feet by 300 feet and will be surrounded by a 6-foot-tall chain-link fence with a three strands of barbed wire (approximately 7-feet high total). No desert-tortoise-proof fencing will be installed as this facility will be inside the footprint of the HHSEGS facility. Drive gates and man gates will be provided for access to the site off of the adjacent road and the state line road. The site will be covered with crushed rock. The meter station will be shaded by a canopy to cover the meter runs and associated instrumentation and valving.

A data acquisition and control (DAC) building will be set on a concrete foundation. Data acquisition, control, uninterrupted power supply (UPS), and communication equipment will be installed inside the DAC building. The DAC building is provided with a heating, ventilation, and air conditioning unit to provide a temperature-controlled environment for the equipment. Communication between the meter station and Kern River gas control operations will likely be facilitated using a very small aperture terminal (VSAT) satellite network or radio; however, the

communication method will be confirmed by Kern River's communication group during detailed design. Conductors for electrical power and control will be routed primarily within an overhead cable tray routed between the DAC building and the piping skid. Yard lights will be installed on the DAC building and meter building exterior and will be photocell-operated. Grounding will be provided in accordance with code requirements, and will include electrical systems, equipment, structural steel and fencing. Cathodic protection will extend into the meter station site from the lateral; however, isolation will be provided downstream of the pig receiver.

4. LAND REQUIREMENTS

4.1 PIPELINE FACILITIES

Construction of the proposed pipeline facilities will require acquisition of temporary and permanent construction and operational ROW easements.

All of the 32.4 miles of pipeline will be on BLM land. On BLM lands, construction of the proposed pipeline will include a total construction impact of up to 1,323.6 acres, of which 196.6 acres are encompassed by proposed permanent 50-foot-wide ROW. Approximately 981.9 acres are associated with proposed temporary construction workspace (assuming 250-foot-wide temporary construction workspace), and 145.2 acres are associated with potential staging areas (pipeyards / contractor yards). A summary of federal land requirements for the proposed pipeline is provided in Table 4.1-1. Land acreage requirements on federal land by land use are provided in Table 4.1-2.

Table 4.1-1
Land Requirements for Pipeline Facilities on Federal Land

Pipeline				Total Construction Corridor (acres)
	Acres in Permanent ROW ¹	Acres in Temporary Construction ROW ²	Acres in Staging Areas ³	
Pipeline	196.6	981.9	-	1,178.4
Pipeyards / Contractor yards	-	-	145.2	145.2
Total	196.6	981.9	145.2	1,323.6
Notes:				
¹ Permanent ROW = Total area retained for operation of this proposed pipeline (50-foot-wide permanent ROW).				
² Temporary Construction ROW = the area of temporary workspace parallel to the Permanent ROW for this proposed pipeline (assuming additional 250-foot-wide temporary ROW).				
³ Staging Areas = Acres of temporary staging areas adjacent to the Permanent ROW/Temporary Construction ROW or acres of temporary pipeyards/ contractor yards.				

Table 4.1-2
Acreage Required for Construction and Operation of the Proposed Project on Federal Land by Land Use Type

Land Use ¹	Acres in Permanent ROW ²	Acres in Temporary Construction ROW ³	Acres in Staging Areas ⁴	Total Disturbance (acres)
Barren Land (Rock/Sand/Clay)	6.3	32.5	53.6	91.4
Developed, Low Intensity	3.9	26.3	2.8	33.1
Developed, Medium Intensity	0.0	0.0	2.9	2.9
Developed, Open Space	13.6	72.9	7.0	93.5
Grassland/Herbaceous	2.1	11.0	0.0	13.0
Shrub/Scrub	170.7	840.2	78.9	1,089.8
Total	196.6	981.9	145.2	1,323.6
Notes:				
¹ Land Use source: USGS 2011a				
² Permanent ROW = Total area retained for operation of this proposed pipeline (50-foot wide permanent ROW).				
³ Temporary Construction ROW = the area of temporary workspace parallel to the Permanent ROW for this proposed pipeline (assuming additional 250-foot wide temporary ROW).				
⁴ Staging Areas = Acres of temporary staging areas adjacent to the Permanent ROW/Temporary Construction ROW or acres of temporary pipeyards/ contractor yards.				

4.1.1 Construction Right-of-Way

A 50-foot-wide permanent ROW will be required along the length of the pipeline route. In addition to the requested permanent ROW, up to an additional 250-foot-wide temporary construction ROW may be required to install the pipeline. The necessary width of temporary construction ROW will depend on factors such as slope and difficulty of the terrain, construction constraints, construction activities (e.g., access road passing areas), waterbody/wash crossings, stability of soils, and topsoil segregation requirements

4.1.2 Additional Temporary Workspaces

ATWS will be required at road crossings (particularly at the planned conventional bore crossings at the Old Spanish Trail and Tecopa Road), designated waterbody/wash crossings and in areas with steep side slopes or other difficult terrain. ATWS will also be required for topsoil segregation, truck turnarounds, access road passing lanes, hydrotest water withdrawal and discharge locations, crossovers, tie-ins, staging and fabrication areas (e.g., mainline tap/ pig launcher and meter station/ pig receiver locations) and at foreign utility crossings. Additionally, ATWS will be needed wherever special construction techniques are required. Specific ATWS locations will be identified during detailed design of the Project, and will be provided to BLM when they are known.

4.1.3 Access Roads

Access roads will be identified during the final engineering design; however, access from existing roads (either maintained roads or existing powerline access roads) is expected to be readily available, with few exceptions. Small spur roads from the existing roads to the construction ROW will likely be required. In addition to state highways 160 and 161, access to the lateral and minor aboveground facilities from existing roads and ROWs is summarized below:

- The mainline tap and pig launcher area can be accessed from Kern River's existing mainline ROW and from the adjacent Kingston Road to the south;
- The meter station and pig receiver area (on private land) is accessible via adjacent unnamed roads to the northeast (state line road) and southeast of the site;
- Access is available to MP 0 through MP 7.1 from adjacent Kingston Road;
- Access is available to MP 7.1 through MP 32.4 from the adjacent Kingston and Pahrump roads, a former railroad ROW road, a short section of Tecopa Road, and state line road.

4.1.4 Pipe Storage Yards and Staging Areas (Contractor Yards)

To support construction of the Project, Kern River has preliminarily identified three sites on BLM land for potential use as contractor yards, though all three locations may not be used. These sites are located at MP 11.2 (35.7 acres), 12 miles north of MP 13 (49.6 acres), and 8 miles north of MP 26 (59.9 acres). Two additional sites located on private land have been identified as potential contractor yards on previously disturbed private land in Jean, Nevada and Calvada Springs, California.

4.1.5 Permanent Operational Right-of-Way

Kern River requests a 50-foot-wide permanent operational easement for the pipeline permanent ROW. The mainline tap and pig launcher aboveground facilities would be located within and adjacent to this permanent ROW (as well as the permanent ROW of the existing mainline). The two valve stations will also be located within and immediately adjacent to the Hidden Hills Lateral pipeline permanent ROW. The meter station and pig receiver and any other portion of the Project facilities will require a permanent easement located on the HHSEGS property. Acreage required for pipeline construction and operation on federal land is presented in Table 4.1-1, and acreage required for the minor aboveground facilities on federal land is presented in Table 4.2-1.

4.2 MINOR ABOVEGROUND FACILITIES

Kern River is proposing a new mainline tap assembly and pig launcher on BLM land located partly within the existing Kern River mainline ROW at MP 563.2. The permanent land requirement for this site is 0.3 acres in size. An area of 150-feet by 175-feet would be required to construct the mainline tap assembly and pig launcher, inclusive of the 100-foot by 125-foot permanent land requirement. The tap and pig launcher site is within and adjacent to the existing Kern River mainline ROW. Two valve stations are proposed within and adjacent to the Project permanent ROW at MP 15.8 and MP 27.8. The permanent land requirement for each valve station is 0.13 acres in size. An area of 150-feet by 150-feet would be required to construct each valve station, inclusive of the 75-foot by 75-foot permanent land requirement. The proposed meter station and pig receiver will be located on private, non-BLM land. The permanent land requirement for the meter station/ pig receiver area is 2.07 acres of private land. An area of 300-feet by 300-feet would be required to construct the meter station/ pig receiver, inclusive of the 300-foot by 300-foot permanent land requirement. Permanent land requirements for minor aboveground facilities on federal land are presented in Table 4.2-1.

Table 4.2-1 Land Requirements of Minor Aboveground Facilities on Federal Land		
Minor Aboveground Facility	Land Requirements (dimensions; feet)	Land Requirements (acres)
2 mainline taps 1 pig launcher (MP 0)	100 x 125	0.29
1 valve station (MP 15.8)	75 x 75	0.13
1 valve station (MP 27.8)	75 x 75	0.13
Total		0.55

5. PRE-CONSTRUCTION AND CONSTRUCTION PROCEDURES AND SCHEDULE

All facilities described in this Preliminary *POD* will be designed, constructed, tested, operated, and maintained to conform with the requirements of applicable federal and state regulations including Title 49 CFR, Part 192, Transportation of Natural and Other Gas by Pipeline: Minimum Safety Standards; and 18 CFR, 380.15, Site and Maintenance Requirements.

To ensure that construction of the proposed facilities will comply with the procedures described in the Preliminary *POD*, stipulations of the BLM ROW grant, the requirements of other federal and state permitting agencies and company specifications, Kern River will employ a Lead Environmental Inspector (EI) during construction of the Project. To ensure that standardized procedures for environmental compliance management and inspection are followed, Kern River will develop an *Environmental Compliance Management Plan (ECMP)*. The *ECMP* will provide detailed information about the roles and responsibilities of Kern River's environmental compliance team members, define reporting relationships, define compliance levels and reporting procedures, explain the variance process, and establish communication protocol. The Lead EI will provide overall coordination with FERC and BLM monitoring efforts and all other resource agencies. The Lead EI will be supported by additional EIs, and qualified desert tortoise monitors as necessary. The number of environmental inspectors at any time will depend on the season and the construction activities occurring along the pipeline route. The duties of the Lead EI and the EIs are consistent with those contained in the *FERC Upland Erosion Control, Revegetation and Maintenance Plan (FERC Plan)*. The Lead EI and EIs shall be:

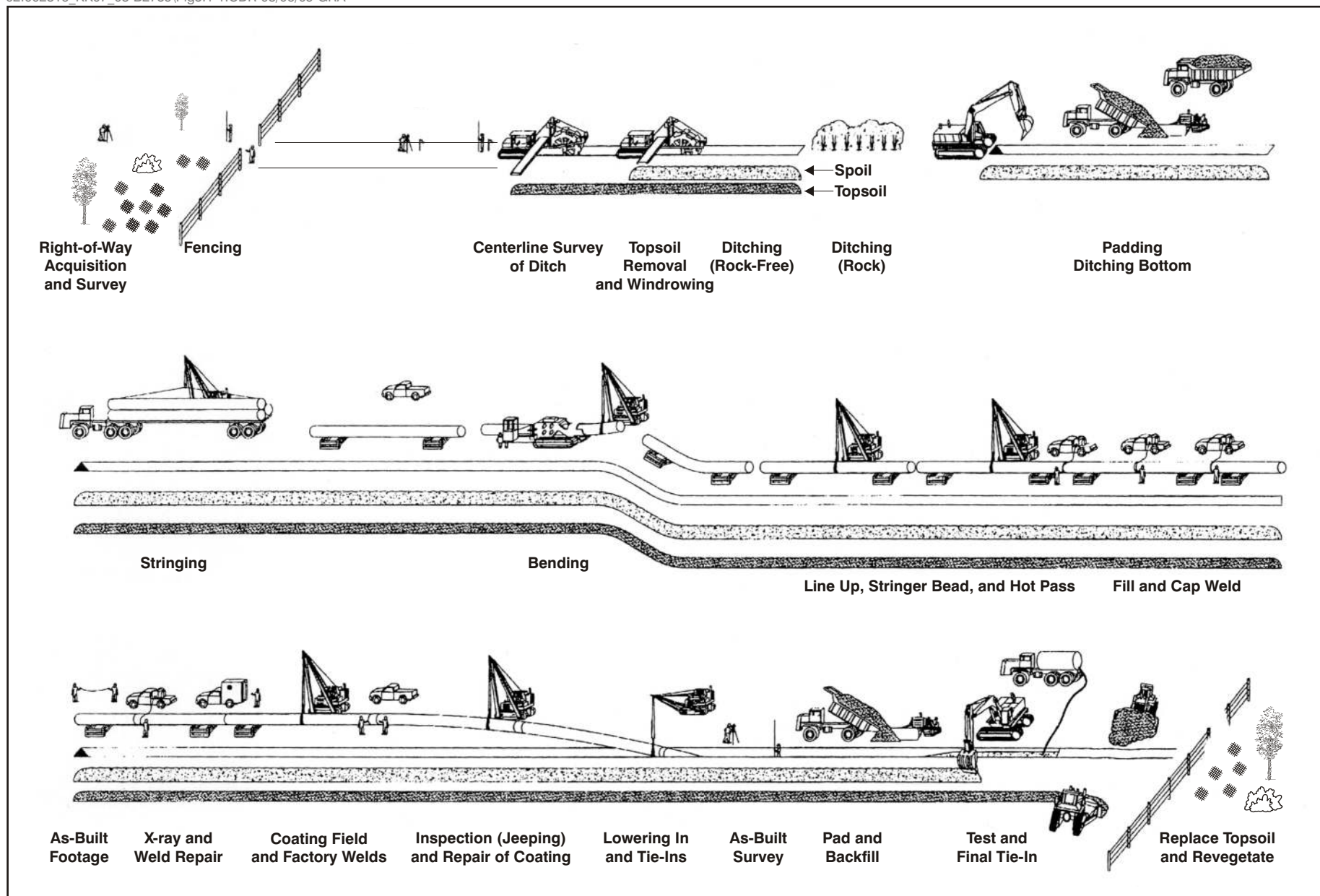
- responsible for monitoring and documenting compliance with all mitigation measures required by the BLM ROW Grant, the FERC's Certificate and any other grants, permits, certificates or other authorizing documents;
- responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract or any other authorizing document;
- empowered to order correction of acts that violate the environmental conditions of the BLM ROW Grant or any other authorizing document (i.e., FERC's Certificate, USACE Section 404 Permit, etc.);
- a full-time position separate from all other activity inspectors; and
- responsible for maintaining status reports and training records.

5.1 PRE-CONSTRUCTION PROCEDURES

Pre-construction activities include surveying and staking the ROW to delineate centerline, workspaces, access roads, laydown yards, etc. This activity is essential to identify the limits of the ROW, the centerline location of the pipeline, drainage centerlines and elevations, access roads, highway and railroad crossings and any ATWS, such as laydown areas or stream crossings. Underground utilities (e.g., cables, conduits, and pipelines) will be located and flagged. Landowner permission and/or easements will be secured and affected landowners will be notified prior to surveying and staking activities along the Proposed Route.

5.2 GENERAL PIPELINE CONSTRUCTION PROCEDURES

Construction of the proposed pipeline facilities will generally follow conventional overland pipeline construction techniques, except where otherwise required by agencies and/or permits. Construction will be conducted in accordance with the Project-specific *Upland Erosion Control, Revegetation and Maintenance Plan (Plan)* and *Wetland and Waterbody Construction and Mitigation Procedures (Procedures)* to be developed for the Project. The *FERC Plan* and *Wetland and Waterbody Construction and Mitigation Procedures (FERC Procedures)* will be used as the basis for these Project-specific documents. Some measures in the *FERC Plan* and *Procedures* may be unsuitable for specific conditions in the Project area, and the Project-specific *Plan* and *Procedures* will be designed to provide a comparable level of environmental protection. The construction of the proposed pipeline will follow a set of sequential operations, common to the gas pipeline industry, as shown in Figure 5.2-1 and as further described below. In the typical pipeline construction scenario, the construction spread (comprised of multiple crews) proceeds along the pipeline ROW in one continuous operation. As the spread moves along, construction at any single point along the pipeline, from clearing and grading to backfilling and finish-grading, may last up to nine months. The entire process will be coordinated to minimize the total time a tract of land is disturbed, exposed to erosion, and temporarily precluded from normal use.



SOURCE: Mojave-Kern River-El Dorado Natural Gas Pipeline Projects, Final Environmental Impact Report/Statement, Volume 1, Chambers Group, December, 1987

Figure 5.1-1 Typical Pipeline Construction Sequence

5.2.1 Clearing and Grading

The initial step in the preparation of the ROW for construction, following the pre-construction survey and staking, is the clearing of the ROW. Large obstacles such as trees, rocks, brush, and logs will be removed. Certain cacti and other succulent plants that meet salvage requirements and can be safely removed by construction crews will be salvaged with their root systems. These plants may be stockpiled and maintained toward the outer edge of the construction ROW for replanting within portions of the ROW, or may be transported directly to a recipient site. Plant salvage criteria and procedures will be included in the *Reclamation Plan* to be prepared for the Project. Small to mid-sized vegetative debris may be chipped for use as erosion-control mulch, or otherwise disposed of in accordance with applicable local regulations and landowner requirements (timber is not present within the ROW). Any existing fences located along the ROW will be cut and braced, and temporary gates will be installed to limit public access to ensure the safety of the public and crews. The ROW will then be graded where necessary to create a reasonably level working surface to allow effective use and safe passage of equipment. Where topsoil is present, the top three inches of the soil horizon will be segregated and stockpiled along one side of the ROW, allowing the other side to be used for access, material transport and pipe assembly. Additional definition of topsoil segregation is explained in Section 5.2.2. Typically, water wells and natural springs would also be located and marked at this stage; however, none were encountered during environmental surveys.

Temporary erosion controls will also be installed where necessary immediately after initial disturbance of the soil. Temporary erosion controls will be properly maintained throughout construction and reinstalled as necessary until they are replaced by permanent erosion controls or restoration is completed.

5.2.2 Trenching

To bury the pipeline underground, a trench will be excavated with a rotary trenching machine, a track-mounted excavator, or similar equipment. Explosives may be necessary in areas where rock substrates are found at depths that interfere with conventional excavation or rock-trenching methods. The bottom of the trench will be excavated at least 12 inches wider than the diameter of the pipe (i.e., a minimum 24-inch trench bottom for a 12-inch-diameter pipe). The trench will be excavated to a sufficient depth to allow a minimum of 3 feet of cover (unless otherwise specified in specific areas) between the top of the pipe and the final land surface after backfilling. Excavated spoil will be stockpiled separately from the topsoil where

required along the ROW on the side of the trench away from the construction traffic and pipe assembly area.

As mentioned previously, topsoil segregation will occur over the trench and spoil storage areas, where possible. Typically, subsoil will be stockpiled separately from topsoil; however, it may be necessary to employ a straw barrier technique between the topsoil and subsoil if ROW width is insufficient to maintain safe working conditions using separate topsoil/subsoil stockpiles, or prevent excessive exposure to loss of topsoil from wind erosion. Topsoil and vegetative debris will be removed to a typical depth of 3 inches over the trench and spoil storage areas, as well as any areas involving cut and fill, such as on side-slopes. Topsoil will only be segregated on BLM lands where topsoil is present. When soils have a high content of cobbles, rocks, or boulders, or when surface fines are less than 3 inches deep, topsoil will not be segregated. Kern River will only attempt to salvage topsoil when safe construction conditions can be maintained. Kern River will make every effort to segregate the entire topsoil layer, avoiding mixing with the underlying horizons, and to stockpile separately from all subsoil material. The segregated topsoil and subsoil stockpiles will be replaced in the proper order during backfilling and final grading.

5.2.3 Stringing

Steel pipe for the pipeline will be procured in nominal 60-foot lengths or “joints” as appropriate for local terrain conditions. The pipe will be protected on the outside with a fusion-bonded epoxy coating and an abrasion-resistant overlay applied at the factory (the beveled ends will be left uncoated for welding) and shipped to contractor yards or directly to the ROW. Individual joints will be transported to the ROW by truck (or by other means if required in areas with steep topography) and typically placed along the excavated trench in a single, continuous line, easily accessible to the construction personnel on the working side of the trench, opposite the spoil side. This will allow the subsequent lineup and welding operations to proceed efficiently.

5.2.4 Pipe Bending

Pipe will be delivered to the Project site in straight sections. Some bending of the pipe will be required to allow the pipeline to follow the natural grade changes, cross waterbodies/washes and direction changes of the ROW. Selected joints will be field-bent by track-mounted hydraulic bending machines as necessary prior to line-up and welding. Where angles are too great to be addressed by standard cold bending techniques, prefabricated induction bends or fittings will be installed.

5.2.5 Pipe Assembly and Welding

Following stringing and bending, the joints of pipe will be placed on temporary supports adjacent to the trench. The ends will be carefully aligned and welded together using multiple passes, which will provide for a full penetration weld. Only qualified welders will be permitted to perform the welding. Welders will be qualified according to applicable American Welding Society, American Society of Mechanical Engineers and American Petroleum Institute (API) Standards.

5.2.6 X-Ray and Weld Repair

To ensure that the assembled pipe will meet or exceed the design strength requirements, each weld will be visually inspected and non-destructively tested using radiographic (X-ray) or other approved test methods, in accordance with API Standards. Welds displaying unacceptable defects will be repaired or cut out and re-welded.

5.2.7 Coating Field Welds, Inspection and Repair

Following welding, the previously uncoated ends of the pipe at the weld joints will be epoxy coated. Coating at the joints and on the remainder of the completed pipe section will be visually inspected for holidays (i.e., coating flaw) and using an electronic holiday detector with the voltage calibrated for the type and thickness of coating; any damaged areas will be repaired.

5.2.8 Pipe Lowering

The completed section of pipe will be lifted off the temporary supports and lowered into the trench by side-boom tractors. Prior to lowering of the pipe, the trench will be inspected to ensure that it is free of rocks and other debris that could damage the pipe or its coating. The pipe and trench will also be inspected to ensure that the pipe and trench configurations are compatible.

5.2.9 Padding and Backfilling

After the pipe is lowered into the trench, the trench will be backfilled. Previously excavated materials will be pushed back into the trench using bladed equipment or excavators. Where the previously excavated material contains large rocks or other materials that could damage the pipe or its coating, screened fill (padding) will be placed around the pipe prior to backfilling. Screened fill materials will be generated from excavated material and processed with a track mounted padding machine or a bucket screener on a trackhoe. Topsoil will not be used for padding or backfilling the pipeline.

5.2.10 Hydrostatic Test and Final Tie In

All components in high-pressure natural gas service will be hydrostatically tested for eight hours in accordance with United States Department of Transportation (USDOT) 49 CFR Part 192 prior to being placed in service. Any leaks detected will be repaired and the segment retested. Upon completion of the test, the water will be cascaded (transferred to the next test segment) whenever possible to be re-used for hydrostatic testing purposes. When discharged, the test water will be released within the construction ROW through an energy-dissipating device and straw bale filters or sediment bags. Test water will not be discharged directly into surface waters. Discharge sites will be in upland areas. A *Hydrostatic Test Plan* will be developed for the project.

The anticipated volume of water that would be used for hydrostatic testing and subsequently released is approximately 1,100,000 gallons for a 12-inch-diameter, 33.21-mile long pipeline. Test water for the Project will contact only new pipe and no chemicals will be added, so no testing is required prior to discharging test water to upland surface areas. The Project-specific *Procedures* will provide detail regarding hydrostatic test water discharge

5.2.11 Cleanup and Restoration

After a segment of pipeline has been installed, backfilled and successfully tested, the construction ROW, ATWS and other disturbed areas will be finish-graded and the construction debris will be removed and disposed of properly. Original land contours will be restored to conform with adjacent areas and salvaged topsoil will be spread across the ROW. Permanent erosion and sediment control measures, including diversion terraces (slope breakers) will be installed, and the ROW will be revegetated. A Project-specific *Reclamation Plan* will be developed for the Project. The *Reclamation Plan* will include specifications for replanting salvaged cacti and other succulent plant material. Disturbed areas will be seeded in accordance with the *Reclamation Plan* to be developed in consultation with the local soil conservation authority and/or the BLM. Private and public property such as fences, gates, driveways, and roads that have been disturbed by the pipeline construction will be restored to original condition. Large rocks removed from the trench and not suitable for use as backfill will be spread across the ROW to discourage all-terrain vehicle use of the ROW and to stabilize erosion-prone areas.

5.3 SPECIAL PIPELINE CONSTRUCTION TECHNIQUES

5.3.1 Road Crossings

Smaller, unpaved roads located along the pipeline route will be crossed by open trenching and then restored to pre-construction conditions. If an open-cut road requires extensive construction time, provisions will be made for detours or other measures to permit traffic flow during construction. The pipeline will be buried to a depth of at least 5 feet below the road surface and will be designed to withstand anticipated external loading.

A conventional bored road crossing is currently planned at the project crossing of the Tecopa Road. Site-specific plans for conventional bored road crossings will be finalized during detailed design.

5.3.2 Waterbodies and Wash Crossings

A waterbody is defined as any watercourse that is flowing at the time of crossing; dry washes will not be treated as waterbodies unless they are flowing at the time of crossing. The Project crosses 55 United States Geological Survey (USGS) National Hydrography Dataset (NHD) (USGS 2011b) mapped washes. Field surveys will be conducted to verify these wash crossings and identify any wash crossings not included in the NHD. These washes may support flow during rain events; however, these washes will likely be dry at the time of construction. For any wash without flow at the time of construction, Kern River proposes to utilize standard upland cross-country construction methods. The pipeline will be installed with sag bends under these washes to provide adequate cover and protection to the pipeline and will conform with the natural contours. All bed and banks will be restored to preconstruction contours as part of restoration activities.

Though Kern River does not anticipate flow in these intermittent washes, it is possible that flow may occur in these washes during construction. To avoid construction in washes during periods of extreme high flow, Kern River will monitor weather conditions up to two days in advance of installing the pipe through wash crossings. The most likely cause for developing flow in such intermittent streams would be brief, intense, intermittent thunderstorms and heavy rains upstream of the crossing. In such cases, the flow in the stream would be expected to be brief (lasting hours or days). For such short-term events, Kern River will remove equipment from within the stream banks and restore banks to their original shape or protect the banks through erosion control methods to keep flow within the banks; backfill excavated areas where possible; continually monitor the banks where the crossing was attempted and restore the banks in the event that soil is eroded by flow; and resume construction once the wash returns to non-flowing

conditions. To allow vehicles and equipment to move across the spread throughout construction a travel lane will be cut through the wash crossings. In certain locations, Kern River may choose to install temporary equipment bridges to accommodate the flow and move construction across the wash. In these locations, temporary erosion control devices will be installed while the bridge is in place.

Alternatively, a flume may be installed in some washes and covered in native spoil material to create a more level travel lane during construction. Erosion control devices, including but not limited to rock, silt fence, straw bales, or a combination thereof, will be placed on the upstream and downstream sides of the flume to direct water flow into and out of the flume, and to prevent undercutting of the flume. A site-specific energy dissipation device such as staked straw bales or equivalent will be employed to prevent scouring of the channel bed and undercutting of the flume erosion control device(s). The flume pipe under the travel lane will be left in place for the duration of construction. Sufficient setback from the ROW limits will be left to install erosion control devices at the entry/exit of the flume pipe. Material excavated during grading activities will be placed over and around the flume pipe and will be removed from the waterbody/wash during reclamation.

The flume method for pipeline installation is typically used to cross small to intermediate flowing, cold-water fisheries, or cool-water and warm-water fisheries considered significant by the State. The Project does not cross waterbodies deemed to support fisheries. Therefore, this method is not being proposed to cross any of the intermittent washes.

5.3.3 Spill Prevention and Management

Measures that fully describe spill prevention and response to avoid or minimize impacts on storm water will be described in the Project-specific *Procedures*. In addition, a *Spill Prevention, Control and Countermeasure Plan* will be prepared for the Project.

5.3.4 Blasting

Difficult excavation conditions are present in the Project area, and blasting will likely be required in some areas. Where unrippable rock is encountered, blasting for ditch excavation will be necessary. In these areas, care will be taken to prevent damage to underground structures (e.g., cables, conduits, and pipelines) or any environmental resources that may be affected by the blasting activity. Blasting mats or soil cover will be used as necessary to prevent the scattering of loose rock. All blasting will be conducted during daylight hours. Kern River will identify areas where blasting is likely following geotechnical investigations. Kern River will conduct all blasting in accordance with the *Blasting Plan* to be prepared for the Project.

The *Blasting Plan* will include measures for the protection of desert tortoise (*Gopherus agassizii*) during blasting activities. These measures will include a survey of the blasting area and buffer immediately prior to the blast to prevent direct mortality of desert tortoise due to blasting.

5.3.5 Shallow Groundwater

Shallow groundwater presents issues of concern for both design and construction of pipeline facilities. Design issues include pipe buoyancy in saturated ground conditions and corrosion that may be accelerated by the presence of moisture. Construction issues include difficulty in excavating an adequate ditch in saturated conditions and trench-wall stability that must be maintained for safety during placement and subsequent inspection of the pipe. There are no areas of shallow groundwater within the Project area; therefore, special pipeline design considerations for this condition are not warranted.

5.3.6 Liquefaction Potential and Ground Failure

Liquefaction is a loss of shear strength in loose granular soils because of excessive pore water pressure that develops during seismic shaking. Liquefaction is a concern because it can lead to ground failure. Ground failure may consist of a bearing capacity failure, flotation of buried structures, soil block oscillation, lateral spreading, flow landslides, or a combination of these. Liquefaction is not considered a significant geologic hazard in the Project area given the relatively deep occurrence of ground water (greater than 100 feet below ground surface).

5.3.7 Scour

A hydrology study, including scour analysis, will be conducted to determine which, if any ephemeral stream systems would require burial depths of more than 5 feet below the base elevation of the wash. This hydrology study will be completed during detailed engineering design.

5.3.8 Faults

Regional fault databases, including the USGS Quaternary fault and fold database and the Nevada Bureau of Mines and Geology (NBMG) Map 167, Quaternary Faults in Nevada (USGS 2006), do not map any Quaternary faults crossing the proposed routes, but do show Quaternary faults projecting into the area from the north. The status of these faults with regard to location and recency of activity is not well documented in the site area. The faults in the site area will be further evaluated to more firmly establish the presence or absence of any significant

fault rupture hazard to the proposed pipeline. Fault rupture hazards along the proposed route will be accommodated during final design of the pipeline.

5.3.9 Slopes

Areas with slopes of 15% or greater have a higher surface erosion potential or potential for localized slumping or earth movement than areas which are less steep. While the Proposed Route has incorporated localized variations to avoid or minimize crossing of severe terrain and areas with landslide potential, it is not possible to avoid all slopes of 15% or greater in crossing the Spring Mountains. Kern River has designed the route to cross steep slopes perpendicular to the slope angle when possible. Where the steeper contours parallel the pipeline ROW, Kern River will use proven side slope construction methods. The construction ROW configuration in these areas will include a temporary cut and fill embankment and slope to provide a more level, stable and safe working surface for construction activities. The fill embankment and spoil will be stockpiled to maintain stability and erosion and sediment control during construction. Following construction, side slope areas will be promptly restored as close as practicable to original contours and natural drainage patterns. These areas will be seeded and erosion-control matting or rock mulch will be installed to provide a higher degree of protection from surface erosion until vegetation becomes established.

Where the slopes are generally perpendicular to the ROW, erosion control structures including slope and trench breakers will be used in accordance the provisions of the Project-specific *Plan*. The restored ROW will be monitored for restoration success and corrective action will be implemented in any areas of active erosion. Additional erosion control measure will be included in the *Reclamation Plan*.

5.3.10 Springs

Based on a review of USGS 7.5-minute quadrangle maps, no springs were identified that could potentially be affected by the pipeline construction or operation. Stump Springs, is located in the vicinity of the Project; however, this spring is approximately 1 mile north of the proposed route, and will not be impacted by construction of the Project.

5.3.11 Mineral Leases and Mining Claims

Kern River has identified active mining claims in the vicinity of the Project, and is working with claim holders to address potential impacts of the Project on these claims.

5.3.12 Wildfire Control

Kern River will prepare a *Fire Prevention and Suppression Plan* to prevent wildfire during construction of the Project. A portion of the ROW does traverse lands impacted by the 2005 Spring Mountain fire.

5.3.13 Sensitive Biological Resources

Sensitive biological resources include habitats and species of wildlife and plants considered to be sensitive or of special concern for one or more reasons, such as rarity, legal status, limited distribution or unique value for scientific, educational or recreational purposes.

A number of sensitivity classifications exist; species may be considered sensitive due to inclusion in one or more of the following classifications:

- Federally listed threatened or endangered species (Federal Endangered Species Act of 1973; PL 93-205);
- Species proposed for federal listing;
- Species protected by other federal acts, such as bald and golden eagles (protected by the Bald Eagle Protection Act of 1940) and migratory birds (protected by the Migratory Bird Treaty Act of 1918);
- State-listed threatened or endangered species, such as those species in Nevada listed as protected or threatened (NAC §503), and in California protected by the California Endangered Species Act (Fish and Game Code §2050);
- Other species afforded state protection, such as those on fully protected lists;
- BLM listed sensitive species;
- Other species considered to be of special interest; and
- Habitat for one or more of the above species.

During spring 2012, habitat level field surveys were conducted to assess the vegetative communities and potential habitat for sensitive species along the proposed pipeline route. The survey corridor was generally 300 feet in width centered on the proposed Project centerline. Additional surveys will be conducted as necessary for Project features that are located outside this corridor and would result in new impacts on wildlife habitat, such as staging areas and pipe storage or contractor yards. In addition to the habitat level surveys, Kern River conducted species-specific desert tortoise surveys for presence/absence within a 150-foot survey corridor centered on the proposed centerline and zone of influence transects at 200 meters, 400 meters and 600 meters from the proposed centerline. In addition to surveying for the desert tortoise,

botanical surveys were conducted for special status plant species and incidental observations of other special status wildlife were recorded. Detailed results of these field surveys are provided in the Desert Tortoise (*Gopherus agassizii*) Presence/Absence and Botanical Surveys for the Proposed Hidden Hills Lateral Natural Gas Pipeline, Nevada (Noble 2012) provided to BLM June 22, 2012. Kern River will continue to coordinate with the USFWS and BLM to develop appropriate mitigation for potential impacts to the desert tortoise. Mitigation measures to protect the desert tortoise will be rendered by the USFWS in the Biological Opinion issued for the Project.

Seven populations of *Eriogonum heermannii* var. *clokeyi* (Clokey's Buckwheat) plants, a BLM special status species, were encountered during field surveys. Botanists also documented a variety of penstemon in the eastern end of the Project near MP 0.0 that may be *Penstemon bicolor* (Pinto Beardtongue), a Federal species of concern and BLM special status species, but definitive identification could not be reached due to the absence of flowers. No live burrowing owl (*Athene cunicularia*) individuals were observed during the survey; however, burrowing owl sign (e.g., whitewash, droppings, feathers, and diagnostic pellets) was observed in the Project area.

Migratory bird nesting habitat is present in the Project area. If clearing of vegetation is required during the migratory bird nesting season, Kern River will survey vegetated areas for migratory birds prior to clearing. If a nesting migratory bird is found, a buffer will be established around the nesting bird. Construction will not be allowed within the buffer until the young have fledged, unless alternative mitigation measures are developed and approved by resource agencies. If migratory birds move into the active construction area, they will be considered habituated and a buffer will be established that allows construction activities to continue in the area.

Kern River will develop a *Biological Resources Mitigation Plan* in consultation with the BLM. This plan will address protection of desert tortoise, special status plant species, and burrowing owl and other migratory birds during construction.

5.3.14 Noxious Weed Control

Surveys for invasive species along the ROW were conducted in May 2012. The results of these field surveys are provided in the Desert Tortoise (*Gopherus agassizii*) Presence/Absence and Botanical Surveys for the Proposed Hidden Hills Lateral Natural Gas Pipeline, Nevada (Noble 2012) provided to BLM June 20, 2012. Kern River will prepare a

Noxious Weed Control Plan which will include noxious weed treatment measures to be implemented during construction.

5.3.15 Cultural Resources

Surveys for cultural resources will be conducted along the proposed Project. Based on the results of these surveys, Kern River will evaluate the potential effects of the Project on cultural resources. One known cultural resource, the Old Spanish Trail, is located in the vicinity of the Project, and Kern River is evaluating the suitability of using a conventional bore during construction in this area to avoid impacts to the resource.

Kern River will prepare an *Unanticipated Discoveries Plan for Cultural Resources* for implementation during construction.

5.3.16 Visual Resources

Simulations of the visual impact of the Project are required at key observation points (KOPs) along the pipeline route. Impacts to visual resources will be evaluated following these simulations. Measures to reduce the visual impact of the Project may include replanting of succulent plants in the Project area, and allowing the ROW to revegetate with native vegetation.

5.3.17 All-terrain and Off-highway Vehicle Control

In consultation with the land management agency and/or landowner, Kern River will develop a plan to discourage all-terrain and off-highway vehicle use of the restored ROW following construction.

5.3.18 Dust Control

In order to control fugitive dust during construction of the Project, Kern River will conduct dust control watering. This dust control watering will be conducted in accordance with the dust control permit issued by the Clark County Division of Air Quality Management, and the *Dust Control Plan* to be prepared for the Project.

5.3.19 Contingency for Unforeseen Conditions

In the event of unforeseen problems or issues arising during construction that are not addressed in this Preliminary *POD*, resolution will be achieved by consultation among designated representatives of Kern River, the construction contractor, biological monitoring contractor, and the appropriate federal and state agencies. To facilitate this response, a contact list will be developed including both primary and secondary contacts for the federal agencies, state agencies, Kern River, contractors, and biological monitors. The contact list will include

phone, fax, cell, pager and email information as appropriate. The list would be provided prior to construction initiation and would be updated as required. Resolution of such issues would be achieved by a combination of telephone calls, conferences, meetings and field visits, as necessary. If appropriate, a variance request would be submitted by Kern River and reviewed and approved or denied by FERC and the BLM.

5.4 MINOR ABOVEGROUND FACILITIES CONSTRUCTION

Mainline Tap and Pig Launcher

A new mainline tap assembly (including block valves) and pig launcher will be installed within and immediately adjacent to Kern River's existing ROW located at Project MP 0.00 (mainline MP 563.18). The tap area will also include block valves and check valves used to isolate the lateral from Kern River's mainlines. In general, construction would begin with site grading, installation of equipment and piping and the erection of permanent buildings. After completion of pipeline tie-ins and testing, final construction would consist of painting aboveground facilities with suitable colors to blend into the surrounding environment, road surfacing, grading and gravelling the station yard.

Mainline Valves

Two new mainline valves will be installed at locations along the proposed Hidden Hills Lateral. The installation of the block valves will follow similar general construction procedures to the mainline tap and pig launcher.

Meter Station and Pig Receiver

A new meter station and pig receiver will be installed within the HHSEGS site at Project MP 33.2. The installation of the meter station and pig launcher will follow similar general construction procedures to the mainline tap and pig launcher.

5.6 PROJECT CONSTRUCTION SCHEDULE AND WORKFORCE

Construction of the Project will last between 9 and 12 months, and is scheduled to begin in late 2013. Construction is expected to require 250 workers on average and 400 workers during periods of peak construction. Expected equipment requirements are included in Table 5.6-1.

**Table 5.6-1
Construction Equipment Requirements**

Equipment	Number
D5 Pipe Layer (Caterpillar)	4
561 (D6) Pipe Layer (Caterpillar)	5
D6 Dozer (Caterpillar)	3
D8 Dozer (Caterpillar)	3
Trencher (Rock)	3
Excavator	5
CRC Bending Machine	1
Backhoe	2
Pickup truck 4X4	20
Truck 1 Ton 4X4	7
Truck Flatbed 2 Ton	3
Water Truck	8
Welding Units	12
Pipe Delivery Truck	8
Dump Truck	2
Generator and Light Plants	5
Utility Truck	2
Boring Machine	1

6. OPERATIONS AND MAINTENANCE

Kern River will operate and maintain the proposed pipeline and aboveground facilities in compliance with the USDOT regulations provided in 49 CFR 192, the Commission's guidance at 18 CFR 380.15, and maintenance provisions of the Project-specific *Plan* and *Procedures*.

6.1 PIPELINE MONITORING

Operational activity on the pipeline will be limited primarily to maintenance of the ROW and inspection, repair and cleaning of the pipeline itself. Regularly scheduled aerial and ground inspections by pipeline personnel will identify soil erosion which may expose the pipe; dead vegetation that may indicate a gas leak in the line; conditions of the vegetative cover and erosion control measures; unauthorized encroachment on the ROW such as excavation activities, inappropriate ROW utilization, construction of buildings and other substantial structures; and other conditions which could present a safety hazard or require preventative maintenance or repairs. Aerial patrols will use existing airports and heliports. No additional landing strips or heliports are planned for the Project. The pipeline cathodic protection (CP) system will also be monitored and inspected periodically to ensure proper and adequate corrosion protection is being maintained. Appropriate responses to conditions observed during inspection will be taken, as necessary.

Pipeline facilities will be clearly marked at line-of-sight intervals and at crossings of roads and other key points. The markers will clearly indicate the presence of a pipeline and provide a telephone number and address where a Kern River representative may be reached in the event of an emergency or prior to any excavation in the area of the pipeline by a third party. Kern River participates in One-Call programs in the states in which its pipeline is located.

6.1.1 Cathodic Protection


In accordance with 49 CFR 192, the pipeline system will have a CP system to protect it from corrosion if defects develop in the pipe coating. Without a CP system, such defects may be anodic and subject to corrosion. The CP system impresses a direct current on the pipe, which makes the pipe cathodic. The CP system provides deep well sacrificial anodes that will corrode instead of the pipe. The CP system does not influence the pipeline excavation depth. The main components of the CP system are deep well anode beds, rectifiers and test stations. Kern River proposes to install new CP equipment (deep wells and rectifiers) to maintain CP on the new Hidden Hills Lateral pipeline. Deep well anode beds are proposed at the mainline tap area and

near the meter station. The CP test post locations will be shown on the alignment drawings that are issued for construction and will be installed during pipeline construction.


6.1.2 Alternating Current Mitigation

In addition to CP, Kern River is evaluating the necessity for alternating current (AC) interference mitigation. AC test stations will be installed at approximately 1-mile intervals over the proposed pipeline alignment within the permanent ROW. Selected locations will also consider access to facilitate routing testing.

6.2 RIGHT-OF-WAY MAINTENANCE

The ROW will be allowed to revegetate; however, large brush may be periodically removed near the pipeline. Kern River must maintain the ROW such that large woody vegetation does not impact the integrity of the pipeline. Vegetation maintenance is expected to be minimal in the Mojave Desert environment, and mowing of the ROW is not planned. Smaller woody vegetation will be allowed to recruit across the ROW. Kern River will not conduct mowing or other vegetation maintenance over the full width of the permanent ROW. Routine vegetation maintenance clearing will be avoided between April 15 and August 1 in order to avoid impacts to nesting migratory birds. Any eral, state, or local protected plant species requiring removal for maintenance purposes will be transplanted to another area within the ROW. Kern River will monitor the revegetation of the ROW following restoration to determine the success of reclamation. The monitoring timeframe will be established in coordination with the BLM.

Over the life of the Hidden Hills Lateral, there will be times when a segment of the lateral will be excavated for pipe evaluation, repair and/or replacement. Typical maintenance activities will be confined to the permanent ROW. Although unlikely, if a major repair or replacement is necessary, Kern River will work with the BLM to obtain the necessary permission to work beyond the permanent ROW. Pipeline technicians involved in the operation and maintenance of the Hidden Hills Lateral will generally work during the daylight hours for five to six days per week. Occasionally, seven day workweeks are required to complete some tasks. At every phase of the project construction and maintenance, fire prevention safeguards will be incorporated for fire control. No industrial wastes or toxic substances will be generated or stored on the ROW.

Kern River will utilize existing g roads to the extent possible to access the permanent ROW for operations and maintenance activities; however, there would be some expanded access. Access to the permanent ROW will be at approximately 1 - 2 mile intervals, primarily

from roads that roughly parallel the Hidden Hills Lateral (e.g., Kingston and Pahrump roads, powerline access road, and Tecopa Rd). New access spur roads leading to the permanent ROW from these existing roads will be required.

Kern River's operational and maintenance activities for this Project are considered and authorized under Biological Opinion file numbers 84320-2001-0337 and 1-5-02-F-476.

6.3 TERMINATION AND RESTORATION

Kern River has no definitive plans for either termination or restoration of the facilities described in this Preliminary *POD*. Gas supply and market need are the major factors in determining the economic life of the Project. If properly maintained, and assuming adequate gas supplies and markets, the pipeline is expected to operate for 50 years or more.

At the end of the useful life of the pipeline, Kern River will obtain the necessary permission(s) to abandon its facilities. All aboveground structures will be removed from the ROW when the Project life is complete, and below-ground structures will be cleaned and abandoned in place or removed per the conditions of the BLM ROW grant. The disturbed ROW and any access roads created for the Project (e.g., spurs from existing roads to the ROW) will be stabilized and re-vegetated.

7. REFERENCES

- Noble Creek Biological Consulting, Inc. (Noble) and Walde Research Environmental Consulting, Inc. 2012. Desert Tortoise (*Gopherus agassizii*) Presence/Absence and Botanical Surveys for the Proposed Hidden Hills Lateral Natural Gas Pipeline, Nevada. Prepared for Ecology and Environment, inc.
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Chapter AAppendix A
Legal Description

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Proposed Route

BLM Aliquot Parts for Southern Route 50-ft Permanent (25-ft on each side of centerline)

Meridian	Township	Range	Section	¼ Section	¼ ¼ Section
M.D.M	23S	55E	6	NW	SENW
M.D.M	23S	55E	6	NE	SWNE
M.D.M	23S	55E	6	SE	NWSE
M.D.M	23S	55E	6	SE	SWSE
M.D.M	23S	55E	6	SE	SESE
M.D.M	23S	55E	5	SW	SWSW
M.D.M	23S	55E	8	NW	NENW
M.D.M	23S	55E	8	NE	NWNE
M.D.M	23S	55E	8	NW	NWNW
M.D.M	23S	55E	8	NE	NENE
M.D.M	23S	55E	9	NW	SENW
M.D.M	23S	55E	9	NW	SWNW
M.D.M	23S	55E	8	NE	SENE
M.D.M	23S	55E	8	NE	SWNE
M.D.M	23S	55E	9	SE	NESE
M.D.M	23S	55E	9	SE	NWSE
M.D.M	23S	55E	9	SW	NESW
M.D.M	23S	55E	10	SW	SESW
M.D.M	23S	55E	10	SW	SWSW
M.D.M	23S	55E	9	SE	SESE
M.D.M	23S	55E	15	NE	NWNE
M.D.M	23S	55E	15	NW	NENW
M.D.M	23S	55E	15	NE	SENE
M.D.M	23S	55E	15	NE	SWNE
M.D.M	23S	55E	14	SW	NWSW
M.D.M	23S	55E	15	SE	NESE
M.D.M	23S	55E	14	SW	SESW
M.D.M	23S	55E	14	SW	SWSW
M.D.M	23S	55E	23	NE	NWNE
M.D.M	23S	55E	23	NW	NENW
M.D.M	23S	55E	23	NE	SENE
M.D.M	23S	55E	23	NE	SWNE
M.D.M	23S	55E	23	SE	NESE
M.D.M	23S	55E	24	SW	NWSW
M.D.M	23S	55E	24	SW	SWSW
M.D.M	23S	55E	24	SW	SESW
M.D.M	23S	55E	25	NW	NENW
M.D.M	23S	55E	25	NE	NWNE
M.D.M	23S	55E	25	NE	NENE
M.D.M	23S	55E	25	NE	SENE
M.D.M	23S	55E	6	NW	L 4
M.D.M	23S	55E	6	NW	L 3
M.D.M	23S	56E	30	SW	NESW

Proposed Route

M.D.M	23S	56E	30	SW	SESW
M.D.M	23S	56E	30	SE	SWSE
M.D.M	23S	56E	31	NE	NWNE
M.D.M	23S	56E	31	NE	NENE
M.D.M	23S	56E	31	NE	SENE
M.D.M	23S	56E	32	NW	SWNW
M.D.M	23S	56E	32	SW	NWSW
M.D.M	23S	56E	32	SW	NESW
M.D.M	23S	56E	32	SE	NWSE
M.D.M	23S	56E	32	SE	SWSE
M.D.M	23S	56E	32	SE	SESE
M.D.M	23S	56E	33	SW	SWSW
M.D.M	23S	56E	30	NW	L 2
M.D.M	23S	56E	30	SW	L 3
M.D.M	24S	56E	4	NE	SENE
M.D.M	24S	56E	4	NE	SWNE
M.D.M	24S	56E	4	NW	SENW
M.D.M	24S	56E	4	SE	NESE
M.D.M	24S	56E	3	SW	NWSW
M.D.M	24S	56E	3	SW	NESW
M.D.M	24S	56E	3	SW	SESW
M.D.M	24S	56E	3	SE	SWSE
M.D.M	24S	56E	10	NE	NWNE
M.D.M	24S	56E	10	NE	NENE
M.D.M	24S	56E	10	NE	SENE
M.D.M	24S	56E	11	NW	SWNW
M.D.M	24S	56E	11	SW	NWSW
M.D.M	24S	56E	11	SW	NESW
M.D.M	24S	56E	11	SW	SESW
M.D.M	24S	56E	11	SE	SWSE
M.D.M	24S	56E	14	NW	NENW
M.D.M	24S	56E	14	NE	NWNE
M.D.M	24S	56E	14	NE	SWNE
M.D.M	24S	56E	14	NE	SENE
M.D.M	24S	56E	14	SE	NESE
M.D.M	24S	56E	13	SW	NWSW
M.D.M	24S	56E	13	SW	NESW
M.D.M	24S	56E	13	SW	SESW
M.D.M	24S	56E	13	SE	SWSE
M.D.M	24S	56E	24	NE	NWNE
M.D.M	24S	56E	24	NE	NENE
M.D.M	24S	56E	24	NE	SENE
M.D.M	24S	56E	4	NW	L 3
M.D.M	24S	56E	4	NW	L 4
M.D.M	24S	57E	12	NE	SENE
M.D.M	24S	57E	12	NE	SWNE
M.D.M	24S	57E	12	NW	SENW

Proposed Route

M.D.M	24S	57E	12	SW	NESW
M.D.M	24S	57E	12	SW	SESW
M.D.M	24S	57E	12	SW	SWSW
M.D.M	24S	57E	13	NW	NWNW
M.D.M	24S	57E	13	NW	SWNW
M.D.M	24S	57E	13	SW	NWSW
M.D.M	24S	57E	13	SW	SWSW
M.D.M	24S	57E	14	SE	SESE
M.D.M	24S	57E	23	NE	NENE
M.D.M	24S	57E	23	NE	NWNE
M.D.M	24S	57E	23	NW	NENW
M.D.M	24S	57E	23	NW	SENW
M.D.M	24S	57E	23	NW	SWNW
M.D.M	24S	57E	22	SE	NESE
M.D.M	24S	57E	23	SW	NWSW
M.D.M	24S	57E	19	SW	SESW
M.D.M	24S	57E	22	SE	SWSE
M.D.M	24S	57E	22	SE	SESE
M.D.M	24S	57E	30	NW	NENW
M.D.M	24S	57E	27	NW	NENW
M.D.M	24S	57E	27	NE	NWNE
M.D.M	24S	57E	30	NW	SENW
M.D.M	24S	57E	30	NE	SWNE
M.D.M	24S	57E	27	NW	SWNW
M.D.M	24S	57E	27	NW	SENW
M.D.M	24S	57E	30	SE	NWSE
M.D.M	24S	57E	30	SE	NESE
M.D.M	24S	57E	29	SW	NWSW
M.D.M	24S	57E	27	SW	NWSW
M.D.M	24S	57E	27	SW	NESW
M.D.M	24S	57E	29	SE	SESE
M.D.M	24S	57E	28	SW	SWSW
M.D.M	24S	57E	29	SE	SWSE
M.D.M	24S	57E	29	SW	SESW
M.D.M	24S	57E	29	SW	SWSW
M.D.M	24S	57E	28	SW	SESW
M.D.M	24S	57E	28	SE	SWSE
M.D.M	24S	57E	28	SE	SESE
M.D.M	24S	57E	27	SW	SWSW
M.D.M	24S	57E	19	NW	L 2
M.D.M	24S	57E	19	SW	L 3
M.D.M	24S	57E	19	SW	L 4
M.D.M	24S	58E	7	NE	SWNE
M.D.M	24S	58E	7	NW	SENW
M.D.M	24S	58E	7	SE	NESE
M.D.M	24S	58E	7	SE	NWSE
M.D.M	24S	58E	8	SW	SWSW

Proposed Route

M.D.M	24S	58E	7	SE	SESE
M.D.M	24S	58E	17	NE	NWNE
M.D.M	24S	58E	17	NW	NENW
M.D.M	24S	58E	17	NW	NWNW
M.D.M	24S	58E	18	NE	NENE
M.D.M	24S	58E	17	NE	SENE
M.D.M	24S	58E	16	NW	SWNW
M.D.M	24S	58E	17	NE	SWNE
M.D.M	24S	58E	17	NW	SENW
M.D.M	24S	58E	16	NW	SENW
M.D.M	24S	58E	16	NE	SWNE
M.D.M	24S	58E	16	SE	NWSE
M.D.M	24S	58E	16	SE	NESE
M.D.M	24S	58E	15	SW	NWSW
M.D.M	24S	58E	15	SW	SWSW
M.D.M	24S	58E	15	SW	SESW
M.D.M	24S	58E	15	SE	SWSE
M.D.M	24S	58E	22	NE	NWNE
M.D.M	24S	58E	22	NE	NENE
M.D.M	24S	58E	23	NW	NWNW
M.D.M	24S	58E	23	NW	SENW
M.D.M	24S	58E	23	NW	SWNW
M.D.M	24S	58E	22	NE	SENE
M.D.M	24S	58E	23	SE	NESE
M.D.M	24S	58E	24	SW	NWSW
M.D.M	24S	58E	23	SE	NWSE
M.D.M	24S	58E	23	SW	NESW
M.D.M	24S	58E	24	SW	NESW
M.D.M	24S	58E	7	NW	L 2
M.D.M	22S	55E	31	SW	L 4

Proposed Route

BLM Aliquot Parts for Tecopa Section Variation 3, 50-ft Description (25-ft on each side of centerline)					
Meridian	Township	Range	Section	$\frac{1}{4}$ Section	$\frac{1}{4} \frac{1}{4}$ Section
M.D.M	22S	54E	36	SE	L 6
M.D.M	22S	55E	36	SE	L 5
M.D.M	22S	54E	36	SW	L 4
M.D.M	22S	54E	36	SW	L 3
M.D.M	22S	54E	35	SE	L 5
M.D.M	22S	54E	35	SE	L 6
M.D.M	22S	55E	31	SW	L 4

Proposed Route

BLM Aliquot Parts for Southern Route 50-ft Permanent and 250-ft Temporary
Workspace total = 300-ft (150-ft on each side of centerline)

Meridian	Township	Range	Section	¼ Section	¼ ¼ Section
M.D.M	23S	55E	6	NW	SENW
M.D.M	23S	55E	6	NE	SWNE
M.D.M	23S	55E	6	SW	NESW
M.D.M	23S	55E	6	SE	NWSE
M.D.M	23S	55E	6	SE	NESE
M.D.M	23S	55E	6	SE	SWSE
M.D.M	23S	55E	6	SE	SESE
M.D.M	23S	55E	5	SW	SESW
M.D.M	23S	55E	5	SW	SWSW
M.D.M	23S	55E	8	NW	NENW
M.D.M	23S	55E	8	NE	NWNE
M.D.M	23S	55E	8	NW	NWNW
M.D.M	23S	55E	8	NE	NENE
M.D.M	23S	55E	9	NW	SENW
M.D.M	23S	55E	9	NW	SWNW
M.D.M	23S	55E	8	NE	SENE
M.D.M	23S	55E	8	NE	SWNE
M.D.M	23S	55E	10	SW	NWSW
M.D.M	23S	55E	9	SE	NESE
M.D.M	23S	55E	9	SE	NWSE
M.D.M	23S	55E	9	SW	NESW
M.D.M	23S	55E	10	SW	SESW
M.D.M	23S	55E	10	SW	SWSW
M.D.M	23S	55E	9	SE	SESE
M.D.M	23S	55E	15	NE	NWNE
M.D.M	23S	55E	15	NW	NENW
M.D.M	23S	55E	15	NE	SENE
M.D.M	23S	55E	15	NE	SWNE
M.D.M	23S	55E	14	SW	NWSW
M.D.M	23S	55E	15	SE	NESE
M.D.M	23S	55E	14	SW	SESW
M.D.M	23S	55E	14	SW	SWSW
M.D.M	23S	55E	23	NE	NWNE
M.D.M	23S	55E	23	NW	NENW
M.D.M	23S	55E	23	NE	SENE
M.D.M	23S	55E	23	NE	SWNE
M.D.M	23S	55E	23	SE	NESE
M.D.M	23S	55E	24	SW	NWSW
M.D.M	23S	55E	24	SW	NESW
M.D.M	23S	55E	24	SW	SWSW
M.D.M	23S	55E	24	SW	SESW
M.D.M	23S	55E	24	SE	SWSE
M.D.M	23S	55E	25	NW	NENW

Proposed Route

M.D.M	23S	55E	25	NE	NWNE
M.D.M	23S	55E	25	NE	NENE
M.D.M	23S	55E	25	NE	SWNE
M.D.M	23S	55E	25	NE	SENE
M.D.M	23S	55E	6	NW	L 4
M.D.M	23S	55E	6	NW	L 3
M.D.M	23S	56E	30	SW	NESW
M.D.M	23S	56E	30	SW	SESW
M.D.M	23S	56E	30	SE	SWSE
M.D.M	23S	56E	31	NE	NWNE
M.D.M	23S	56E	31	NE	NENE
M.D.M	23S	56E	31	NE	SENE
M.D.M	23S	56E	32	NW	SWNW
M.D.M	23S	56E	32	NW	SENW
M.D.M	23S	56E	32	SW	NWSW
M.D.M	23S	56E	32	SW	NESW
M.D.M	23S	56E	32	SE	NWSE
M.D.M	23S	56E	32	SE	SWSE
M.D.M	23S	56E	32	SE	SESE
M.D.M	23S	56E	33	SW	SWSW
M.D.M	23S	56E	30	NW	L 2
M.D.M	23S	56E	30	SW	L 3
M.D.M	24S	56E	4	NE	SENE
M.D.M	24S	56E	4	NE	SWNE
M.D.M	24S	56E	4	NW	SENW
M.D.M	24S	56E	4	SE	NESE
M.D.M	24S	56E	3	SW	NWSW
M.D.M	24S	56E	3	SW	NESW
M.D.M	24S	56E	3	SW	SWSW
M.D.M	24S	56E	3	SW	SESW
M.D.M	24S	56E	3	SE	SWSE
M.D.M	24S	56E	10	NE	NWNE
M.D.M	24S	56E	10	NE	NENE
M.D.M	24S	56E	10	NE	SENE
M.D.M	24S	56E	11	NW	SWNW
M.D.M	24S	56E	11	SW	NWSW
M.D.M	24S	56E	11	SW	NESW
M.D.M	24S	56E	11	SW	SWSW
M.D.M	24S	56E	11	SW	SESW
M.D.M	24S	56E	11	SE	SWSE
M.D.M	24S	56E	14	NW	NENW
M.D.M	24S	56E	14	NE	NWNE
M.D.M	24S	56E	14	NE	NENE
M.D.M	24S	56E	14	NE	SWNE
M.D.M	24S	56E	14	NE	SENE
M.D.M	24S	56E	14	SE	NESE
M.D.M	24S	56E	13	SW	NWSW

Proposed Route

M.D.M	24S	56E	13	SW	NESW
M.D.M	24S	56E	13	SW	SWSW
M.D.M	24S	56E	13	SW	SESW
M.D.M	24S	56E	13	SE	SWSE
M.D.M	24S	56E	13	SE	SESE
M.D.M	24S	56E	24	NE	NWNE
M.D.M	24S	56E	24	NE	NENE
M.D.M	24S	56E	24	NE	SENE
M.D.M	24S	56E	24	SE	NESE
M.D.M	24S	56E	4	NE	L 2
M.D.M	24S	56E	4	NW	L 3
M.D.M	24S	56E	5	NE	L 1
M.D.M	24S	56E	4	NW	L 4
M.D.M	24S	57E	12	NE	SENE
M.D.M	24S	57E	12	NE	SWNE
M.D.M	24S	57E	12	NW	SENE
M.D.M	24S	57E	12	SE	NESE
M.D.M	24S	57E	12	SE	NWSE
M.D.M	24S	57E	12	SW	NESW
M.D.M	24S	57E	12	SW	SESW
M.D.M	24S	57E	12	SW	SWSW
M.D.M	24S	57E	13	NW	NWNW
M.D.M	24S	57E	13	NW	SWNW
M.D.M	24S	57E	13	SW	NWSW
M.D.M	24S	57E	13	SW	SWSW
M.D.M	24S	57E	14	SE	SESE
M.D.M	24S	57E	23	NE	NENE
M.D.M	24S	57E	23	NE	NWNE
M.D.M	24S	57E	23	NW	NENW
M.D.M	24S	57E	23	NE	SWNE
M.D.M	24S	57E	23	NW	SENE
M.D.M	24S	57E	23	NW	SWNW
M.D.M	24S	57E	22	SE	NESE
M.D.M	24S	57E	23	SW	NWSW
M.D.M	24S	57E	19	SW	SESW
M.D.M	24S	57E	22	SE	SWSE
M.D.M	24S	57E	22	SE	SESE
M.D.M	24S	57E	30	NW	NENW
M.D.M	24S	57E	30	NE	NWNE
M.D.M	24S	57E	27	NW	NENW
M.D.M	24S	57E	27	NE	NWNE
M.D.M	24S	57E	30	NW	SENE
M.D.M	24S	57E	30	NE	SWNE
M.D.M	24S	57E	27	NW	SWNW
M.D.M	24S	57E	27	NW	SENE
M.D.M	24S	57E	27	NE	SWNE
M.D.M	24S	57E	30	SE	NWSE

Proposed Route

M.D.M	24S	57E	30	SE	NESE
M.D.M	24S	57E	29	SW	NWSW
M.D.M	24S	57E	27	SW	NWSW
M.D.M	24S	57E	27	SW	NESW
M.D.M	24S	57E	29	SE	SESE
M.D.M	24S	57E	28	SW	SWSW
M.D.M	24S	57E	29	SE	SWSE
M.D.M	24S	57E	29	SW	SESW
M.D.M	24S	57E	29	SW	SWSW
M.D.M	24S	57E	30	SE	SESE
M.D.M	24S	57E	28	SW	SESW
M.D.M	24S	57E	28	SE	SWSE
M.D.M	24S	57E	28	SE	SESE
M.D.M	24S	57E	27	SW	SWSW
M.D.M	24S	57E	19	NW	L 2
M.D.M	24S	57E	19	SW	L 3
M.D.M	24S	57E	19	SW	L 4
M.D.M	24S	58E	7	NE	SWNE
M.D.M	24S	58E	7	NW	SENE
M.D.M	24S	58E	7	SE	NESE
M.D.M	24S	58E	7	SE	NWSE
M.D.M	24S	58E	8	SW	SWSW
M.D.M	24S	58E	7	SE	SESE
M.D.M	24S	58E	7	SE	SWSE
M.D.M	24S	58E	17	NE	NWNE
M.D.M	24S	58E	17	NW	NENW
M.D.M	24S	58E	17	NW	NWNW
M.D.M	24S	58E	18	NE	NENE
M.D.M	24S	58E	17	NE	SENE
M.D.M	24S	58E	16	NW	SWNW
M.D.M	24S	58E	17	NE	SWNE
M.D.M	24S	58E	17	NW	SENE
M.D.M	24S	58E	16	NW	SENE
M.D.M	24S	58E	16	NE	SWNE
M.D.M	24S	58E	16	SW	NESW
M.D.M	24S	58E	16	SE	NWSE
M.D.M	24S	58E	16	SE	NESE
M.D.M	24S	58E	15	SW	NWSW
M.D.M	24S	58E	15	SW	SWSW
M.D.M	24S	58E	15	SW	SESW
M.D.M	24S	58E	15	SE	SWSE
M.D.M	24S	58E	22	NE	NWNE
M.D.M	24S	58E	22	NE	NENE
M.D.M	24S	58E	23	NW	NWNW
M.D.M	24S	58E	23	NW	SENE
M.D.M	24S	58E	23	NW	SWNW
M.D.M	24S	58E	22	NE	SENE

Proposed Route

M.D.M	24S	58E	23	SE	NESE
M.D.M	24S	58E	24	SW	NWSW
M.D.M	24S	58E	23	SE	NWSE
M.D.M	24S	58E	23	SW	NESW
M.D.M	24S	58E	24	SW	NESW
M.D.M	24S	58E	24	SW	SWSW
M.D.M	24S	58E	24	SW	SESW
M.D.M	24S	58E	7	NW	L 2
M.D.M	24S	58E	7	SW	L 3
M.D.M	22S	55E	31	SW	L 4

BLM Aliquot Parts for Tecopa Section Variation 3, 50-ft Permanent and 250-ft Temporary Workspace total = 300-ft (150-ft on each side of centerline)

Meridian	Township	Range	Section	¼ Section	¼ ¼ Section
M.D.M	22S	54E	36	SE	L 6
M.D.M	22S	55E	36	SE	L 5
M.D.M	22S	54E	36	SW	L 4
M.D.M	22S	54E	36	SW	L 3
M.D.M	22S	54E	35	SE	L 5
M.D.M	22S	54E	35	SE	L 6
M.D.M	22S	55E	31	SW	L 4

North Route

BLM Aliquot Parts for Norther Route 50-ft Permanent (25-ft on each side of centerline)

Meridian	Township	Range	Section	¼ Section	¼ ¼ Section
M.D.M	23S	57E	6	NW	SENW
M.D.M	23S	57E	6	NE	SWNE
M.D.M	23S	57E	6	SE	NESE
M.D.M	23S	57E	6	SE	NWSE
M.D.M	23S	57E	5	SW	SWSW
M.D.M	23S	57E	6	SE	SESE
M.D.M	23S	57E	7	NE	NENE
M.D.M	23S	57E	8	NW	NWNW
M.D.M	23S	57E	8	NW	SENW
M.D.M	23S	57E	8	NW	SWNW
M.D.M	23S	57E	8	SE	NWSE
M.D.M	23S	57E	8	SW	NESW
M.D.M	23S	57E	8	SE	SESE
M.D.M	23S	57E	8	SE	SWSE
M.D.M	23S	57E	17	NE	NENE
M.D.M	23S	57E	16	NW	NWNW
M.D.M	23S	57E	16	NW	SWNW
M.D.M	23S	57E	16	NW	SENW
M.D.M	23S	57E	16	SW	NESW
M.D.M	23S	57E	16	SE	NWSE
M.D.M	23S	57E	16	SE	SWSE
M.D.M	23S	57E	16	SE	SESE
M.D.M	23S	57E	21	NE	NENE
M.D.M	23S	57E	22	NW	NWNW
M.D.M	23S	57E	22	NW	SENW
M.D.M	23S	57E	22	NW	SWNW
M.D.M	23S	57E	22	SE	NWSE
M.D.M	23S	57E	22	SW	NESW
M.D.M	23S	57E	22	SE	SWSE
M.D.M	23S	57E	22	SE	SESE
M.D.M	23S	57E	26	NW	NWNW
M.D.M	23S	57E	27	NE	NENE
M.D.M	23S	57E	26	NW	SWNW
M.D.M	23S	57E	26	SW	NESW
M.D.M	23S	57E	26	SW	NWSW
M.D.M	23S	57E	26	SE	SWSE
M.D.M	23S	57E	26	SW	SESW
M.D.M	23S	57E	35	NE	NWNE
M.D.M	23S	57E	35	NW	NENW
M.D.M	23S	57E	35	NW	SENW
M.D.M	23S	57E	35	SE	NWSE
M.D.M	23S	57E	35	SW	NESW
M.D.M	23S	57E	35	SE	SWSE

North Route

M.D.M	23S	57E	6	NW	L 4
M.D.M	23S	57E	6	NW	L 3
M.D.M	24S	57E	1	NW	SWNW
M.D.M	24S	57E	2	NE	SENE
M.D.M	24S	57E	1	SW	NWSW
M.D.M	24S	57E	1	SW	SWSW
M.D.M	24S	57E	12	NW	NENW
M.D.M	24S	57E	12	NW	NWNW
M.D.M	24S	57E	12	NE	SENE
M.D.M	24S	57E	12	NE	SWNE
M.D.M	24S	57E	12	NW	SENW
M.D.M	24S	57E	2	NE	L 1
M.D.M	24S	57E	2	NE	L 2
M.D.M	24S	58E	7	NE	SWNE
M.D.M	24S	58E	7	NW	SENW
M.D.M	24S	58E	7	SE	NESE
M.D.M	24S	58E	7	SE	NWSE
M.D.M	24S	58E	8	SW	SWSW
M.D.M	24S	58E	7	SE	SESE
M.D.M	24S	58E	17	NE	NWNE
M.D.M	24S	58E	17	NW	NENW
M.D.M	24S	58E	17	NW	NWNW
M.D.M	24S	58E	18	NE	NENE
M.D.M	24S	58E	17	NE	SENE
M.D.M	24S	58E	16	NW	SWNW
M.D.M	24S	58E	17	NE	SWNE
M.D.M	24S	58E	17	NW	SENW
M.D.M	24S	58E	16	NW	SENW
M.D.M	24S	58E	16	NE	SWNE
M.D.M	24S	58E	16	SE	NWSE
M.D.M	24S	58E	16	SE	NESE
M.D.M	24S	58E	15	SW	NWSW
M.D.M	24S	58E	15	SW	SWSW
M.D.M	24S	58E	15	SW	SESW
M.D.M	24S	58E	15	SE	SWSE
M.D.M	24S	58E	22	NE	NWNE
M.D.M	24S	58E	22	NE	NENE
M.D.M	24S	58E	23	NW	NWNW
M.D.M	24S	58E	23	NW	SENW
M.D.M	24S	58E	23	NW	SWNW
M.D.M	24S	58E	22	NE	SENE
M.D.M	24S	58E	23	SE	NESE
M.D.M	24S	58E	24	SW	NWSW
M.D.M	24S	58E	23	SE	NWSE
M.D.M	24S	58E	23	SW	NESW
M.D.M	24S	58E	24	SW	NESW
M.D.M	24S	58E	7	NW	L 2

North Route

M.D.M	21S	55E	35	SE	SESE
M.D.M	21S	55E	35	SE	SWSE
M.D.M	22S	55E	1	NW	SENW
M.D.M	22S	55E	1	NW	SWNW
M.D.M	22S	55E	2	NW	SENW
M.D.M	22S	55E	2	NW	SWNW
M.D.M	22S	55E	1	SE	NESE
M.D.M	22S	55E	1	SE	NWSE
M.D.M	22S	55E	1	SW	NESW
M.D.M	22S	55E	3	SE	NESE
M.D.M	22S	55E	2	SW	NWSW
M.D.M	22S	55E	1	SE	SESE
M.D.M	22S	55E	3	SE	SESE
M.D.M	22S	55E	2	SW	SWSW
M.D.M	22S	55E	10	NE	NWNE
M.D.M	22S	55E	10	NE	NENE
M.D.M	22S	55E	10	NW	SENW
M.D.M	22S	55E	10	NE	SWNE
M.D.M	22S	55E	10	SW	NESW
M.D.M	22S	55E	10	SW	SWSW
M.D.M	22S	55E	10	SW	SESW
M.D.M	22S	55E	16	NE	NENE
M.D.M	22S	55E	15	NW	NWNW
M.D.M	22S	55E	16	NE	SENE
M.D.M	22S	55E	16	SE	NESE
M.D.M	22S	55E	16	SE	NWSE
M.D.M	22S	55E	16	SE	SWSE
M.D.M	22S	55E	16	SW	SESW
M.D.M	22S	55E	21	NW	NENW
M.D.M	22S	55E	21	NW	SENW
M.D.M	22S	55E	21	NW	SWNW
M.D.M	22S	55E	21	SW	NWSW
M.D.M	22S	55E	20	SE	NESE
M.D.M	22S	55E	20	SE	SESE
M.D.M	22S	55E	29	NE	NWNE
M.D.M	22S	55E	29	NE	NENE
M.D.M	22S	55E	29	NW	SENW
M.D.M	22S	55E	29	NE	SWNE
M.D.M	22S	55E	29	SW	NWSW
M.D.M	22S	55E	29	SW	NESW
M.D.M	22S	55E	29	SW	SWSW
M.D.M	22S	55E	29	SW	SESW
M.D.M	22S	55E	31	NE	NENE
M.D.M	22S	55E	32	NW	NWNW
M.D.M	22S	55E	31	NE	SWNE
M.D.M	22S	55E	31	NE	SENE
M.D.M	22S	55E	31	SW	NESW

North Route

M.D.M	22S	55E	31	SE	NWSE
M.D.M	22S	55E	31	SW	SESW
M.D.M	22S	55E	1	NW	L 4
M.D.M	22S	55E	2	NE	L 1
M.D.M	22S	55E	2	NE	L 2
M.D.M	22S	55E	2	NW	L 3
M.D.M	22S	55E	31	SW	L 4
M.D.M	22S	56E	7	NW	NENW
M.D.M	22S	56E	7	NE	NWNE
M.D.M	22S	56E	7	NE	SWNE
M.D.M	22S	56E	7	NE	SENE
M.D.M	22S	56E	7	SE	NESE
M.D.M	22S	56E	8	SW	NWSW
M.D.M	22S	56E	8	SW	SWSW
M.D.M	22S	56E	8	SW	SESW
M.D.M	22S	56E	8	SE	SWSE
M.D.M	22S	56E	17	NE	NWNE
M.D.M	22S	56E	17	NE	NENE
M.D.M	22S	56E	17	NE	SENE
M.D.M	22S	56E	16	NW	SWNW
M.D.M	22S	56E	16	SW	NWSW
M.D.M	22S	56E	16	SW	NESW
M.D.M	22S	56E	16	SE	NWSE
M.D.M	22S	56E	16	SE	SWSE
M.D.M	22S	56E	16	SE	SESE
M.D.M	22S	56E	21	NE	NENE
M.D.M	22S	56E	22	NW	NWNW
M.D.M	22S	56E	22	NW	NENW
M.D.M	22S	56E	22	NE	SWNE
M.D.M	22S	56E	22	NW	SENW
M.D.M	22S	56E	22	SE	NESE
M.D.M	22S	56E	22	SE	NWSE
M.D.M	22S	56E	22	SE	SESE
M.D.M	22S	56E	23	SW	SWSW
M.D.M	22S	56E	23	SW	SESW
M.D.M	22S	56E	26	NW	NENW
M.D.M	22S	56E	26	NE	NWNE
M.D.M	22S	56E	26	NE	SWNE
M.D.M	22S	56E	26	NE	SENE
M.D.M	22S	56E	25	NW	SWNW
M.D.M	22S	56E	26	SE	NESE
M.D.M	22S	56E	25	SW	NWSW
M.D.M	22S	56E	25	SW	SWSW
M.D.M	22S	56E	25	SW	SESW
M.D.M	22S	56E	36	NW	NENW
M.D.M	22S	56E	36	NE	NWNE
M.D.M	22S	56E	36	NE	SWNE

North Route

M.D.M	22S	56E	36	SE	NWSE
M.D.M	22S	56E	36	SE	NESE
M.D.M	22S	56E	36	SE	SESE
M.D.M	22S	56E	6	SW	L 7
M.D.M	22S	56E	7	NW	L 1
M.D.M	22S	57E	31	SW	L 4

North Route

BLM Aliquot Parts for Northern Route 50-ft Permanent and 250-ft Temporary Workspace total = 300-ft (150-ft on each side of centerline)

Meridian	Township	Range	Section	¼ Section	¼ ¼ Section
M.D.M	23S	57E	6	NW	SENW
M.D.M	23S	57E	6	NE	SWNE
M.D.M	23S	57E	6	SE	NESE
M.D.M	23S	57E	6	SE	NWSE
M.D.M	23S	57E	6	SW	NESW
M.D.M	23S	57E	5	SW	SWSW
M.D.M	23S	57E	6	SE	SWSE
M.D.M	23S	57E	6	SE	SESE
M.D.M	23S	57E	8	NW	NENW
M.D.M	23S	57E	7	NE	NENE
M.D.M	23S	57E	8	NW	NWNW
M.D.M	23S	57E	8	NE	SWNE
M.D.M	23S	57E	8	NW	SENW
M.D.M	23S	57E	8	NW	SWNW
M.D.M	23S	57E	8	SE	NESE
M.D.M	23S	57E	8	SE	NWSE
M.D.M	23S	57E	8	SW	NESW
M.D.M	23S	57E	8	SE	SESE
M.D.M	23S	57E	8	SE	SWSE
M.D.M	23S	57E	17	NE	NENE
M.D.M	23S	57E	16	NW	NWNW
M.D.M	23S	57E	16	NW	SWNW
M.D.M	23S	57E	16	NW	SENW
M.D.M	23S	57E	16	SW	NESW
M.D.M	23S	57E	16	SE	NWSE
M.D.M	23S	57E	16	SE	SWSE
M.D.M	23S	57E	16	SE	SESE
M.D.M	23S	57E	21	NE	NENE
M.D.M	23S	57E	22	NW	NWNW
M.D.M	23S	57E	22	NW	SENW
M.D.M	23S	57E	22	NW	SWNW
M.D.M	23S	57E	22	SE	NWSE
M.D.M	23S	57E	22	SW	NESW
M.D.M	23S	57E	22	SE	SWSE
M.D.M	23S	57E	22	SE	SESE
M.D.M	23S	57E	26	NW	NWNW
M.D.M	23S	57E	27	NE	NENE
M.D.M	23S	57E	26	NW	SENW
M.D.M	23S	57E	26	NW	SWNW
M.D.M	23S	57E	27	NE	SENE
M.D.M	23S	57E	26	SW	NESW
M.D.M	23S	57E	26	SW	NWSW
M.D.M	23S	57E	26	SE	SWSE

North Route

M.D.M	23S	57E	26	SW	SESW
M.D.M	23S	57E	35	NE	NWNE
M.D.M	23S	57E	35	NW	NENW
M.D.M	23S	57E	35	NW	SENW
M.D.M	23S	57E	35	SE	NWSE
M.D.M	23S	57E	35	SW	NESW
M.D.M	23S	57E	35	SE	SESE
M.D.M	23S	57E	35	SE	SWSE
M.D.M	23S	57E	6	NW	L 4
M.D.M	23S	57E	6	NW	L 3
M.D.M	24S	57E	1	NW	SWNW
M.D.M	24S	57E	2	NE	SENE
M.D.M	24S	57E	1	SW	NWSW
M.D.M	24S	57E	2	SE	NESE
M.D.M	24S	57E	1	SW	SWSW
M.D.M	24S	57E	12	NW	NENW
M.D.M	24S	57E	12	NW	NWNW
M.D.M	24S	57E	12	NE	SENE
M.D.M	24S	57E	12	NE	SWNE
M.D.M	24S	57E	12	NW	SENW
M.D.M	24S	57E	12	SE	NESE
M.D.M	24S	57E	12	SE	NWSE
M.D.M	24S	57E	2	NE	L 1
M.D.M	24S	57E	2	NE	L 2
M.D.M	24S	58E	7	NE	SWNE
M.D.M	24S	58E	7	NW	SENW
M.D.M	24S	58E	7	SE	NESE
M.D.M	24S	58E	7	SE	NWSE
M.D.M	24S	58E	8	SW	SWSW
M.D.M	24S	58E	7	SE	SESE
M.D.M	24S	58E	7	SE	SWSE
M.D.M	24S	58E	17	NE	NWNE
M.D.M	24S	58E	17	NW	NENW
M.D.M	24S	58E	17	NW	NWNW
M.D.M	24S	58E	18	NE	NENE
M.D.M	24S	58E	17	NE	SENE
M.D.M	24S	58E	16	NW	SWNW
M.D.M	24S	58E	17	NE	SWNE
M.D.M	24S	58E	17	NW	SENW
M.D.M	24S	58E	16	NW	SENW
M.D.M	24S	58E	16	NE	SWNE
M.D.M	24S	58E	16	SW	NESW
M.D.M	24S	58E	16	SE	NWSE
M.D.M	24S	58E	16	SE	NESE
M.D.M	24S	58E	15	SW	NWSW
M.D.M	24S	58E	15	SW	SWSW
M.D.M	24S	58E	15	SW	SESW

North Route

M.D.M	24S	58E	15	SE	SWSE
M.D.M	24S	58E	22	NE	NWNE
M.D.M	24S	58E	22	NE	NENE
M.D.M	24S	58E	23	NW	NWNW
M.D.M	24S	58E	23	NW	SENW
M.D.M	24S	58E	23	NW	SWNW
M.D.M	24S	58E	22	NE	SENE
M.D.M	24S	58E	23	SE	NESE
M.D.M	24S	58E	24	SW	NWSW
M.D.M	24S	58E	23	SE	NWSE
M.D.M	24S	58E	23	SW	NESW
M.D.M	24S	58E	24	SW	NESW
M.D.M	24S	58E	24	SW	SWSW
M.D.M	24S	58E	24	SW	SESW
M.D.M	24S	58E	7	NW	L 2
M.D.M	24S	58E	7	SW	L 3
M.D.M	21S	55E	35	SE	SESE
M.D.M	21S	55E	35	SE	SWSE
M.D.M	22S	55E	1	NE	SWNE
M.D.M	22S	55E	1	NW	SENW
M.D.M	22S	55E	1	NW	SWNW
M.D.M	22S	55E	2	NW	SENW
M.D.M	22S	55E	2	NW	SWNW
M.D.M	22S	55E	1	SE	NESE
M.D.M	22S	55E	1	SE	NWSE
M.D.M	22S	55E	1	SW	NESW
M.D.M	22S	55E	3	SE	NESE
M.D.M	22S	55E	2	SW	NWSW
M.D.M	22S	55E	1	SE	SESE
M.D.M	22S	55E	1	SE	SWSE
M.D.M	22S	55E	3	SE	SESE
M.D.M	22S	55E	2	SW	SWSW
M.D.M	22S	55E	10	NE	NWNE
M.D.M	22S	55E	10	NE	NENE
M.D.M	22S	55E	10	NW	SENW
M.D.M	22S	55E	10	NE	SWNE
M.D.M	22S	55E	10	SW	NESW
M.D.M	22S	55E	10	SE	NWSE
M.D.M	22S	55E	10	SW	SWSW
M.D.M	22S	55E	10	SW	SESW
M.D.M	22S	55E	16	NE	NENE
M.D.M	22S	55E	15	NW	NWNW
M.D.M	22S	55E	16	NE	SENE
M.D.M	22S	55E	16	NE	SWNE
M.D.M	22S	55E	16	SE	NESE
M.D.M	22S	55E	16	SE	NWSE
M.D.M	22S	55E	16	SE	SWSE

North Route

M.D.M	22S	55E	16	SW	SESW
M.D.M	22S	55E	21	NW	NENW
M.D.M	22S	55E	21	NW	SENW
M.D.M	22S	55E	21	NW	SWNW
M.D.M	22S	55E	21	SW	NWSW
M.D.M	22S	55E	20	SE	NESE
M.D.M	22S	55E	20	SE	SWSE
M.D.M	22S	55E	20	SE	SESE
M.D.M	22S	55E	29	NE	NWNE
M.D.M	22S	55E	29	NE	NENE
M.D.M	22S	55E	29	NW	SENW
M.D.M	22S	55E	29	NE	SWNE
M.D.M	22S	55E	29	SW	NWSW
M.D.M	22S	55E	29	SW	NESW
M.D.M	22S	55E	29	SW	SWSW
M.D.M	22S	55E	29	SW	SESW
M.D.M	22S	55E	31	NE	NENE
M.D.M	22S	55E	32	NW	NWNW
M.D.M	22S	55E	31	NE	SWNE
M.D.M	22S	55E	31	NE	SENE
M.D.M	22S	55E	31	SW	NESW
M.D.M	22S	55E	31	SE	NWSE
M.D.M	22S	55E	31	SW	SESW
M.D.M	22S	55E	1	NW	L 4
M.D.M	22S	55E	2	NE	L 1
M.D.M	22S	55E	2	NE	L 2
M.D.M	22S	55E	2	NW	L 3
M.D.M	22S	55E	2	NW	L 3
M.D.M	22S	55E	31	SW	L 4
M.D.M	22S	56E	7	NW	NENW
M.D.M	22S	56E	7	NE	NWNE
M.D.M	22S	56E	7	NW	SENW
M.D.M	22S	56E	7	NE	SWNE
M.D.M	22S	56E	7	NE	SENE
M.D.M	22S	56E	7	SE	NESE
M.D.M	22S	56E	8	SW	NWSW
M.D.M	22S	56E	8	SW	NESW
M.D.M	22S	56E	8	SW	SWSW
M.D.M	22S	56E	8	SW	SESW
M.D.M	22S	56E	8	SE	SWSE
M.D.M	22S	56E	17	NE	NWNE
M.D.M	22S	56E	17	NE	NENE
M.D.M	22S	56E	17	NE	SENE
M.D.M	22S	56E	16	NW	SWNW
M.D.M	22S	56E	16	NW	SENW
M.D.M	22S	56E	16	SW	NWSW
M.D.M	22S	56E	16	SW	NESW

North Route

M.D.M	22S	56E	16	SE	NWSE
M.D.M	22S	56E	16	SE	SWSE
M.D.M	22S	56E	16	SE	SESE
M.D.M	22S	56E	15	SW	SWSW
M.D.M	22S	56E	21	NE	NENE
M.D.M	22S	56E	22	NW	NWNW
M.D.M	22S	56E	22	NW	NENW
M.D.M	22S	56E	22	NE	SWNE
M.D.M	22S	56E	22	NW	SENW
M.D.M	22S	56E	22	SE	NESE
M.D.M	22S	56E	23	SW	NWSW
M.D.M	22S	56E	22	SE	NWSE
M.D.M	22S	56E	22	SE	SESE
M.D.M	22S	56E	23	SW	SWSW
M.D.M	22S	56E	23	SW	SESW
M.D.M	22S	56E	26	NW	NENW
M.D.M	22S	56E	26	NE	NWNE
M.D.M	22S	56E	26	NE	SWNE
M.D.M	22S	56E	26	NE	SENE
M.D.M	22S	56E	25	NW	SWNW
M.D.M	22S	56E	26	SE	NESE
M.D.M	22S	56E	25	SW	NWSW
M.D.M	22S	56E	25	SW	SWSW
M.D.M	22S	56E	25	SW	SESW
M.D.M	22S	56E	36	NW	NENW
M.D.M	22S	56E	36	NE	NWNE
M.D.M	22S	56E	36	NW	SENW
M.D.M	22S	56E	36	NE	SWNE
M.D.M	22S	56E	36	NE	SENE
M.D.M	22S	56E	36	SE	NWSE
M.D.M	22S	56E	36	SE	NESE
M.D.M	22S	56E	36	SE	SESE
M.D.M	22S	56E	6	SW	L 7
M.D.M	22S	56E	7	NW	L 1
M.D.M	22S	57E	31	SW	L 4

Minor Route Variations

BLM Aliquot Parts for Tecopa Section Variation 1, 50-ft Description (25-ft on each side of centerline)

Meridian	Township	Range	Section	¼ Section	¼ ¼ Section
M.D.M	22S	54E	35	SE	L 5
M.D.M	23S	55E	6	NW	L 4
M.D.M	23S	54E	1	NE	NENE
M.D.M	23S	54E	2	NE	L 5
M.D.M	23S	54E	1	NE	L 2
M.D.M	23S	54E	1	NE	L 9
M.D.M	23S	54E	1	SE	L 10
M.D.M	22S	55E	31	SW	L 4

BLM Aliquot Parts for Tocopa Section Variation 1, 50-ft Permanent and 250-ft Temporary Workspace total = 300-ft (150-ft on each side of centerline)

Meridian	Township	Range	Section	¼ Section	¼ ¼ Section
M.D.M	22S	54E	35	SE	L 5
M.D.M	22S	54E	35	SE	L 6
M.D.M	23S	55E	6	NW	L 4
M.D.M	23S	54E	1	NE	NENE
M.D.M	23S	54E	1	NW	L 5
M.D.M	23S	54E	0	NE	L 5
M.D.M	23S	54E	1	NW	L 7
M.D.M	23S	54E	1	NE	L 2
M.D.M	23S	54E	1	NE	L 9
M.D.M	23S	54E	1	SE	L 10
M.D.M	22S	55E	31	SW	L 4

BLM Aliquot Parts for Tecopa Section Variation 2, 50-ft Description (25-ft on each side of centerline)

Meridian	Township	Range	Section	¼ Section	¼ ¼ Section
M.D.M	22S	54E	36	NE	NWNE
M.D.M	22S	55E	36	NE	SENE
M.D.M	22S	54E	36	NE	SWNE
M.D.M	22S	54E	36	NW	SENE
M.D.M	22S	54E	36	NW	SWNW
M.D.M	22S	54E	36	SE	NESE
M.D.M	22S	54E	36	SW	NWSW
M.D.M	22S	54E	35	SE	NESE
M.D.M	22S	54E	36	SE	L 6
M.D.M	22S	54E	35	SE	L 5
M.D.M	22S	54E	35	SE	L 6
M.D.M	22S	55E	31	SW	L 4

BLM Aliquot Parts for Tocopa Section Variation 2, 50-ft Permanent and 250-ft Temporary Workspace total = 300-ft (150-ft on each side of centerline)

Meridian	Township	Range	Section	¼ Section	¼ ¼ Section
M.D.M	22S	54E	36	NE	NWNE
M.D.M	22S	54E	36	NE	SENE
M.D.M	22S	55E	36	NE	SWNE
M.D.M	22S	54E	36	NW	SENE
M.D.M	22S	54E	36	NW	SWNW
M.D.M	22S	54E	36	SE	NESE
M.D.M	22S	54E	36	SW	NESW
M.D.M	22S	54E	36	SW	NWSW
M.D.M	22S	54E	35	SE	NESE
M.D.M	22S	54E	36	SE	L 6
M.D.M	22S	54E	35	SE	L 5
M.D.M	22S	54E	35	SE	L 6
M.D.M	22S	55E	31	SW	L 3
M.D.M	22S	55E	31	SW	L 4

Minor Route Variations

BLM Aliquot Parts for Variation S2; 50-ft Description (25-ft on each side of centerline)

Meridian	Township	Range	Section	¼ Section	¼ ¼ Section
M.D.M	24S	57E	22	SE	NESE
M.D.M	24S	57E	21	SW	SWSW
M.D.M	24S	57E	21	SW	SESW
M.D.M	24S	57E	21	SE	SWSE
M.D.M	24S	57E	21	SE	SESE
M.D.M	24S	57E	22	SW	SWSW
M.D.M	24S	57E	22	SW	SESW
M.D.M	24S	57E	22	SE	SWSE
M.D.M	24S	57E	22	SE	SESE
M.D.M	24S	57E	30	NW	NENW
M.D.M	24S	57E	30	NE	NWNE
M.D.M	24S	57E	30	NE	NENE
M.D.M	24S	57E	29	NW	NWNW
M.D.M	24S	57E	29	NW	NENW
M.D.M	24S	57E	29	NE	NWNE
M.D.M	24S	57E	29	NE	NENE
M.D.M	24S	57E	28	NW	NWNW
M.D.M	24S	57E	28	NW	NENW

BLM Aliquot Parts for Variation S2, 50-ft Permanent and 250-ft Temporary Workspace total = 300-ft (150-ft on each side of centerline)

Meridian	Township	Range	Section	¼ Section	¼ ¼ Section
M.D.M	24S	57E	22	SE	NWSE
M.D.M	24S	57E	22	SE	NESE
M.D.M	24S	57E	21	SW	SWSW
M.D.M	24S	57E	21	SW	SESW
M.D.M	24S	57E	21	SE	SWSE
M.D.M	24S	57E	21	SE	SESE
M.D.M	24S	57E	22	SW	SWSW
M.D.M	24S	57E	22	SW	SESW
M.D.M	24S	57E	22	SE	SWSE
M.D.M	24S	57E	22	SE	SESE
M.D.M	24S	57E	30	NW	NENW
M.D.M	24S	57E	30	NE	NWNE
M.D.M	24S	57E	30	NE	NENE
M.D.M	24S	57E	29	NW	NWNW
M.D.M	24S	57E	29	NW	NENW
M.D.M	24S	57E	29	NE	NWNE
M.D.M	24S	57E	29	NE	NENE
M.D.M	24S	57E	28	NW	NWNW
M.D.M	24S	57E	28	NW	NENW
M.D.M	24S	57E	30	NW	SENW
M.D.M	24S	57E	30	NE	SWNE