U.S. Department of Energy
Categorical Exclusion Determination Form

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Proposed Action Title: Glen Canyon Substation Stage 09 - 50MVA 230/69KV Transformer addition

Program or Field Office: DOE/Western/Desert Southwest Region

Location(s) (City/County/State): Glen Canyon Substation, Page/Coconino County/Arizona

Proposed Action Description:
Western proposes to conduct electrical maintenance activities within the existing Glen Canyon Substation located at Page, Coconino County, Arizona. The project is on federal (Western-owned) property in Section 19 Township 41N, Range 8 East, in every quarter sections 24 and 25, Coconino County, AZ, (Gila and Salt River Baseline and Meridian; Figure 1).

The proposed scope of work includes the following (Figure 2):
• Install one 50MVA 230/69KV transformer to a new storage pad in the upper yard. The new pad will measure 26 feet 6 inches long by 16 feet wide with a depth of 3 feet 6 inches.
• Install new 69KV bus will extend from the new transformer and head north and tie into the existing H structure on the north end of the upper yard and removal of the old existing Capacitor bank.
• Install one (1) 69KV gas breaker, inverted 69KV inverted switch, and the concrete foundation will not exceed 8 feet long by 7 feet wide with a depth of 3 feet.
• Install one (1) 69KV CCVT will be installed in the upper yard, and the new concrete foundation will not exceed 4 feet 6 inches long by 4 feet 6 inches wide with a depth of 6 feet.

See Continuation Sheet:

Categorical Exclusion(s) Applied:
B4.11 - Electric power substations and interconnection facilities

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of 10 CFR Part 1021.

Regulatory Requirements in 10 CFR 1021.410(b): (See full text in regulation)

☑ The proposal fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D.

To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

☑ There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal.

☑ The proposal has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

Based on my review of the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

NEPA Compliance Officer: [signature] Date Determined: 7-2-13

Glen Canyon Substation Stage 09

50MVA 230/69KV Transformer addition, Page/Coconino County, Arizona

Categorical Exclusion Continuation Sheet

Project Description (Continued)

- Install two (2) 230 KV gas breakers in the lower 69KV yard, and the new concrete foundations will not exceed 18 feet long by 6 feet 6 inches wide with a depth of 3 feet.
- Install one (1) 230KV CCVT in the lower 230KV yard on a new concrete foundation will not exceed 4 feet 6 inches long by 4 feet 6 inches wide with a depth of 6 feet.
- Install six (6) new 230KV switches installed, with two (2) switches located in the upper yard and four (4) in the lower yard on a new concrete foundation and excavating will not exceed 18 feet 6 inches long by 13 feet wide with a depth of 3 feet.
- Install ducts for the new 50 MVA transformer. The duct installation will require a trench of about 2 feet 6 inches wide by 4 feet deep over 250 linear feet.
- Removal of three wave traps within Bay 7 located between breaker (#7786) and open switch (#7785) of the 230kV lower yard. (See Attachment – Diagram and Photos)

Wave traps are used in switchyard to prevent high frequency carrier from entering the station equipment. It is connected in series with the power (transmission) line. Wave trap is a filtering device employed to separate the high voltage power and communication signals at every receiving end of the grid. This was a means for electric company to use communication signals from substation to substation without installing a telephone line to the substation. This system worked well for an analog telecommunications system, but with today's digital systems via repeaters and fiber optic overhead ground wires, this system is outdated and in no longer used.

The three wave traps that are being removed in Bay 7 are part of the existing circuit that is connected to the capacitor bank that will also be removed in the 69kV upper yard for the placement of the new transformer. Once the wave traps are removed, the new switches will be installed as part of the 230/69kV transformer addition. The space needed for the wave traps to be removed and the new switches installed exceed the minimum requirements needed for this work to be performed.

All equipment staging will be located inside the existing fenced boundary of Glen Canyon Substation, which is bladed, leveled, and graveled. Access to the project is via existing public roads. The transformer will be delivered to the substation via railroad and heavy hauling company. The hauling company shall provide pilot vehicles and follow all Department of Transportation guidelines for public safety. Equipment used on-site at Glen Canyon Substation will include 50- and 100-ton cranes; pick-up trucks (gasoline and diesel); flatbed trailers; concrete, tanker, auger, and dump trucks; and backhoes. A

temporary construction trailer, storage trailers, and portable toilets will be set up on-site for the duration of the project.

Western anticipates that the project will start June 15th 2015, and will take about 4 months to complete.

Special Conditions

1) COMPLIANCE

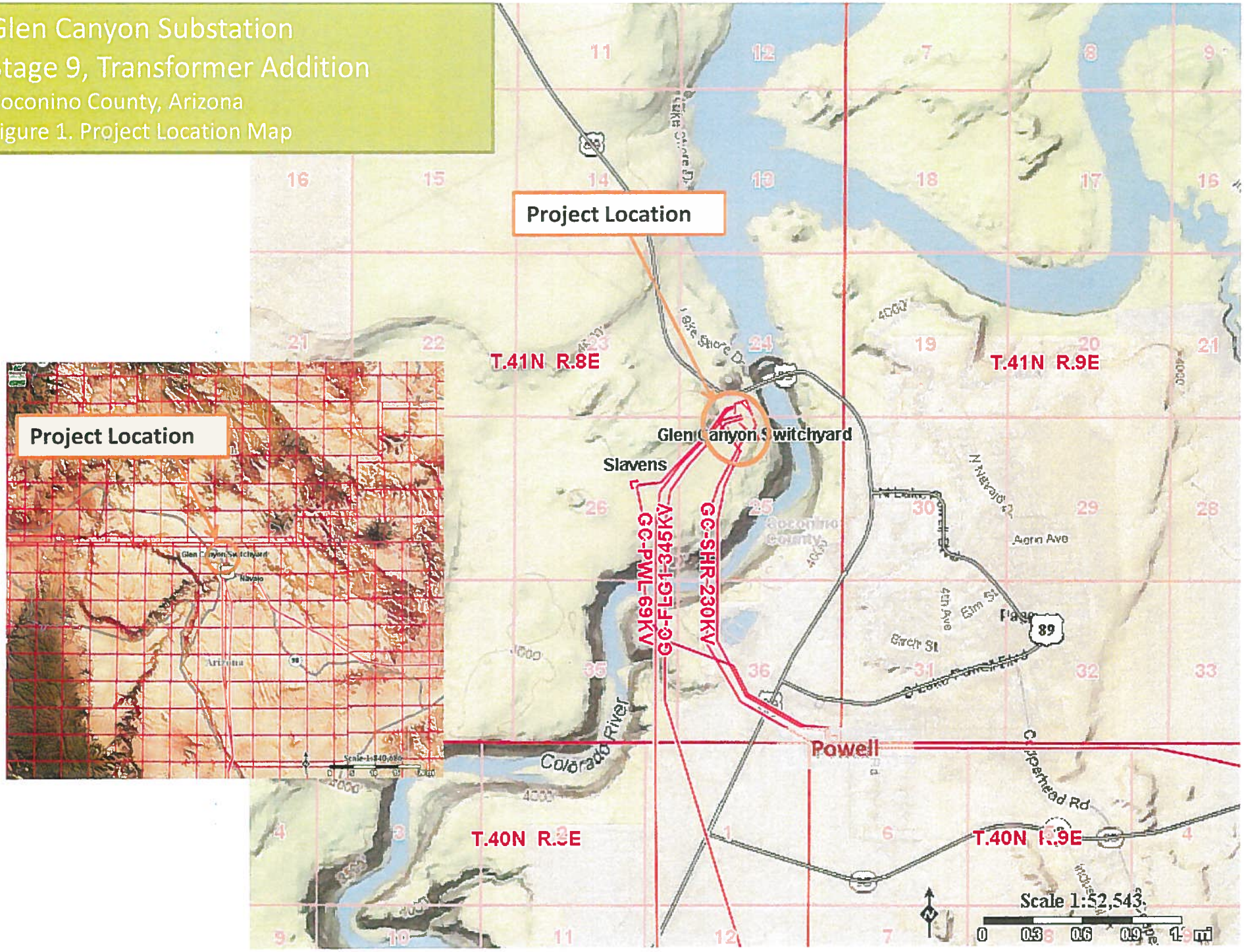
   a) Drainage from both upper and lower yards is diverted via a system of ditches and gravel berms into two areas which have detention dikes constructed. The spill containment area located southeast of the facility measures approximately 7.875 cubic feet, containing a volume of approximately 58,900 gallons. The largest total volume of oil in any piece of equipment is 35,890 gallons in the Phase Shifting Transformer KZ10A located at the south end of the lower yard (230kV area). A MOSES study will need to be conducted to see if current secondary containment can contain a new transformer.
   b) Storm Water Pollution Prevention Plan will be required, if construction site includes clearing, grading, and excavating activities that disturbs one acre or more. A Construction General Permit will be required, by submitting to ADEQ a Notice of Intent (NOI). A SWPPP will be required at the site and Best Management Practices (BMPs) will need to be implemented.
   c) Glen Canyon substation is adding an additional transformer. Glen Canyon is a Spill Prevention, Control and Countermeasures site, so an update will be needed for the Spill Prevention, Control and Countermeasures (SPCC) plan.

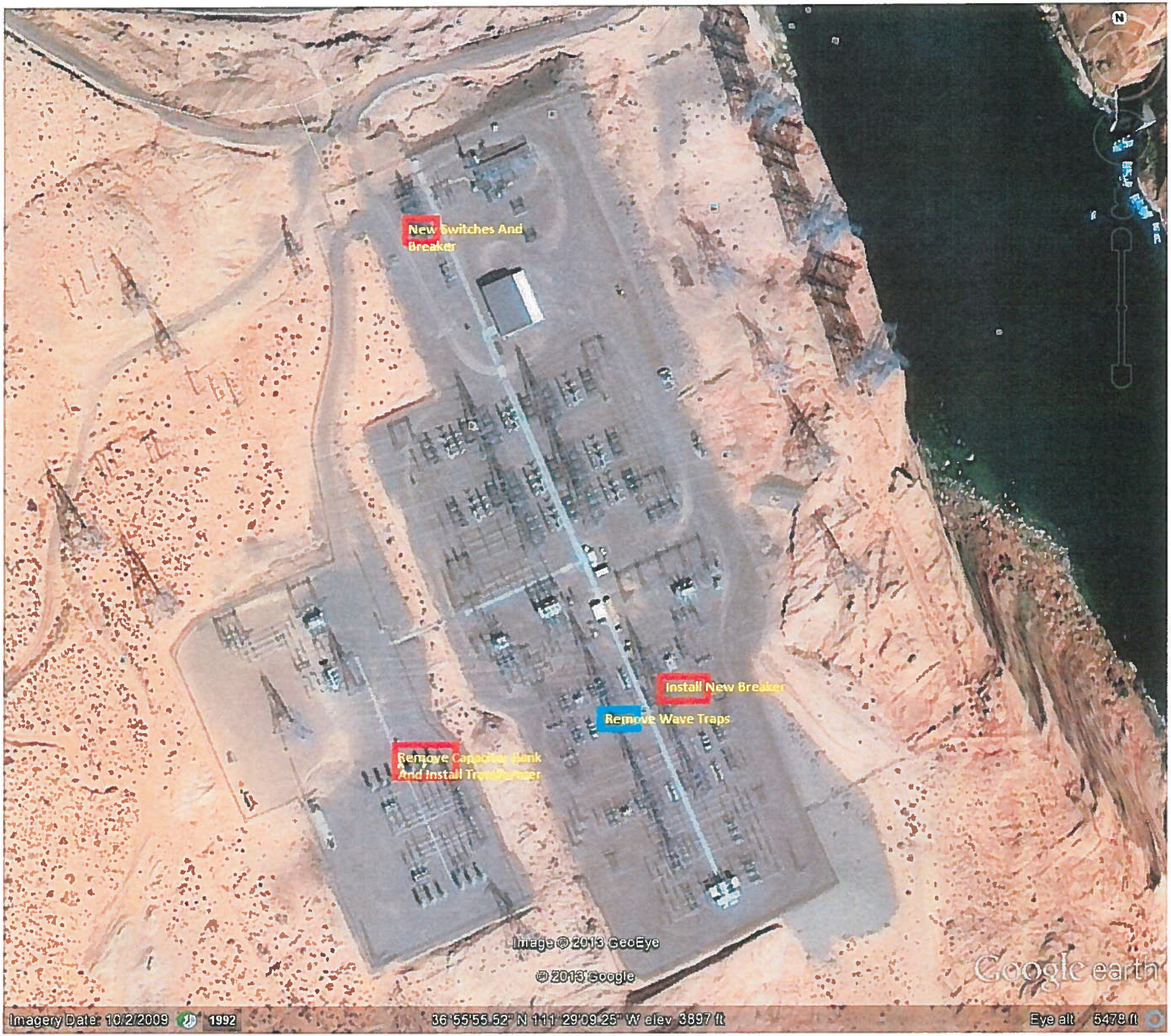
(b)(1) The proposal fits within a class of actions that is listed in appendix A or B to subpart D.		X	
(b)(2) There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal, including, but not limited to, scientific controversy about the environmental effects of the proposal; uncertain effects or effects involving unique or unknown risks; and unresolved conflicts concerting alternate uses of available resources		X	
(b)(3) The proposal has not been segmented to meet the definition of a categorical exclusion. Segmentation can occur when a proposal is broken down into small parts in order to avoid the appearance of significance of the total action. The scope of a proposal must include the consideration of connected and cumulative actions, that is, the proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or § 1021.211 of this part concerning limitations on actions during EIS preparation.		X	
B. Conditions that are Integral Elements of the Classes of Actions in Appendix B. :	NO	YES	UNKNOWN
(1) Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety and health, or similar requirements of DOE or Executive Orders.	X		
(2) Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities;	X		
(3) Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases;	X		
(4) Have the potential to cause significant impacts on environmentally sensitive resources. An environmentally sensitive resource is typically a resource that has been identified as needing protection through Executive Order, statue, or regulation by Federal, state, or local government, or a federally recognized Indian tribe. An action may be categorically excluded if, although sensitive resources are present, the action would not have the potential to cause significant impacts on those resources (such as construction of a building with its foundation well above a sole-source aquifer or upland surface soil removal on a site that has wetlands). Environmentally sensitive resources include, but are not limited to:	X		
(i) Property (such as sites, buildings, structures, and objects) of historic, archaeological, or architectural significance	X		

	designated by a Federal, state, or local government, or property determined to be eligible for listing on the National Register of Historic Places;			
(ii)	Federally-listed threatened or endangered species or their habitat (including critical habitat) or Federally- proposed or candidate species or their habitat (Endangered Species Act); state-listed or state-proposed endangered or threatened species or their habitat; Federally-protected marine mammals and Essential Fish Habitat (Marine Mammal Protection Act; Magnuson-Stevens Fishery Conservation and Management Act); and otherwise Federally-protected species (such as under the Bald and Golden Eagle Protection Act or the Migratory Bird Treaty Act);	X		
(iii)	Floodplains and wetlands (as defined in 10 CFR 1022.4, —Compliance with Floodplain and Wetland Environmental Review Requirements: "Definitions," or its successor);	X		
(iv)	Areas having a special designation such as Federally- and state-designated wilderness areas, national parks, national monuments, national natural landmarks, wild and scenic rivers, state and Federal wildlife refuges, scenic areas (such as National Scenic and Historic Trails or National Scenic Areas), and marine sanctuaries;	X		
(v)	Prime or unique farmland, or other farmland of statewide or local importance, as defined at 7 CFR 658.2(a), —Farmland Protection Policy Act: Definitions,‖ or its successor;	X		
(vi)	Special sources of water (such as sole-source aquifers, wellhead protection areas, and other water sources that are vital in a region); and	X		
(vii)	Tundra, coral reefs, or rain forests.; or	X		
(5)	Involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those of the Department of Agriculture, the Environmental Protection Agency, and the National Institutes of Health.	X		

Glen Canyon Substation
Stage 9, Transformer Addition
Coconino County, Arizona

Figure 1. Project Location Map




New Switches And Breaker
Install New Breaker
Remove Wave Traps
Remove Capacitor Bank And Install Transformer
Image © 2013 GeoEye
© 2013 Google
Google earth
Imagery Date: 10/2/2009
1992
36°55'55.52" N 111°29'09.25" W elev 3897 ft
Eye alt 5478 ft

Western's Routine Maintenance Programmatic Agreement Checklist

Date: 03/25/2013 Initials: JJ State: ⦿AZ ◯CA Discovery: ◯Yes ⦿No Emergency: ◯Yes ⦿No

Project Name: Glen Canyon Substation Stage 09 - 50MVA 230/69KV Transformer addition

Project Description: Install 230/69kV, 50 MVA transformer in the capacitor bank PZ7A area in the upper 230-kV yard. Also, some new 69-kV bus would be installed on the new bus support structures from the new transformer location. In the 69-kV switchyard, one new 69-kV breaker and one new 69-kV switch would be installed in the 69-kV bay where the tie line between the 138-kV and 69-kV yards is terminated. In the 345-kV yard two (2) new 230-kV breakers and six (6) new 230-kV switches would be installed and bus work extended to connect to the main busses, in bays 6 and 9.

Access:
Existing roads

Project Type: (Write # Type) (PA Appendix B lists project categories)

⦿ I: No or Minor Ground Disturbance	☑ A: Substation	☐ B: T-line	☐ C: Comm	☐ D: General
◯ II: Minimal Ground Disturbance	☐ A: Substation	☐ B: T-line	☐ C: Comm	☐ D: General
◯ III: Extensive Ground Disturbance	☐ A: Substation	☐ B: T-line	☐ C: Comm	☐ D: General
◯ Building:	☐ Acquisition	☐ Rehabilitation	☐ Disposal	☐ Demolition

Background Research Results: (surveyed, when, # & types of properties, condition) [Required for Type II & III and building activities]

Western:

◯AZ ◯CA SHPO:

Electronic Database:

Other: N/A - Within existing disturbance area

Treatment Decision:

Type I Projects: ☑ no treatment needed [done] ☐ treatment conducted: ☐Survey ☐Monitor ☐Field visit

Type II Projects: (45 years old or older)
- ☐ survey required
- ☐ previously surveyed
- ☐ monitoring required
- ☐ field visit required
- ☐ no treatment required [done] Why: _____
- ☐ properties present
- ☐ properties absent [done]
- ☐ properties present, but previously determined ineligible [done]
- ☐ will be avoided [done]
- ☐ cannot be avoided [consult w/SHPO & tribes]

Type III Projects: (45 years old or older)
- ☐ surveyed required
- ☐ survey completed
- ☐ previously surveyed
- ☐ properties present
- ☐ properties absent [done]
- ☐ properties present, but previously determined ineligible [done]
- ☐ will be avoided [done]
- ☐ cannot be avoided [consult w/SHPO & tribes]

Building Projects:
- ☐ less than 45 years old, built _____ [done]
- ☐ previously determined Not Eligible [done]
- ☐ 45 years old or older [consult w/SHPO & tribes]
- ☐ determined Eligible [consult w/SHPO & tribes]
- ☐ unknown eligibility [consult w/SHPO & tribes]

Documentation: [attach map showing project location]

Survey Report: properties present, send to SHPO & consulting parties on _____ [within 4 weeks of completion]
properties absent, to be included in Annual Report: ☑ AZ April 1, 2013
☐ CA October 1,

Checklist: ☐Project file copy ☑SHPO PA file copy

Jill Jensen

Biological Evaluation Short Form
NEPA Supplement for ESA Compliance

NEPA Action: CE☒ EA☐ EIS☐	Assigned Biologist: Johnida S. Dockens
Project Name: Glen Canyon Substation Modifications and Additions	NEPA Project Manager: Art Ruiz / Enoe Marcum
Project/WO #: **100237315 Transformer Addition**	Western Project Manager: Grover Bray / Mark Depoe

Location Description (Land Ownership; Township, Range, Section (include Baseline and Meridian); County; State):
The project is located on BLM withdrawn (Western fee-owned) lands at the existing Glen Canyon Substation in Page, Coconino County, Arizona. The substation is located on a bench west of and above the Colorado River in Township 41 North, Range 8 East, Sections 24 and 25 (Gila and Salt River Baseline and Meridian).

Summary of Proposed Action & Purpose and Need for Proposed Action:
Western proposes to install a new 50 MVA/69-kV transformer and associated equipment (buses, breakers, CCVTs) within the existing yard of the Glen Canyon substation. The proposed work will require the construction of new equipment pads and foundations. Trenches will be installed to house duct work; all ground disturbance will occur within the existing bladed and graveled yard. The transformer work will begin no sooner than July 2015 and will take about 4 months to complete.

Vegetation/Habitat Type:
The Glen Canyon substation is located within the Great Basin Desertscrub biotic community. However, the substation is located within a fenced yard which has been bladed and graveled. The yard was constructed in the 1960s and is a manned substation. No native vegetation remains within the existing yard. In addition, the substation is located in close proximity to the Glen Canyon Dam visitor entrance and is subject to a high volume of vehicular disturbance on the north side due to US 89.

I. Previous Biological Evaluation (BE)	**No**	**Yes***
1. Prior Project BE: Name: Completed By: Date:	X	
2. Update to BE or Surveys Required:		X
II. Species and/or Habitat	**No**	**Yes**
1. Site Visit Completed: Date: 05/30/2013		X
2. Previous Species Observation (e.g., AGFD records, existing survey data):	X	
3. Species List(s) Obtained: Date: 06/28/2013 (AGFD and USFWS)		X
4. Habitat for Federally Listed Species Present (if Yes, include information in Notes)	X	
5. Federally Listed Species Present (if Yes, include information in Notes)	X	
6. Sensitive Species Present (Tribal or Federal Lands)	X	
7. Habitat for Sensitive Species Present (Tribal or Federal Lands)	X	
III. Analysis of Effects	**No**	**Yes**
1. Substantial Habitat Alteration	X	
2. Impacts Outside the Project Area	X	
3. Impacts to Native Vegetation	X	
4. Impacts to Riparian, Wetland and/or Water Resources	X	
IV. Determination of Effects (choose those that apply)		
1. No effect on listed species or habitat	☒	
2. May affect, not likely to adversely affect listed species or habitat	☐	
3. May affect, likely to adversely affect listed species or habitat	☐	
4. No impact to individual sensitive species (Tribal/State)	☒	
5. May impact individual sensitive species or sensitive species' population viability	☐	

V. USFWS/Agency Consultation Requirements	No	Yes
1. Informal Consultation Required	X	
2. Formal Consultation Required	X	
3. Agency Review Required	X	
**Refer to Additional Notes and Analysis section for details.*		

VI. Agency Concurrence (if applicable)	No	Yes
Concurrence Received: FWS File Number: Date:		
BO Received: Date:		
Determination Rationale:		

Attachments

- AGFD HDMS Online Environmental Tool Receipt (page 1 of 6)

Prepared By: Johnida S. Dockens, Environmental Planner	**Date:** 06/28/2013