BEFORE THE
PUBLIC UTILITIES COMMISSION
STATE OF SOUTH DAKOTA

KEYSTONE XL PROJECT
DOCKET HP09-001

PREFILED TESTIMONY OF PATRICK ROBBLEE
ON BEHALF OF THE COMMISSION STAFF
SEPTEMBER 2009

BEFORE THE PUBLIC UTILITIES COMMISSION STATE OF SOUTH DAKOTA

PREFILED TESTIMONY OF PATRICK ROBBLEE

Q. Please state your name and business address.

A. Patrick Robblee, Natural Resource Group, LLC, 1000 IDS Center, 80 South 8th Street, Minneapolis, MN 55402.

Q. Describe your educational background.

A. I received a Bachelor of Arts Degree in Anthropology from the University of Massachusetts at Amherst in 1993, and a Master of Arts Degree in Anthropology from the College of William & Mary in Virginia in 1995.

Q: What is your employment history?

A: From 1994 to 1995, I worked as a field archaeologist for the Colonial Williamsburg Foundation in Williamsburg, Virginia. From 1995 to 1998, I worked as an archaeological field director for R. Christopher Goodwin & Associates, Inc., in New Orleans, Louisiana. From 1998 to 2001, I worked as an archaeological project manager/principal investigator for R. Christopher Goodwin & Associates, Inc., in New Orleans, Louisiana. From 2001 to 2007, I worked as a cultural resources specialist at Natural Resource Group, LLC. From 2001 to the present, I have worked as a regulatory specialist and project manager for Natural Resource Group, LLC. A copy of my resume is attached to this testimony.

Q: What work experience have you had that is relevant to your role on this project?

A: I have worked as a consultant in the energy industry since 1995 as a cultural resources specialist, regulatory specialist, or project manager for natural gas and oil pipelines and electric transmission lines in the United States. I have expertise in cultural resource management and experience in project management, field

survey management, routing, federal and state permitting, and preparation of environmental review documents on behalf of applicants or agencies.

Q. On whose behalf was this testimony prepared?

A. This testimony was prepared on behalf of the Staff of the South Dakota Public Utilities Commission (Staff).

Q: What is the purpose of your testimony?

A: The purpose of my testimony is two-fold: to provide a summary of the U.S. Department of State's (DOS) environmental review of the Keystone XL Project as required under the National Environmental Policy Act (NEPA), and to provide comments on portions of Keystone's application to the South Dakota Public Utilities Commission (PUC) for a permit to construct the Keystone XL Project under the Energy Conversion and Transmission Facility Act. My testimony includes comments pertaining to alternatives analysis, paleontological resources, and cultural resources.

Q: What methodology did you employ?

A: To provide a summary of the NEPA process, I reviewed the public notices and scoping report prepared by the DOS. To provide comments on Keystone's application to the South Dakota PUC, I reviewed the application, revised application, and other documents filed under the docket as well as Keystone's responses to data requests from PUC staff. I also reviewed portions of Keystone's application to the DOS for a Presidential Permit.

Q: Provide an overview of the NEPA review process.

A: NEPA defines national policy for managing impacts on the environment resulting from the actions of federal agencies, including the actions of non-federal parties approved by federal permit or other federal agency decision. It requires that federal agencies identify impacts on the environment likely to result from an

agency action, and to consider reasonable alternatives which would avoid, minimize, or mitigate those impacts. To comply with NEPA, agencies first consider if an action has potential to affect the environment. Routine agency actions which would not result in significant impacts typically are excluded from NEPA review under a categorical exclusion; these are identified in an agency's procedures for complying with NEPA. For actions unlikely to cause significant impacts, or actions where the extent of impacts is not known, agencies prepare an Environmental Assessment (EA). The purpose of an EA is to identify and assess the environmental impacts resulting from an action. If an agency concludes that an action would not result in significant impacts based on the analysis in the EA, it issues a decision document called a Finding of No Significant Impact (FONSI), and concludes the NEPA review process. For actions likely to cause significant impacts, however, agencies are required to prepare a statement--referred to as an Environmental Impact Statement (EIS)--which provides a detailed assessment of impacts associated with the action, identifies and evaluates reasonable alternatives to the action, identifies and evaluates cumulative effects (i.e., the effects of the action combined with the effects of other past, present, or reasonably foreseeable future actions), and identifies measures for avoiding, minimizing, or mitigating impacts. Agency decisions resulting from the preparation of an EIS are explained in a decision document called a Record of Decision (ROD). The ROD provides an overview of the NEPA review process for the action, identifies alternatives considered in the process, identifies the environmentally preferred alternative, identifies any measures or conditions required to avoid, minimize, or mitigate impacts, and identifies any monitoring requirements or enforcement mechanisms required by the agency. Preparation of the ROD concludes the NEPA review process.

Q. Is the Keystone XL Project subject to review under NEPA?

A. Yes. Because the project requires a Presidential Permit from the DOS, it is subject to review under NEPA by the DOS. In a Notice of Intent (NOI) published in the Federal Register on January 28, 2009, the DOS concluded that the Keystone XL Project is a "major federal action that may have a significant impact upon the environment," thereby requiring the preparation of an EIS.

Q: Has the DOS completed the EIS?

A: No. The DOS currently is preparing a draft EIS for the Keystone XL Project.

Q: Has the DOS solicited comments from other agencies or the public on the scope of the EIS?

A: Yes. The DOS invited comments from other agencies, non-government organizations, and the public (referred to collectively as stakeholders) in the NOI published in the Federal Register on January 28, 2009 (amended by subsequent notices published in the Federal Register on February 10 and March 23, 2009). The NOI requested "comments or suggestions to assist in identifying significant environmental issues, measures that might be adopted to reduce environmental impacts, and in determining the appropriate scope of the EIS." The DOS accepted written and electronic comments from other agencies and the public between January 28 and April 15, 2009. The DOS also held 20 public meetings, including three in South Dakota, both to share information on the project and to solicit oral comments from other agencies and the public.

Q: Has the DOS provided a summary of the comments it received on the scope of the EIS?

A: Yes. In May 2009, the DOS published a summary of the comments it received during the scoping period. According to the summary, 122 individuals provided testimony at the public meetings accounting for 340 individual comments.

Another 194 individuals submitted correspondence by letter, e-communication, or telephone accounting for an additional 1,350 comments. The DOS also received over 13,000 form letters sponsored by non-government organizations, and 13 letters from federal or state agencies, including the South Dakota Department of Game, Fish, and Parks and the South Dakota Department of Environment and Natural Resources (DENR). The summary identified 188 topics for consideration in preparation of the EIS grouped into 18 categories: purpose and need; project description; soils and geology; groundwater; surface water; wetlands and vegetation; fish, wildlife, and threatened and endangered species; land use; recreation; visual resources; cultural resources; socioeconomics; transportation and traffic; air quality, noise, and vibration; reliability, safety, and emergency response; impacts from oil spills; alternatives; and cumulative impacts.

Q: How many comments were received by the DOS from residents of South Dakota?

A: The summary report did not identify the source of public comments.

Q. What are the next steps in the NEPA review process?

A: Once complete, the DOS will distribute copies of the draft EIS to stakeholders and provide a 45-day comment period for review of the document. The DOS will consider any comments it receives on the draft EIS during the comment period, and revise the document as appropriate or necessary to address comments, before publishing a final EIS and issuing a ROD.

Q: When will the draft EIS be available for review?

A: The DOS has not announced a schedule for publishing the draft EIS.

Q: In addition to NEPA, is the Keystone Project subject to environmental review under any other federal laws or regulations?

A. Yes. Keystone's application and revised application to the PUC includes a permit table identifying all of the federal permits or authorizations required for the project. As lead federal agency, the DOS is required to comply with Section 106 of the National Historic Preservation Act (NHPA) and Section 7 of the Endangered Species Act (ESA). Section 106 of the NHPA requires federal agencies to take into account the effects of agency actions on properties that are listed in or eligible for listing in the National Register of Historic Places (NRHP). Section 7 of the ESA requires federal agencies to consult with the U.S. Fish & Wildlife Service and/or the National Marine Fisheries Service to determine if an agency action would jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Keystone is assisting the DOS in complying with the requirements of Section 106 and Section 7. Other federal authorizations include permits or approvals from the Bureau of Land Management (for crossings of federal lands), U.S. Army Corps of Engineers (for crossings of jurisdictional wetlands and waterbodies), the Environmental Protection Agency (for water quality certification and discharge of hydrostatic test waters), the Pipeline and Hazardous Materials Safety Administration (for pipeline design/safety and emergency response), and the Federal Highway Administration (for crossings of federally funded highways). According to its application, Keystone has or will submit applications to each of these agencies to obtain the required permit or authorization prior to construction.

Q: Is the NEPA review process connected to or associated with the South Dakota PUC's permitting process?

A: No. The PUC's review of the Keystone XL Project is separate from the NEPA review process and is limited to Keystone's permit application under the Energy

Conversion and Transmission Facility Act.

Q: Is the South Dakota PUC participating in the NEPA review process?

A. No. The South Dakota PUC is not participating in the NEPA review process. It would, however, be reasonable for the PUC to review the draft EIS, and in particular any conditions identified in the EIS which are relevant to the South Dakota portion of the project, and provide comments if appropriate. DENR does, however, have expertise in this area and is as previously stated participating in the NEPA process.

Q: Is the South Dakota PUC required to prepare an EIS specific to the State of South Dakota?

A: No. Under SDCL 34A-9-11, a South Dakota state agency is not required to prepare an EIS if a federal EIS also is required provided that the federal EIS complies with the requirements of the chapter. The purpose of this provision is "to avoid duplication of effort and to promote consistent administration of federal and state environmental policies".

Q: Provide an overview of your role in reviewing Keystone's application to the South Dakota PUC under the Energy Conversion and Transmission Facility Act.

A. I oversaw a team of resource specialists who reviewed Keystone's initial application, Keystone's responses to staff data requests, and Keystone's revised application for consistency with SDAR 20:10:22. Additionally, I reviewed select portions of Keystone's application, Keystone's responses to staff data requests, and Keystone's revised application (i.e., alternative sites, paleontological resources, and cultural resources). I also reviewed comments submitted to the PUC by the public and/or intervenors.

Q: Summarize the team's findings with regard to Keystone's application and

its compliance with SDAR 20:10:22.

A. In general, the team of resource specialists concluded that the information provided by Keystone in its initial application, responses to staff data requests, or revised application complies with relevant provisions of SDAR 20:10:22 and the applicant's burden of proof at 49-41B-22, augmented by the recommendations in this testimony and the testimony of Ross Hargrove (on Keystone's Construction, Mitigation, and Reclamation Plan) and Dr. James Arndt (on soils).

Q: Summarize your findings with regard to alternative sites.

A. The role of the South Dakota PUC in evaluating alternative sites is limited by SDCL 49-41B-36, which states that "this chapter shall not be construed as a delegation to the Public Utilities Commission of the authority to route a facility." Based on this language, the PUC concluded in another recent docket (i.e., Docket HP07-001 for the Keystone Pipeline Project) that it cannot compel an applicant to select an alternative site or make a permit decision based on an analysis of alternatives. That conclusion notwithstanding, SDAR 20:10:22:12 requires applicants to provide information to the PUC related to its selection of the proposed transmission site. As required under this rule, Keystone provided the following information in its application and revised application:

(1) A general description of the process used to identify alternative sites (SDAR 20:10:22:12): Section 4.1 of the application and revised application describes the route selection process used by Keystone to identify alternative sites.

(2) The criteria used to select alternative sites (SDAR 20:10:22:12(1)): Section 4.1.3 of the application and revised application identifies control points for the selection of alternative sites. Sections 4.1.4 and 4.1.5 of the application and revised application identify the types of routing

constraints and opportunities considered by Keystone in the routing process.

(3) A description of how criteria were measured and weighed, and the reasons for selecting these criteria (SDAR 20:10:22:12(1)): Section 4.1.4 of the application and revised application divides routing constraints into primary and secondary categories. The section also states that Keystone avoided or minimized crossings of constrained areas throughout the route selection process. Section 4.1.5 of the application and revised application identifies key criteria used to screen alternative sites. This section also states that Keystone held public meetings and met with stakeholders to discuss and review routing in South Dakota.

(4) An evaluation of alternative sites considered by the applicant (SDAR 20:10:22:12(2)): Section 4.2 of the application and revised application states that Keystone "developed or evaluated" several reroutes in response to concerns about environmental or other issues. The section also describes two major route alternatives in South Dakota (i.e., the Mellette County Reroute and the Colome Reroute) which Keystone evaluated, in whole or in part, to avoid environmental features. Additionally, Keystone stated that it would continue to evaluate route adjustments throughout the pre-construction design phase of the project, as appropriate, to "accommodate environmental features identified during surveys."

(5) An evaluation of the proposed site and its advantages over other alternatives, including the extent to which the use of eminent domain powers could be reduced by selecting an alternative site (SDAR 20:10:22:12(2)): Section 4.2 of the application identifies advantages of

selecting the Mellette County and Colome Reroutes over the originally proposed route. Section 4.3 of the application compares the use of eminent domain powers on the proposed site and any alternative site.

The information provided by Keystone appears to satisfy the requirements of SDAR 20:10:22:12 with regard to alternative sites consistent with the limitations imposed on the PUC by SDCL 49-41B-36.

Q: Are there differences in the consideration of alternatives under PUC rules and under NEPA?

A: Yes. As noted above, SDAR 20:10:22:12 requires that applicants provide the PUC with "information related to its selection of the proposed site", but the PUC's authority to require an alternative route is precluded by SDCL 49-41B-36. Under NEPA, however, federal agencies are required to identify and compare alternatives to identify an environmentally-preferred route which would avoid, minimize, or mitigate impacts on the environment. The DOS will include a description of its evaluation of alternatives in the draft EIS.

Q: Provide a summary of your findings with regard to paleontological resources.

A: Keystone's application and revised application indicate that the project will cross exposed geological formations (i.e., the Hell Creek Formation, the Ludlow member of the Fort Union Formation, and the Fox Hills Formation) with moderate or high potential for containing fossil remains. In response to a data request from PUC staff, Keystone indicated that it would conduct a literature review to identify known fossil sites along the pipeline route prior to construction, that a pre-construction field survey of sensitive formations along the pipeline route would be conducted on federal and state lands, and that a paleontological mitigation plan would be prepared following the completion of field surveys. Keystone also

committed to returning fossils discovered on private lands to the appropriate landowner and fossils recovered from federal or state lands to the Museum of Geology at the South Dakota School of Mines and Geology. I recommend that the PUC require Keystone to implement each of these measures.

Q: Provide a summary of your findings with regard to cultural resources.

A: Keystone is assisting the DOS in complying with Section 106 of the NHPA by conducting field surveys to identify sites within the pipeline right-of-way which may be eligible for listing in the NRHP. Keystone has committed to completing all outstanding field investigations as well as avoiding or mitigating impacts to any eligible sites which cannot be avoided by the project. In response to a PUC data request, Keystone provided a copy of an Unanticipated Finds Plan (*Unanticipated Discovery Plan for Cultural Resources Along the Steele City Segments of the Keystone XL Pipeline in South Dakota*) referenced in its application and revised application (copy attached). The plan identifies measures to be implemented in the event that undocumented cultural resources or human remains are discovered during construction. I recommend that the PUC requires that Keystone implement this plan during the construction phase of the project, with a provision that the plan be revised to include any changes identified by the South Dakota State Historic Preservation Officer or DOS through the Section 106 process.

Patrick Robblee
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Pat Robblee is a Project Manager and regulatory specialist at Natural Resource Group, LLC (NRG), specializing in natural gas and oil pipeline projects, electric transmission lines, and other linear corridor projects. His experience includes project management, routing, cultural resources compliance, general survey management, and Corps of Engineers Section 404 and 10 permitting.

Selected Project Experience

- NV Energy: managed routing and feasibility studies for a 484-mile-long electric transmission line project in Nevada; identified, compared, and ranked over 1000 miles of alternative routes and 10 potential substation sites
- Sierra Pacific: identified and compared route alternatives for several electric transmission line feasibility projects in Nevada; identified environmentally preferred alternatives; and prepared summary reports.
- Spectra Energy: managed routing and feasibility studies for a natural gas pipeline project in the western U.S.
- Confidential Client: managed routing and feasibility studies for a shale oil pipeline project in the western U.S.
- Boardwalk Pipeline Partners, LP: managed COE Section 404 and 10 permitting and assisted with project management on a 357-mile-long natural gas pipeline and a 17-mile-long natural gas loop line in Texas, Oklahoma, Louisiana, and Mississippi.
- Minnesota Pipe Line Company: managed alternatives identification and analyses, COE Section 404 and 10 permitting, and NHPA compliance on a 295-mile long oil pipeline in Minnesota.
- Questar Overthrust Pipeline Company: managed NHPA compliance on a 27-mile-long natural gas pipeline and a 77-mile-long natural gas pipeline in Wyoming.
- Rockies Express LLC: managed state floodway licensing for the Indiana segment of a 633-mile-long pipeline in the Midwest and assisted with NHPA compliance on the project.
- Entrega Gas Pipeline Project: assisted with NHPA compliance on a 327-mile-long natural gas pipeline in Colorado and Wyoming.
- Questar Pipeline Company: managed NHPA compliance on a 20-mile-long natural gas pipeline and compressor station project in Utah.
- Crown Landing LNG Project: conducted third party review of cultural resources reports and prepared sections of an EIS for an LNG import terminal and associated pipeline in New Jersey and Pennsylvania.
- Blue Sky and Green Field Wind Farm Projects: managed NHPA compliance on two 44-turbine wind farm projects in Wisconsin.
- Guardian Pipeline Project: managed NHPA compliance on a 140-mile-long natural gas pipeline in Illinois and Wisconsin and a 110-mile-long natural gas pipeline in Wisconsin.

Education and Training

- M.A., Anthropology with a specialization in Historical Archaeology, College of William and Mary in Virginia, Williamsburg, Virginia
- B.A., Anthropology, University of Massachusetts at Amherst, Amherst, Massachusetts
- Register of Professional Archaeologists

Unanticipated Discovery Plan for Cultural Resources Along the Steele City Segment of Keystone XL Pipeline Project in South Dakota

Federal Agency

Department of State

Prepared for

AECOM Environment

Prepared by

SWCA Environmental Consultants

March 30, 2009

Unanticipated Discovery Plan for Cultural Resources Along the Steele City Segments of the Keystone XL Pipeline Project in South Dakota

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ATTACHMENTS

1.0 INTRODUCTION

This Discovery Plan documents the procedures to be implemented in the event that cultural resources are discovered during construction of the Keystone XL Pipeline Project (hereafter referred to as the Project) in South Dakota. This plan contains standard procedures for handling cultural resource discoveries identified by the Project archaeologists in areas designated for open trench inspection (OTI) and monitoring, and by construction personnel or Environmental Inspectors. Procedures for the initial treatment of discoveries, the evaluation and treatment of discoveries, and the treatment of human remains are discussed in the following sections. As an attachment (Attachment A) to this document is a Plan for Unanticipated Historic Properties and Human Remains in South Dakota to be distributed among field personnel during the Project.

1.1 QUALIFICATION AND TRAINING OF ARCHAEOLOGICAL MONITORS AND CONSTRUCTION PERSONNEL

This section describes the qualification and training of archaeological monitors and construction personnel.

1.1.1 Archaeological Personnel

All lead archaeologists/field directors will be qualified based on the standards required under a Bureau of Land Management (BLM) Cultural Resource Use Permit. The lead archaeologists/field directors will be evaluated and listed on the permit for the Project before conducting and supervising field monitoring. When appropriate, additional safety training may be required. Archaeological monitors have the authority to halt construction at an archaeological discovery and, in some instances as described below, to authorize construction to resume.

1.1.2 Construction Personnel

All construction personnel will meet with Keystone representatives for training and orientation prior to the start of construction activity. The training will be developed by Keystone representatives and the participating archaeologists. New construction personnel added after construction begins will be trained before working on site. A list of trained personnel will be maintained by Keystone.

1.2 OPEN TRENCH INSPECTION AND MONITORING

This section details the OTI and monitoring plan to be used during the current Project. The OTI and monitoring plan includes the delineation of areas to be inspected, methods to be used during inspection and monitoring of the right-of-way (ROW), discovery recordation methods, and the criteria to be used for selecting any additional sites for testing and/or post-construction data recovery investigations based on inspection and monitoring results. The 75-foot-wide construction ROW will usually comprise a 25-foot-wide "spoil" side and a 50-foot-wide "working" side based on the pipeline centerline. An additional 25 feet of temporary workspace may be required for construction in areas with steep side and vertical slopes.

Keystone will retain a 50-foot-wide permanent ROW (25 feet on either side of the pipeline centerline) during the operation of the new pipeline.

Pipeline ROW construction will be observed by one or more archaeologists in the areas designated for monitoring at each location where machinery is actively involved in ground-disturbing activities. The archaeologist(s) will view the ground disturbance as it occurs to identify cultural remains exposed by construction equipment. In the event that cultural material (such as features or artifact concentrations) is observed during ROW preparation (see Section 1.2.1, Discovery Definition, below), construction will be temporarily suspended at that location to allow the archaeologist(s) to safely examine the exposed remains. Construction will not be stopped for exposed artifacts, except for artifact concentrations or to allow an archaeologist to assess whether other artifacts or features are associated with the exposed artifact(s). Once the discovery has been initially recorded, construction will be allowed to proceed. Discoveries will be recorded and evaluated following the methods presented in Sections 1.2.3 and 1.2.5. Construction will be allowed to proceed once the site has been recorded and all applicable protocol and/or guidelines have been followed.

Archaeological monitors will have the authority to temporarily halt construction in sensitive areas where monitoring stipulations are in place if weather conditions preclude adequate visibility of freshly exposed sediments. This could occur during heavy snowfall or blizzard conditions, during periods of extreme cold or wind, during periods when thawing causes accumulations of water in areas requiring inspection and documentation, and very early or late in the day from mid-November through mid-January.

1.2.1 Discovery Definition

Archaeological discoveries consist of evidence of human activity with the potential to yield data pertinent to the questions in the research design for the Project, and discoveries that are more than 50 years old with potential to yield data pertinent to regional history and prehistory. Prehistoric discoveries include, but are not limited to, features (small hearth features, housepit features, storage features, etc.), artifact concentrations, and activity areas. Occasional isolated prehistoric artifacts, non-human bone, or low numbers of artifacts or non-human bone with little potential to yield additional data will not be considered discoveries. Historical discoveries include, but are not limited to, features (historic hearths, trash deposits, structures, old canals, roads, etc.), artifact concentrations, and activity areas. Isolated historical artifacts, non-human bone, or low numbers of artifacts or non-human bone with little potential to yield additional data will not be considered discoveries. Archaeological discoveries are defined as simple or complex. Simple archaeological discoveries consist of isolated artifacts or isolated features with minimal artifacts or diagnostic characteristics. Complex discoveries are those which entail a significant amount of artifacts or features, or sensitive or unique remains such as housepits, bone beds, or human remains. All of the discoveries, regardless of eligibility, will be recorded on the daily log and a South Dakota State Archaeological Research Center form.

The archaeological monitor will be allowed field judgment to determine if the item or items encountered merit further investigation and thereby being defined as an archaeological

discovery. Once the monitor has determined the item is an archaeological discovery, methods for recordation will be followed, as stated in Sections 1.2.3 and 1.2.5.

1.2.2 Open Trench Inspection Locations

The entire pipeline length in South Dakota will be subject to OTI as stipulated by the BLM and the State Historic Preservation Offices (SHPOs).

1.2.3 Open Trench Inspection Methods

Archaeological inspection will only be required after trenching has been completed, except when human remains are encountered by construction personnel. If construction personnel identify what they believe to be human remains during trenching, procedures in Section 2.0 will be followed. If construction personnel identify discoveries within the trench, the steps to protect the discoveries and notification procedures in Section 1.4.2 will be followed.

At least one archaeologist will inspect the open trench at specified locations along pipeline route where a higher probability of encountering cultural materials exists. The laying of pipe and backfilling the trench will only be allowed after completion of the archaeological inspection. Inspection will consist of an examination of the trench walls and backdirt piles for evidence of artifacts, cultural features, stained occupation surfaces, concentrations of animal bone, or human remains. For safety reasons, examination of trench walls will generally be conducted from the ground surface. Trench backdirt will not be screened, but uncontrolled collection of artifacts may occur from backdirt piles, as may the collection of charcoal and/or stained sediment for possible radiocarbon dating.

Discoveries found during the OTI will be recorded and evaluated following the standards and procedures used for recording sites during the inventory phase of the Project. The initial treatment of any discovery will consist of recording the location of the remains within the ROW and within any previously recorded site boundary; recording summary data concerning the feature(s) and/or other remains (including dimensions, qualitative characteristics, and associated remains); photographing each exposed feature and the overall context of the exposed remains; and profiling trench walls containing cultural features or strata (where safe and prudent). When appropriate, the location around the discovered cultural remains will be tested to determine the extent of the cultural material.

In the event that the location around the discovery cannot be tested at the time due to safety issues or if the discovery is frozen due to winter weather and testing is not possible, the following OTI recording methods will be followed. The archaeological monitor will record the location of the cultural remains with a global positioning system (GPS) unit and also in relation to cadastral monuments or permanent structures. The monitor will place polyvinyl chloride stakes at the edge of, or on both sides of, the ROW to facilitate relocation of the cultural remains; the stakes will be marked in indelible ink with the distance to the cultural remains. The stakes will be minimally placed in line with the discovery and perpendicular to the trench for ease of relocation, and other stakes may be placed as necessary to facilitate relocating the cultural remains. If the discovery is not within the boundaries of a previously recorded site, a permanent datum will also be placed at the edge of the construction corridor. Monitors will take additional necessary steps to ensure that the cultural remains in the trench

can be relocated. This may include (but is not limited to) insertion of pins above the feature in the trench profile wall to facilitate relocation from above, burial of pins above the feature for relocation via metal detection, and other techniques designed to enable the relocation of the feature after construction is complete. The discovery will be tested as soon as the ground has naturally thawed.

A monitor will also be present during trench refill in areas where cultural remains were located to ensure that the cultural remains are not further disturbed. If additional resources are exposed during the backfilling of the trench within the trench walls, the monitor will follow the procedures outlined above. If additional resources are exposed within the ROW during the backfilling of the trench, the monitor will follow the monitoring methods outlined in Section 1.2.5.

Following construction, additional testing may be necessary to define the discovery and any activity areas, if present. The discovery will be fully recorded according to approved standards. The feature(s) will then be excavated and a sample or all feature fill will be collected for laboratory analysis including pollen studies, flotation, and carbon dating as appropriate. Feature plans and profiles will be drawn. Features will be photographed. Uncollected feature fill will be screened using 0.25-inch mesh. If necessary, additional horizontal exposure of sediments/deposits around the feature may be investigated to evaluate the feature context. Such exposure will follow the standard excavation procedures described in the forthcoming treatment plan for the Project. Testing can include, but is not limited to, excavation of controlled units over and around the feature area, placement of additional test units and/or auger probes, or exploratory mechanical trenching. Testing will be designed to identify the nature and extent of the discovery and any associated activity area(s) or other features, if present. Based on these data, and through consultation with the relevant agency(ies), a decision will be made regarding whether additional data recovery of the discovery is necessary. If so, procedures described in Section 1.5 will apply.

1.2.4 Monitoring Locations

Site locations to be monitored will be specified in the forthcoming treatment plan for the Project. Monitoring will occur at specified locations during ground-disturbing activities. For the purposes of this document, ground-disturbing activities are defined as any activities that have moderate to high potential to expose buried cultural resources. These include, but are not limited to, blading, grading, stripping, and trenching activities. They can also include transiting of sites by heavy tracked vehicles if no other activities will occur subsequent to transiting. In general, any activity that has the potential to disturb more than 2 inches of sediment over an area more than 3 feet square will be considered ground-disturbing. Certain activities within sites will not require monitoring. These consist of activities with low potential to expose cultural resources or for which monitoring would not identify disturbed or exposed cultural activities.

1.2.5 Monitoring Methods

Discoveries found during ROW monitoring will be handled in much the same way as those found during OTI. When a discovery is encountered by an archaeological monitor, the construction activity that resulted in the exposure of the discovery will be immediately halted, followed as soon as possible by the cessation of all other ground-disturbing activity in the immediate vicinity of the discovery. Cessation of ground-disturbing activity will encompass a sufficient area to protect the discovery itself and provide a buffer zone for adequate and safe investigation of the discovery and any other features or artifacts that may be associated with the discovery. Vehicle traffic within the vicinity may need to be limited or halted until the discovery is inspected. If construction personnel identify discoveries, the steps to protect the discoveries and notification procedures in Section 1.4.2 will be followed.

The nature of the ROW blading is such that it can cause damage to exposed resources. Therefore, excavation of features will be required in order to collect information contained in them. To protect the discovery during recording, fencing will be placed 100 feet (30 meters [m]) to either side of the discovery. The discovery will be fully recorded according to approved standards. The feature(s) will then be excavated and a sample or all feature fill will be collected for laboratory analysis including pollen studies, flotation, and carbon dating as appropriate. Feature plans and profiles will be drawn. Features will be photographed. Uncollected feature fill will be screened using 0.25-inch mesh. If necessary, additional horizontal exposure of sediments/deposits around the feature may be investigated to evaluate the feature context. Such exposure will follow the standard excavation procedures described in the forthcoming treatment plan for the Project. In the event that the location around the discovery is frozen due to winter weather and testing is not possible, the OTI recording methods (see Section 1.2.3) will be followed. The discovery will be tested at a later time, as soon as the ground is thawed.

After completion of site recording and evaluative testing, discoveries will be evaluated in terms of their potential to provide additional information through post-construction data recovery. Through consultation with the relevant agency(ies), a determination will be made regarding the need for post-construction data recovery. If no post-construction data recovery is needed, the discovery will be reported as part of the overall Project OTI/Monitoring report. If post-construction data recovery is merited, procedures described in Section 1.5 will be followed.

1.3 AGENCY NOTIFICATION AND REPORTING

Archaeological monitors will maintain detailed daily logs. Information to be recorded in the logs will include areas inspected during the day, the nature of the areas inspected, any cultural remains identified during inspection, the subsequent treatment of those remains, photograph logs if applicable, and a record of any relevant communications with regulatory personnel and/or representatives of Keystone.

For simple discoveries, the cultural resource supervisor will notify the appropriate federal agency representative and Keystone representatives by e-mail. This e-mail will be sent out each Monday morning and will report the results of the inspection during the previous week, including areas inspected and results of inspection in each area. The Department of State, the

appropriate federal agency representative, and Keystone representatives will be contacted immediately upon discovery of complex discoveries. If the find is on federal land, the appropriate federal agency representative will be contacted. As the lead federal agency, the Department of State will be copied on weekly logs and complex discoveries made along the entire length of the pipeline. A final inspection report summarizing the results of the OTI and monitoring, including management recommendations, will be submitted within 180 days after completion of the inspection.

1.4 PROCEDURES FOR ADDRESSING DISCOVERIES IDENTIFIED BY CONSTRUCTION PERSONNEL

This section describes the procedures to be used for unanticipated cultural resources discoveries by construction personnel for OTI or monitoring.

1.4.1 Training and Orientation

Prior to the start of a construction activity, Keystone personnel directly involved with construction will be informed of the stipulations provided in this plan. Those stipulations will cover:

- definition of a discovery and examples of discoveries;
- the steps outlined below regarding the protection of discoveries until such time as they can be properly evaluated by a qualified professional archaeologist;
- the need to treat any human skeletal remains that are encountered with dignity and respect;
- the steps outlined below concerning the notification of the appropriate Keystone personnel;
- the necessity of reporting discoveries in a timely manner and complying with the other stipulations provided in this plan; and
- penalties for failure to report discoveries or to comply with the procedures outlined in this plan.

1.4.2 Steps to Protect the Discovery

Figure 1 summarizes the procedures to follow for discoveries identified by construction personnel. When a discovery is encountered, the construction activity that resulted in the exposure of the discovery will be immediately halted, followed as soon as possible by the cessation of all other ground-disturbing activity in the immediate vicinity of the discovery. Cessation of ground-disturbing activity will encompass a sufficient area to protect the discovery itself and provide a buffer zone for adequate and safe investigation of the discovery and any other features or artifacts that may be associated with the discovery. A barricade (typically a fence) will be placed around the discovery. The barricade should be sufficiently large to protect the discovery and any known or potential cultural materials associated with the discovery. A general guideline for the barricade will be to provide a buffer of at least 100 feet (30 m) around the discovery along the length of the pipeline. This barricaded area can be larger or smaller for the width of the ROW in order to protect the discovery adequately

without unnecessary hindrance to construction. Vehicle traffic within the vicinity may need to be limited or halted until the discovery is inspected. After all construction activity in the immediate vicinity of the discovery has been halted, the Construction Supervisor (or designated substitute) will be notified. The supervisor or substitute will immediately notify the Construction Inspector or Environmental Inspector, who will then contact an archaeological monitor who will determine the nature of the discovery. If the archaeologist determines that the discovery is non-cultural, Keystone will be notified and the halted construction activity can resume. If the archaeologist determines that the find is cultural, the procedures outlined in Sections 1.2.3 and 1.2.5 for the treatment of discoveries will be implemented.

During verification and initial evaluation of the discovery, the archaeologist will have the authority to probe and skim-shovel the discovery. If the discovery is something other than human remains but still is archaeological remains, the procedures outlined in Sections 1.2.3 and 1.2.5 will be followed. If human remains are discovered, the procedures outlined in Section 2.0 will be followed.

All discoveries will be reported to the cultural resource contractor (SWCA Environmental Consultants), the Project's environmental consultant (AECOM Environment), and the Department of State, regardless of landowner. Discoveries found on land managed by the State of South Dakota will be reported to the respective landowner.

Table 1 lists the contacts to be notified in the event of an unanticipated discovery of cultural material.

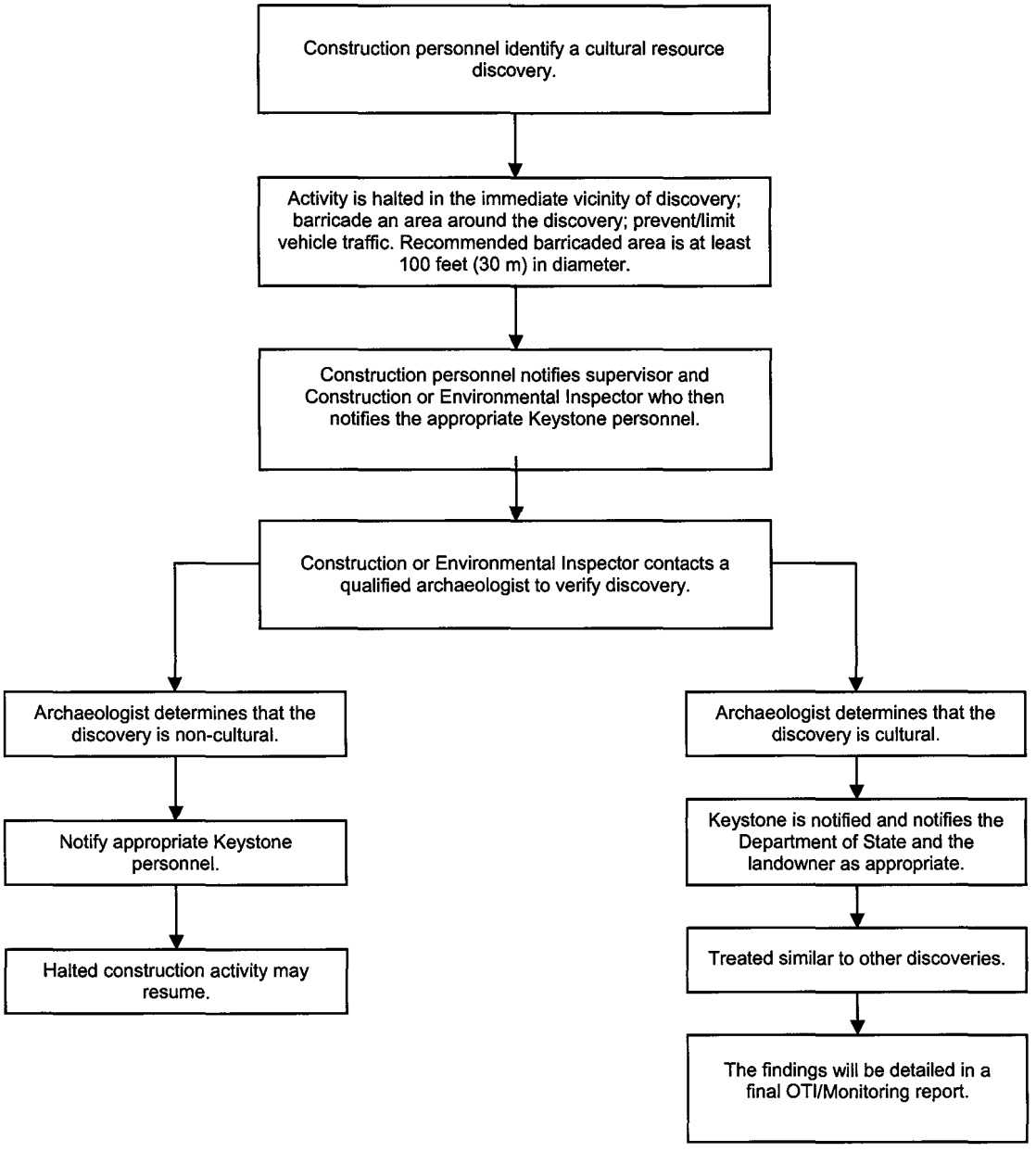

Figure 1. Procedures for Addressing Cultural Resource Discoveries by Construction Personnel.

Table 1. South Dakota Contact Information.

Name	Title/Agency	Phone	Fax	Address	E-Mail
Erin Salisbury	Project Manager, SWCA Environmental Consultants	970-946-8698	303-487-1245	295 Interlocken Boulevard, Suite 300 Broomfield, CO 80021	esalisbury@swca.com
Jim Haug	State Archaeologist, SHPO Director, South Dakota Archaeological Research Center	605-394-1936	605-394-1941	South Dakota Archaeological Research Center PO Box 1257 Rapid City, SD 57709	Jim.Haug@state.sd.us
Chris Nelson	Western Region Archaeological Specialist, SHPO	605-773-3103	605-773-6041	South Dakota State Historical Society 900 Governors Drive Pierre, SD 57501	ChrisB.Nelson@state.sd.us

1.5 CRITERIA FOR SELECTING LOCATIONS FOR POST-CONSTRUCTION DATA RECOVERY INVESTIGATIONS AND GENERAL SCOPE OF ADDITIONAL DATA RECOVERY INVESTIGATIONS

Evaluation of the significance of discoveries will be based on their potential to address research topics and to answer the research questions presented in the research design for the Project. If a newly recorded discovery is judged to have the potential to yield relevant data to address the issues in the research design, it will be recommended as eligible or potentially eligible for the National Register of Historic Places (NRHP). If a significant discovery is part of a previously recorded site, it will be considered a contributing portion of an eligible or potentially eligible site. Only NRHP eligible or contributing discoveries will be subject to additional data recovery investigations; the number and location of discoveries where further work will occur and the extent and nature of the work will be detailed in a final OTI and/or Monitoring report, to be prepared within one year following completion of monitoring and OTI. Discoveries that are judged not to have the potential to yield data relevant to the research design will be considered not eligible or noncontributing and will not be subject to additional investigations.

Data recovery investigations necessitated by adverse impacts to significant discoveries made during Project construction will be limited to a maximum of 250 m^2 of deposits per site, unless exceptional discoveries necessitate a greater level of work. Data recovery will be limited to the Project's area of potential effect (APE). If few sites or components are identified which would complement the preceding data recovery investigations (i.e., those recommended as eligible or contributing), then less additional data recovery work will be conducted, including possibly no additional investigations.

The OTI/Monitoring report will contain recommendations concerning the justification for data recovery investigations at each relevant site, and recommendations concerning the nature and scope of any data recovery investigations at each relevant site. The OTI/Monitoring report will be submitted to the Department of State, and the relevant land managing agencies, after the conclusion of the OTI phase. The report will include a site-specific treatment plan and research design that will propose specific research goals and data needs for each site.

Data recovery motivated by discoveries made during the OTI will be targeted at specific components that possess the characteristics of significance relative to the research topics and domains. Where those components are deeply buried, the overlying deposits will be mechanically stripped following exploratory manual excavations designed to ascertain that components with similar characteristics are not present in the overlying deposits. Data recovered from additional data recovery investigations will be integrated into the final report with the data recovered as a result of the preconstruction data recovery investigations (as described in the forthcoming treatment plan for the Project). Additional data recovery investigations will only be referenced in the final OTI report.

2.0 TREATMENT OF HUMAN REMAINS

If human remains are encountered during construction, the following will immediately occur:

- Appropriate measures will be taken to protect the discovery from further disturbance until it has been fully evaluated and the appropriate treatment of the discovery has been completed.
- Keystone will begin the official notification process by promptly contacting the Department of State and the landowner as appropriate. If human remains are discovered on federal lands and they are determined to be aboriginal, the Native American Graves Protection and Repatriation Act (NAGPRA) and its implementing regulations will apply. In this case, construction activities in the vicinity of the burial will cease for a minimum of 30 days.

Figure 2 summarizes the procedures for the treatment of the unanticipated discovery of human remains in South Dakota.

2.1 STEPS TO PROTECT HUMAN REMAINS

If any potential human remains are discovered, the construction activity that resulted in the exposure of the discovery will be immediately halted, followed by the cessation of all construction-related activity with a minimum of 100 feet (30 m) of the discovery. A buffer area no less than 100 feet (30 m) in radius from the discovery will be delineated by a temporary fence. The width of the buffer may be adjusted depending on the size of the discovery. Construction personnel and vehicles will promptly vacate the buffer zone. Vehicle traffic within the buffer zone will be limited to that necessary to remove vehicles and equipment from the buffer zone. Care will be taken to prevent any disturbance of the potential human remains during removal of vehicles and equipment. Construction personnel involved in such a discovery will immediately notify a supervisor (or designated substitute), who will immediately notify the appropriate Keystone contact. A qualified archaeologist will be responsible for determining if the remains are human. Upon being notified by the archaeologist of the presence of human remains, Keystone personnel will determine landownership status. The Keystone Environmental Specialist will begin the official notification process by promptly contacting the appropriate county sheriff's office, the Department of State, and the appropriate landowner if on federal, state, or private lands. The appropriate county sheriff's office will be requested to contact the county coroner.

After all construction activity has been halted and the appropriate personnel have been notified, steps will be taken to ensure that no further disturbance occurs to the human remains discovery.

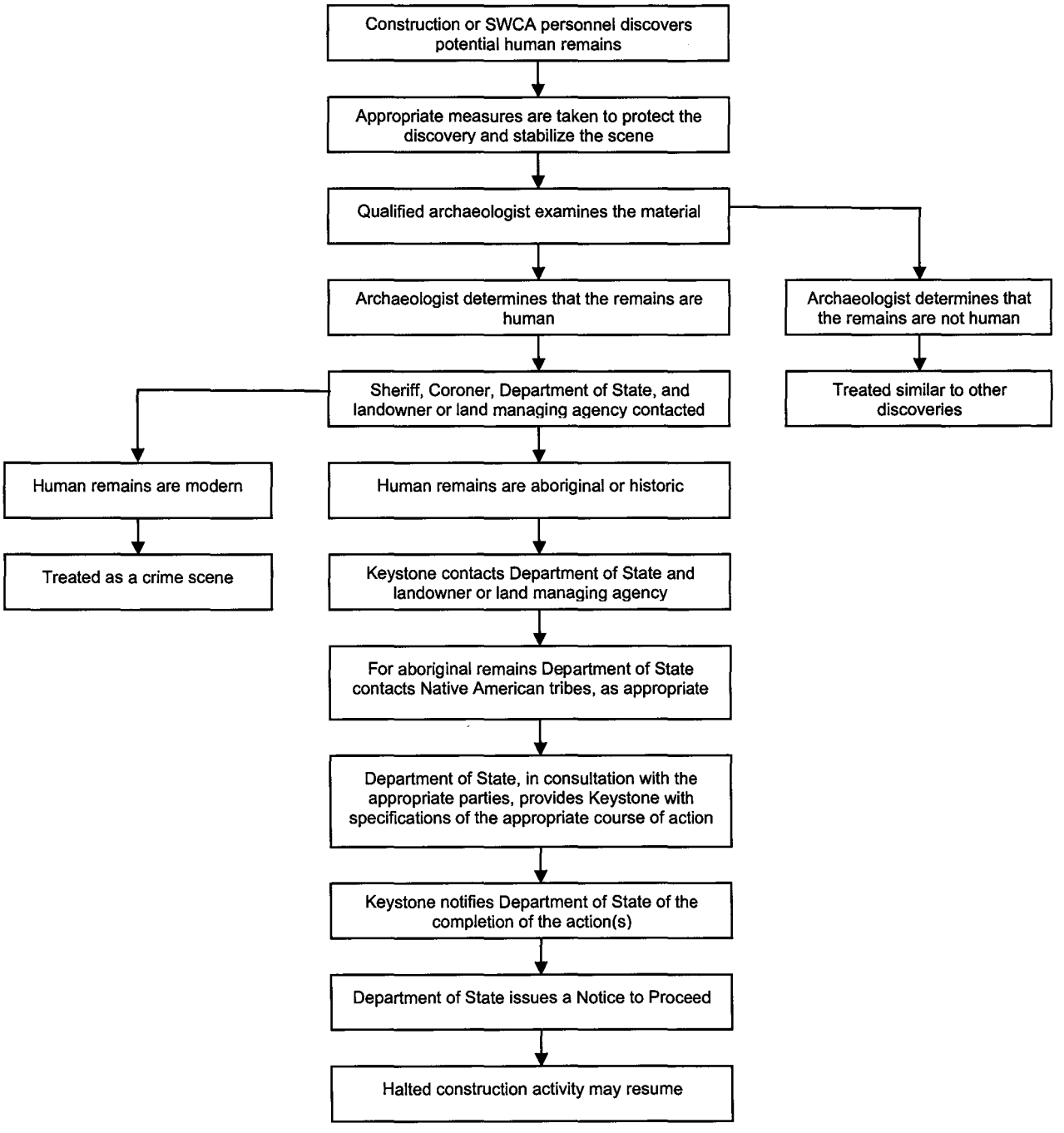

Figure 2. Procedures for the Treatment of Unanticipated Discovery of Human Remains in South Dakota.

The steps to protect the human remains discovery will include:

- ensuring that no ground-disturbing activity resumes within the buffer zone of the discovery; and
- preventing vehicle traffic through that portion of the area of the undertaking beyond that necessary to remove vehicles and equipment already within the area.

The measures to protect the remains and any associated artifacts will remain in effect until Keystone has received notice from the Department of State to proceed with the construction activity in the buffer zone.

2.2 NOTIFICATION PROCEDURES

Upon being notified by the investigating archaeologist of the presence of human remains, the respective Sheriff and County Coroner will be notified by Keystone. Keystone will also contact the relevant agencies and landowners as follows (Table 2):

BLM land – Department of State and BLM

State land – Department of State and SHPO

Private land – Department of State and Landowner

Keystone will notify the Department of State by telephone, followed by written confirmation by fax or e-mail. The notification will include a brief description of the discovery and its location and a clear, explicit statement that the discovery is situated on federal, state, or private lands (as appropriate). The County Sheriff's office and County Coroner initially have jurisdiction with regard to any discovered human remains. If they determine that the remains are not modern or do not reflect a crime scene and/or if they otherwise relinquish their jurisdiction over the remains, then the BLM assumes responsibility for remains on BLM lands and the state assumes responsibility for remains on state/private lands.

Table 2. South Dakota Contact Information for Human Remains Discoveries during Construction of the Keystone XL Pipeline.

Name	Title/Agency	Phone	Fax	Address	E-Mail
Primary: Erin Salisbury	Project Manager, SWCA Environmental Consultants	970-946-8698	303-487-1245	295 Interlocken Boulevard, Suite 300 Broomfield, CO 80021	esalisbury@swca.com
Secondary: Scott Slessman	Principal Investigator, SWCA Environmental Consultants	303-518-4033	303-487-1245	295 Interlocken Boulevard, Suite 300 Broomfield, CO 80021	sslessman@swca.com
Jim Haug	State Archaeologist, SHPO Director, South Dakota State Archaeological Research Center	605-394-1936	605-394-1941	South Dakota State Archaeological Research Center PO Box 1257 Rapid City, SD 57709	Jim.Haug@state.sd.us
Paige Hoskinson Olson	Review and Compliance Coordinator, South Dakota State Historical Society	605-773-6004	605-773-6041	South Dakota State Historical Society 900 Governors Drive Pierre, SD 57501	Paige.HoskinsonOlson@state.sd.us
Jason Haug	Director of Historic Preservation	605-773-6296	605-773-6041	South Dakota State Historical Society 900 Governors Drive Pierre, SD 57501	Jason.Haug@state.sd.us
Chris Nelson	Western Region Archaeological Specialist, SHPO	605-773-3103	605-773-6041	South Dakota State Historical Society 900 Governors Drive Pierre, SD 57501	ChrisB.Nelson@state.sd.us
Fred Lamphere	Butte County Sheriff	605-892-3324	605-723-3327	Butte County Sheriff's Office 839 5th Avenue Belle Fourche, SD 57717	Fred.Lamphere@buttesd.org
Larry Hanes	Haakon County Sheriff	605-859-2741	605-859-2730	Haakon County Sheriff's Office 140 S. Howard Phillip, SD 57567	haakonso@gwtc.net

Name	Title/Agency	Phone	Fax	Address	E-Mail
William Clarkson	Harding County Sheriff	605-375-3414	605-375-3415	Harding County Sheriff's Office 410 Ramsland Street Buffalo, SD 57720	hcso@sdplains.com
Arlo Madsen	Jackson County Sheriff	605-837-2285	605-837-2439	Jackson County Sheriff's Office 700 Main Street Kadoka, SD 57543	
Fred Koester	Jones County Sheriff	605-669-7111	605-669-7109	Jones County Sheriff's Office 104 E. 4th Street Murdo, SD 57559	jonescoso@cji.net
Ron Merwin	Meade County Sheriff	605-347-2681	605-347-6824	Meade County Sheriff's Office 1400 Main Street Sturgis, SD 57785	
Dustin Baxter	Mellette County Sheriff	605-259-3362	605-259-3069	Mellette County Sheriff's Office 321 E. 4th Street White River, SD 57579	Dustin.Baxter@state.sd.us
Don Holloway	Pennington County Sheriff	605-394-6113	605-355-3595	Pennington County Sheriff's Office 300 Kansas City Street Rapid City, SD 57701	
Kelly Serr	Perkins County Sheriff	605-244-5243	605-244-5611	Perkins County Sheriff's Office 100 E. Main Bison, SD 57620	perkinscoso@sdplains.com
Clifford Schroeder	Tripp County Sheriff	605-842-3600	605-842-3621	Tripp County Sheriff's Office 200 E. 3rd Winner, SD 57580	tcso@gwtc.net

2.3 TREATMENT OF HUMAN REMAINS IN SOUTH DAKOTA

Upon being notified by the investigating archaeologist of the presence of human remains, the respective County Sheriff and County Coroner will be notified by the archaeological monitor, as well as the lead agency, the South Dakota SHPO, Keystone, and the private landowner, if applicable (Table 2).

The County Sheriff's office and County Coroner have initial jurisdiction regarding any discovered human remains. The County Sheriff and County Coroner may determine that the remains are not modern, do not reflect a crime scene, and/or may otherwise relinquish their jurisdiction over the remains.

Upon receiving notice that the County Sheriff's office and County Coroner have relinquished jurisdiction over the discovery, Keystone will notify the lead agency, the South Dakota SHPO, and private landowner (if applicable) by telephone, followed by written confirmation by fax or certified mail. The notification will include a brief description of the discovery, its location, and an explicit statement that the discovery is situated on federal, state, or private lands (as appropriate). In cases of discoveries of human remains on private land, Keystone will advise the landowner that Native American tribe(s) with an identifiable interest in the discovery may request to inspect the burial and make recommendations concerning the disposition of the remains within 48 hours of being notified. The South Dakota SHPO may offer to mediate consultation with the landowner.

A forensic expert may be required to determine whether the remains are Native American or Euro-American. If the remains are found to be Native American and the discovery is on private or state lands, SHPO will initiate the notification and consultation process involving the appropriate tribe(s) and/or private landowner. If the remains are found to be Native American and the discovery is on BLM or other federally managed lands, the BLM/lead federal agency will initiate the notification and consultation process involving the appropriate tribe(s) and/or private landowner (BLM 2004). Additionally, if the remains are found to be Native American, the Department of State will comply with all applicable provisions of NAGPRA. The South Dakota SHPO will also determine the appropriate course of action for any non-Native American human remains, and this may include excavation.

After the appropriate course of action has been determined, the Department of State, in consultation with the South Dakota SHPO, will provide Keystone with written notification of its decision, including specific details of any actions that Keystone must complete before written authorization to proceed with construction is granted. Keystone will provide written notification to the Department of State upon completion of any such actions. That notification will include a statement of the nature, scope, and outcomes of the actions completed. After Keystone has successfully fulfilled any such responsibilities, the Department of State will provide Keystone with authorization to proceed with the halted construction activity, provided that the remains are not within an NRHP-eligible archaeological site requiring additional investigations. If the discovery is within an NRHP-eligible site, the procedures outlined in Section 2.0 above may apply. The authorization will include a statement of any stipulations that will apply during or after the resumption of construction. Keystone will provide written documentation to the Department of State after any such stipulations have been fulfilled.

In all cases of human remains to which the County Sheriff and County Coroner have relinquished jurisdiction, the remains will be held temporarily by the Department of State until their final disposition is determined.

3.0 REFERENCES CITED

Bureau of Land Management (BLM)

2004 *Tribal Consultation Under Cultural Resource Authorities: Bureau of Land Management Handbook H-8120.* United States Department of the Interior, Bureau of Land Management.

ATTACHMENT A

Keystone XL Pipeline Field Attachment: Plan for Unanticipated Historic Properties and Human Remains in South Dakota

KEYSTONE XL PIPELINE FIELD ATTACHMENT:

PLAN FOR UNANTICIPATED HISTORIC PROPERTIES AND HUMAN REMAINS IN SOUTH DAKOTA

A. INTRODUCTION

In compliance with provisions of the National Historic Preservation Act, the Native American Graves Protection and Repatriation Act (NAGPRA), and the provisions of applicable South Dakota state laws, TransCanada Keystone Pipeline, LP (Keystone) has established the following procedures to be used in the event that previously unreported historic properties or human remains are found during construction of the Keystone XL Pipeline Project (the Project).

The procedures differ depending on whether suspected human remains or other significant cultural materials are encountered.

B. IF CULTURAL MATERIALS ARE DISCOVERED BY CONSTRUCTION PERSONNEL

Contractor must stop work immediately to protect the integrity of the find as stipulated in the contract General Conditions, Article (to be determined) (Figure A).

If the discovery to be protected is close to construction operations and sensitive to disturbance, the location will be marked and barricaded as stipulated in the contract General Conditions, Article (to be determined).

Contractor will not resume work until clearance is granted by the Keystone Environmental Inspector, as stipulated in the contract (to be determined).

Contractor will notify the on-site Construction Inspector or Environmental Inspector, who will notify the Archaeological Consultant (SWCA Environmental Consultants) to inspect the location of the find and evaluate its significance. The Keystone Environmental Specialist will also be notified.

Keystone Environmental Inspector:

[To Be Determined]

Archaeological Consultant:
Erin Salisbury (Project Manager)
SWCA Environmental Consultants
295 Interlocken Blvd., Suite 300
Broomfield, CO 80021
Office telephone: 303-487-1183
Fax: 303-487-1245
E-mail: esalisbury@swca.com

Keystone Environmental Specialist:
[to be determined]

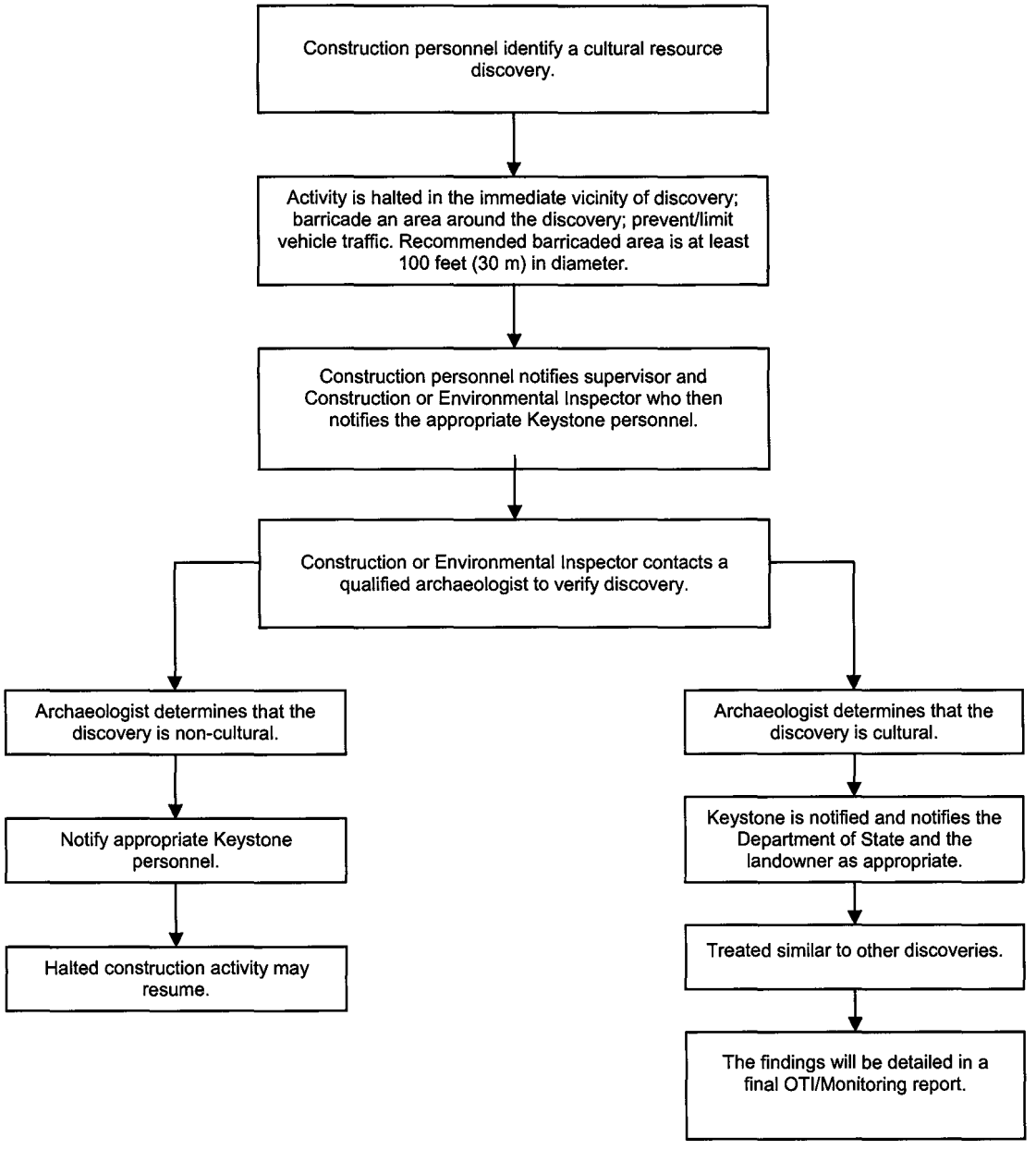

Figure A. Procedures for Addressing Cultural Resource Discoveries by Construction Personnel.

The Archaeological Consultant will promptly travel to the site, evaluate the find, and immediately notify the Environmental Specialist by telephone regarding the significance of the find. If the Archaeological Consultant determines that the discovery is non-cultural, the Construction Inspector or Environmental Inspector will be notified that construction can resume.

If the Archaeological Consultant determines that the find represents a simple find that is not potentially significant, then the Archaeological Consultant will document the find on a South Dakota State Archaeological Research Center for and inform the Construction Inspector or Environmental Inspector that construction can resume. If the Archaeological Consultant determines that the find represents a potentially significant find of cultural materials, the procedures in Section C of this plan will be followed, including immediate cessation of activity within the area. The Archaeological Consultant will notify the relevant agency officer depending on landownership of any complex discoveries, by telephone no more than 48 hours after the discovery, with written follow-up within 36 hours. The Archaeological Consultant, in consultation with the Department of State, will determine site eligibility and identify treatment options. If the Archaeological Consultant determines that the discovery constitutes human remains, the procedures described in Section D of this plan will be followed.

C. IF POTENTIALLY SIGNIFICANT CULTURAL MATERIALS ARE DISCOVERED

The Keystone Environmental Specialist or Archaeological Consultant will promptly notify the Department of State of the find.

The Keystone Environmental Specialist or Archaeological Consultant will also promptly notify the SHPO of the find if the discovery is made on state land.

South Dakota SHPO Contact:

Jim Haug
State Archaeologist
State Historic Preservation Office
South Dakota State Archaeological Research Center
PO Box 1257
Rapid City, SD. 57709
Phone: 605-394-1936
Fax: 605-394-1941
E-mail: Jim.Haug@state.sd.us

The Environmental Specialist or Archaeological Consultant will request input from the Department of State and other parties regarding appropriate measures to avoid additional damage. These steps include:

- Immediate cessation of activity within a sufficient area to protect the discovery itself and provide a buffer zone for adequate and safe investigation of the discovery and any other features or artifacts that may be associated with the discovery.

- A barricade (typically a temporary fence) around the discovery will be erected. The barricade should be sufficiently large to protect the discovery and any known or potential cultural materials associated with the discovery. A general guideline for the barricade will be to provide a buffer of at least 100 feet (30 m) around the discovery, but this barricaded area can be larger or smaller in order to protect the discovery adequately without unnecessary hindrance to construction.
- Discoveries will be recorded and evaluated according to standards and procedures used for recording sites during the Class III inventory phase of the Project.
  - Initial treatment of discovery will include recording location of the remains within the right-of-way and within any previously recorded site boundary; recording summary data concerning the discovery (e.g., dimensions, qualitative characteristics, associated remains); photographing discovery; profiling trench walls containing cultural features and overall context of exposed discovery; profiling trench walls containing cultural features or strata (where safe and prudent).
  - Discoveries made during right-of-way monitoring may require excavation; all feature fill will be collected for laboratory analysis (e.g., pollen studies, flotation, carbon dating); feature plans and profiles drawn; features photographed; uncollected feature fill to be screened using 0.25-inch mesh.
- Discovery report describing each identified and evaluated site to be submitted to Keystone, the Department of State
- If find determined eligible for National Register of Historic Places nomination, a Supplementary Historic Preservation Treatment Plan will be prepared.

If the find is determined to be isolated, a simple discovery, or completely disturbed by construction activities, then the Environmental Specialist will consult with the Department of State and other parties, and will request approval to resume construction, subject to any further mitigation that may be required.

D. IF HUMAN REMAINS ARE DISCOVERED

Keystone will treat all human interments in accordance with federal and state law as it applies to private, state, and public lands in South Dakota.

The Keystone on-site Environmental Inspector will take appropriate measures to protect the discovery from further disturbance. Upon being notified by the Archaeological Consultant of the presence of human remains, Keystone personnel will determine landownership status. Keystone will begin the official notification process by promptly contacting the appropriate federal, state, or private landowner (if applicable) (Figure B). The measures to protect the human remains and any associated artifacts will remain in effect until they have been fully evaluated and the appropriate treatment of the discovery (if applicable) has been completed and Keystone has received formal notice to proceed with the construction activity.

The Keystone Environmental Specialist or the Archaeological Consultant will also notify the appropriate county sheriff's office. The appropriate county sheriff's office will be requested to

contact the county coroner. The county sheriff's office and county coroner have jurisdiction with regard to any discovered human remains (Table A). If they determine that the remains are not modern or do not reflect a crime scene and/or if they otherwise relinquish their jurisdiction over the remains, Keystone will consult with the appropriate parties regarding additional steps to be followed.

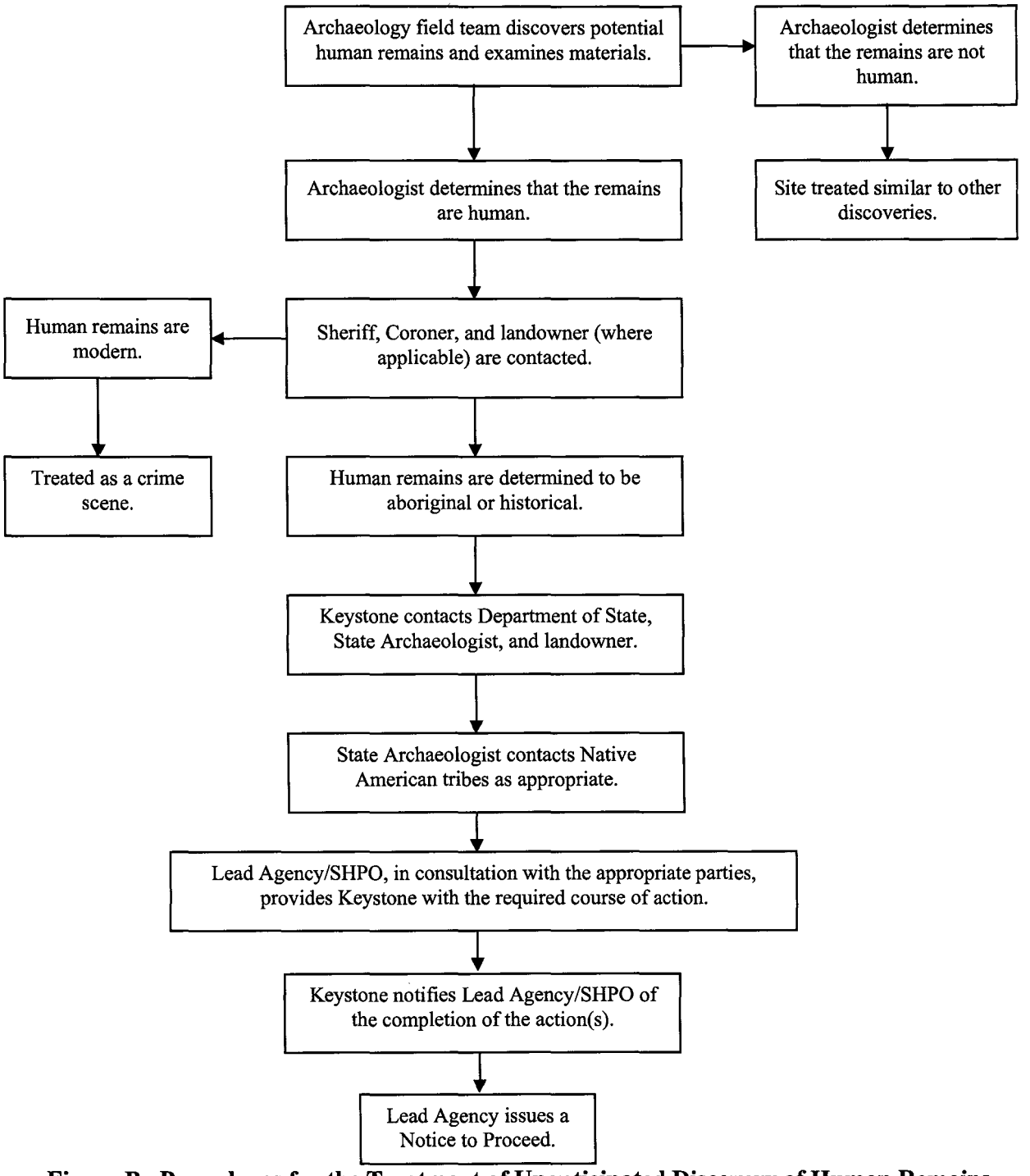

Figure B. Procedures for the Treatment of Unanticipated Discovery of Human Remains in South Dakota.

The Keystone Environmental Specialist or Archaeological Consultant will promptly notify the Department of State of the find.

The Keystone Environmental Specialist or Archaeological Consultant will also promptly notify the SHPO of the find if the discovery is made on state land.

South Dakota SHPO Contact:

Jim Haug
State Archaeologist
State Historic Preservation Office
South Dakota State Archaeological Research Center
PO Box 1257
Rapid City, SD 57709
Phone: 605-394-1936
Fax: 605-394-1941
E-mail: Jim.Haug@state.sd.us

Regardless of land status, if the human remains are modern, the sheriff or coroner will assume responsibility. Human remains will be treated in accordance with procedures agreed upon by the Department of State and SHPO for state and private land, and with applicable federal law for finds on all lands (such as the Native American Graves Protection and Repatriation Act).

If the human remains appear to be prehistoric or historic Native American and are on federal land, the BLM will meet the requirements of NAGPRA for all Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony on a case-by-case basis in accordance with 43CFR10.

Table A. South Dakota Sheriff and Coroner Contact Information for Human Remains Discoveries during Construction of the Keystone XL Pipeline.

Name	Title/Agency	Phone	Fax	Address	E-Mail
Fred Lamphere	Butte County Sheriff	605-892-3324	605-723-3327	Butte County Sheriff's Office 839 5th Avenue Belle Fourche, SD 57717	Fred.Lamphere@buttesd.org
Larry Hanes	Haakon County Sheriff	605-859-2741	605-859-2730	Haakon County Sheriff's Office 140 S. Howard Phillip, SD 57567	haakonso@gwtc.net
William Clarkson	Harding County Sheriff	605-375-3414	605-375-3415	Harding County Sheriff's Office 410 Ramsland Street Buffalo, SD 57720	hcso@sdplains.com
Arlo Madsen	Jackson County Sheriff	605-837-2285	605-837-2439	Jackson County Sheriff's Office 700 Main Street Kadoka, SD 57543	
Fred Koester	Jones County Sheriff	605-669-7111	605-669-7109	Jones County Sheriff's Office 104 E. 4th Street Murdo, SD 57559	jonescoso@cji.net
Ron Merwin	Meade County Sheriff	605-347-2681	605-347-6824	Meade County Sheriff's Office 1400 Main Street Sturgis, SD 57785	
Dustin Baxter	Mellette County Sheriff	605-259-3362	605-259-3069	Mellette County Sheriff's Office 321 E. 4th Street White River, SD 57579	Dustin.Baxter@state.sd.us