U.S. Department of Justice

United States Attorney
District of Oregon
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June 10, 2004

Alan L. Schneider
1437 S.W. Columbia Street, Suite 200
Portland, OR 97201-2535

Paula A. Barran
Barran Liebman, LLP
601 S.W. 2nd Avenue, Suite 2300
Portland, OR 97204

RE: Plaintiffs' Proposed Study Plan; *Bonnichsen et al. v. United States*

Dear Mr. Schneider and Ms. Barran,

Prior to the stay and appeal in the above entitled matter, the United States corresponded with you regarding the possibility of arranging a meeting between our respective clients to discuss the logistics and concerns of studying the skeletal remains known as the Kennewick Man. *See, e.g.,* Letters dated February 17, 2003 and February 21, 2003 between Alan Schneider, David Shuey, and myself. Due to the amended decision by the Ninth Circuit, dated April 19, 2004, and the recent mandate, the United States considered it to be appropriate to re-initiate the conversations regarding your clients' proposed study plan.

Please find attached the United States Corps of Engineers' response to your clients' proposed study plan, dated October 10, 2002, for the Kennewick skeletal remains. The United States supports a face-to-face meeting between our clients so the logistics of the study plan can be finalized and the study phase can commence as soon as possible. Please let me know your thoughts regarding the appropriate way to proceed with this matter.

Sincerely,

KARIN J. IMMERGUT
United States Attorney

SIGNED

TIM SIMMONS
Assistant United States Attorney

Attachment: Agency's Response to Proposed Study Plan

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NORTHWESTERN DIVISION
PO BOX 2870
PORTLAND OR 97208-2870

REPLY TO
ATTENTION OF

CECC-NWD

June 8, 2004

Mr. Tim Simmons
Assistant U.S. Attorney
1000 SW 3rd Ave, Suite 600
Portland, Oregon 97204

RE: Plaintiff's Study Plan; *Bonnichsen et al. v. United States*

Dear Mr. Simmons,

This letter serves as a response to the plaintiffs' proposed study plan, dated October 10, 2002, for the Kennewick skeletal remains in light of the amended decision by the Ninth Circuit, dated April 19, 2004, and the recent mandate. Prior to the stay and appeal in this case, the plaintiffs and the Government were corresponding regarding the possibility of arranging a meeting to discuss the logistics of the study and the concerns of both parties. *See, e.g.,* Letters dated February 17, 2003, and February 21, 2003, between Alan Schneider, David Shuey, and Tim Simmons. The Corps suggests that such a coordination meeting take place at the Burke Museum in Seattle and that we work with the plaintiffs on a mutually agreeable date for this meeting.

The Corps recommends approval of a number of the plaintiffs' proposed studies, although as has been mentioned previously, the agency has a number of concerns about the details of some of the individual studies given the brevity of explanations in the proposed study plan. The attached memorandum from the curator of record, Dr. Michael Trimble, addresses these concerns in greater specificity. We would like to discuss these concerns with the plaintiffs at the coordination meeting so that we could cooperatively develop a revised study plan that satisfies the plaintiffs' research objectives and the federal responsibility to "protect and preserve the condition, research potential, . . . and uniqueness of the collection." 36 C.F.R. § 79.10. The Corps manages and curates the Kennewick remains for the U.S. Government, and in this capacity it is their responsibility to protect the archaeological resources "for the present and future benefit of the American people." 16 U.S.C. §§ 470aa-470mm.

The Corps has several overarching general concerns. One of these concerns involves the amount of handling contemplated by the proposed plan, particularly when the handling is duplicative of previously performed studies and studies proposed by the Plaintiffs' current study plan. Furthermore, the study plan does not address the uniqueness of this collection nor how the proposed studies will further our understanding of Kennewick Man and prehistory.

In analyzing the proposed study plan, it is important to remember that no fewer than eighteen expert scientists have previously examined the remains in some capacity. The

Kennewick collection has been physically examined, measured, and recorded using standard scientific methods and techniques. Sediments adhering to the bones and trapped within bone cavities were described and analyzed for similarity with the soil sediments in the vicinity of the discovery site of the remains. The stone projectile point embedded in the skeleton's pelvis has been described in detail and analyzed. Bone samples have been taken and dated to confirm the ancient date for the remains. A taphonomic study of the bones has been conducted. Radiocarbon laboratories at the University of California, Riverside, the University of Arizona, and BetaAnalytic, Inc. conducted AMS carbon-14 tests of the remains. Parts of the skeleton have been examined using computer-aided tomography (CAT scans) and standard X-rays. Ancient DNA laboratories at the University of California, Davis, the University of Michigan, and Yale University attempted to isolate and amplify ancient DNA from the skeleton. All of these studies were conducted with the purpose of determining Kennewick Man's origins while still maintaining the federal responsibility to preserve the collection for the future. Curators and conservation experts monitored all the studies and recommended alternative methods where appropriate. Handling was kept to a minimum throughout these studies in order to avoid deterioration of the remains, while allowing the researchers to answer the necessary questions given their research design. The conservation experts who have been invited to consult on the collection's care, Dr. Nancy Odegaard (University of Arizona) and Dr. Vicki Cassman (University of Nevada, Las Vegas) have noted changes in the condition of the collection that can be directly attributed to repeated handling associated primarily with study and assessment. This correlation has been noted in their conservation assessment reports and has been reported to the court. The most recent conservation assessment reports are attached to this letter.

Multiple scientists in the plaintiffs' study plan propose to measure and make observations on the collection. We understand the desire and need to verify some of the earlier measurements and studies, but feel strongly that for this unique and fragile collection, the number of individuals conducting standard measurements and observations should be kept to a minimum. The Governments' experts would like to discuss with the plaintiffs an alternative to the proposed plan in which a small team (*e.g.*, 2–3 plaintiff scientists) is chosen to take all standard measurements and observations on the remains. Following the standard measurements and observations, individual experts can perform specific measurements and observations needed for their own comparative databases and studies that are unique to their methods or research design. It is assumed that all studies will be closely coordinated with the plaintiffs and the plaintiffs' studies will take precedence over the non-plaintiffs named in the proposed study plan. We believe that this approach would best protect the collection for the future, while allowing the plaintiff scientists to obtain the desired information from the collection. Through adoption of this approach, or one similar, my clients will be able to accommodate many of the proposed studies.

All scientists (other than the named plaintiffs) involved in the study will need to demonstrate that they are qualified by providing a copy of their curricula vitae. *See* 36 C.F.R. § 79.10(b). Copies of all reports produced from the studies, photos, and the raw data will be furnished to the government at the plaintiffs' cost. As mentioned earlier, our specific concerns are outlined in Dr. Trimble's attached memorandum, but we truly believe that these concerns can be addressed and resolved at a meeting with the plaintiffs.

Due to the preservation concerns surrounding the remains and the destructive nature of some of the proposed studies, the United States must object to five (5) of the proposed studies: microsampling [Study Plan (SP at 17)]; stable isotope analysis (SP at 21); calcium carbonate radiocarbon (SP at 21); sediment sampling and analysis (SP at 22); and, dental peels of occlusal surfaces (SP at 29). The preservation concerns inherent to the remains are too serious to accommodate these five destructive studies, as proposed, at this time. *See* 36 C.F.R. § 79.10(d). However, further discussions with the Plaintiffs involved in these studies and refinement of the scope of these destructive studies would allow the United States to further evaluate these studies. In addition, depending upon the impact on the remains from the other proposed studies, the United States would be willing to re-evaluate its concerns regarding the five above studies.

Please feel free to contact me at (503) 808-3763 if you have any questions.

Sincerely,

SIGNED

JENNIFER R. RICHMAN
Assistant Division Counsel

Encls.

DEPARTMENT OF THE ARMY
ST. LOUIS DISTRICT, CORPS OF ENGINEERS
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103-2833

REPLY TO
ATTENTION OF:

CEMVS-ED-Z

7 June 2004

MEMORANDUM FOR U.S. Army Corps of Engineers, Northwestern Division, ATTN: CECC-NWD (Richman), P.O. Box 2870, Portland, Oregon 97208-2870

SUBJECT: Response to Plaintiffs' October 10, 2002, Study Plan for the Kennewick Remains, *Bonnichsen et al. v. United States*

1. My staff, the government's contracted conservators (Dr. Nancy Odegaard and Dr. Vicki Cassman), and I have reviewed the Plaintiffs' October 10, 2002, study plan, and as the Chief Curator for the Kennewick remains I am submitting further comments on their plan (see enclosure).

2. These comments are consistent with requests for the study of archaeological collections (including human remains) that the St. Louis District recently has reviewed and is in line with the terms and conditions that are normally imposed on studies of human remains.

3. If you have any questions about the contents of the enclosure, please call me at (314) 331-8466.

SIGNED

Encl

MICHAEL K. TRIMBLE, Ph.D.
Director, Mandatory Center of Expertise
for the Curation and Management
of Archaeological Collections

U.S. ARMY CORPS OF ENGINEERS
CHIEF CURATOR FOR THE KENNEWICK REMAINS
COMMENTS ON PLAINTIFFS' STUDY PLAN

Inventory of Skeletal Elements (SP at 2). We agree that a precise, baseline inventory is essential to the scientific process. Powell and Rose (1999) performed such an inventory as a part of their study. Powell and Rose checked the inventory prepared by the Corps curation team and Dr. Doug Owsley in late October 1998 for accuracy. Several changes were made, including altering the completeness scores for some bones, moving several bones from one side of the body to the other, changing the numbers (L2 v. L4) of two lumbar vertebrae, and removing one fragment of maxilla from the faunal collection from the site. We understand the desire to verify particular elements but would like to know which particular elements the Plaintiffs are concerned with and for them to limit additional investigation efforts to those items that are in question. Again, our concern stems from a requirement to reduce handling to preserve the collection for the future.

Reassembly and Reconstruction of Skeletal Elements (SP at 3). Due to the presence of old adhesives in areas of current misalignment and unstable bone, the use of any additional adhesives will pose further risk to the skeleton. The use of adhesives will also complicate new reconstructions and make the ability to realign or adjust fragments very difficult. An example of this concern is illustrated with the cranium. Because of the extremely fragile nature of the skull, and previous attempts at permanent reconstruction using inappropriate materials, the skull would have to be disassembled in order for it to be reconstructed. This would cause significant damage to the remains. We would like to discuss alternate methods and materials that facilitate reconstruction for the study and deconstruction of the joins upon completion. For example, our conservators and curation experts have recommended the use of a conservationally stable wax material to facilitate the temporary reassembly of the cranium. For optimal preservation, reconstruction studies should include provisions for all the remains to be deconstructed, placed in their original containers, and returned to their original condition at the end of the study.

Taphonomic Analysis of the Skeleton (SP at 4). Similar studies were performed by Walker, Larsen, and Powell (2000). We are interested in discussing the comparability of their studies with the proposed plan in order to reduce unnecessary handling. Our suggestion would be to combine this study with some of the other similar proposed studies and have a small team perform all basic observations for the group, with individual study leaders conducting unique observations. It would be preferable to build upon the detailed taphonomic analysis and description conducted and reported on by Walker et al. by adding variables and values to the work that has already been carried out (Walker et al. 2000, Table 1).

Examination and Description of Calcium Carbonate Concretions (SP at 5). Calcium carbonate concretions and various other sediments have been studied in detail and reported by Huckleberry and Stein (1999) and Walker et al. (2000). These studies reached conclusions regarding the origin of the sediments adhering to the skeleton (either from the embankment where the skeleton likely was buried originally or from the river sediments from which the skeletal elements were recovered), how the locations of sediments on the surface of certain skeletal elements indicated the original orientation of the skeleton in its original burial, and other matters. How does the proposed study differ from the previous studies and also how does it relate to the other studies, such as the proposed micro and radiocarbon sampling. Again, undue repetition of previously performed actions will lead to increased handling and damage to the collection. Furthermore, the related study for radiocarbon in the concretions indicates, while not expressly stated, that concretions will be removed from the bones. During previous studies, the outer surface of the bone or periosteum was also removed with the concretion. Non-destructive examination of the concretions will be allowed, provided handling is kept to a minimum, but further removal of concretions will not be allowed due to the likelihood for damage.

Investigation of Embedded Projectile Point (SP at 6). The projectile point is obviously an important aspect of the collection. Formal studies were carried out and published by Fagan (1999) and Powell and Rose (1999). X-rays and CT-scans enhanced by computer processing of the data were done on the ilium as a part of those studies. The proposed study plan makes no reference to the methods or techniques to be used. The 1999 investigations concluded that additional visual inspection alone would not be productive. Further examination of the computer-enhanced CT-scans may be useful, however, and further consideration of this would be profitable. Therefore, further investigations should take into account what has been learned from the 1999 and 2000 investigations and not be unduly duplicative. The element in which the projectile point is embedded is one of the most fragile elements in the entire collection. We can discuss how best to accomplish the research objectives while minimizing the impact to the bones.

Brace's Measurements and Observations (SP at 7). Our suggestion would be to have a team take the standard measurements for verification, rather than have each scientist duplicate standard measurements and produce unnecessary handling. After the standard measurements are taken (which, of course, would be shared with the entire team), individuals may then perform their unique measurements and observations. We are open to other ideas on how the measurements can be carried out while still minimizing excess handling. We would also like to know how Dr. Brace's proposed study differs from Powell and Rose (1999).

Examination of Hands and Feet (SP at 7). Hands and feet are the most robust bones in the collection and should withstand this examination, so we would recommend approval of this study. However, we would like to know more about the specific measurements that are proposed and how this study can add to the understanding of Kennewick Man and his times. We would like to see the photographs coordinated with the larger photographic study to reduce handling.

Chatters' Measurements and Observations (SP at 8–9). Most of the measurements proposed for this study can be provided by a consistent set of measurements taken by a small team. See the concerns discussed under Brace's Measurements above. Dr. Chatters could then make any additional measurements. This process would avoid unnecessary duplication and destructive handling.

Cook's Paleopathology Examination (SP at 10). We have the same concerns as were noted in Taphonomic Analysis. Many of the aspects of this study can be folded into having a small team of experts provide a consistent set of observations and measurements. We would also like to see all photographs coordinated with the larger photographic study to further reduce handling.

Gill's Measurements and Observations (SP at 10). Many of the measurements and observations for this study can be provided by a consistent set of comprehensive measurements and observations by a smaller expert team that would avoid unnecessary duplication and destructive handling. Dr. Gill would then be allowed to make the unique measurements needed for his comparative database. This concern is noted in Brace's Measurements above.

Jantz's Cranial Coordinates, Measurements and Observations (SP at 11). We have the same concerns as are noted in Brace's Measurements. Many of the measurements and observations for this study can be provided by a consistent set of comprehensive measurements and observations made by a smaller expert team that would avoid unnecessary duplicative and destructive handling.

Jantz's Measurements of Postcranial Skeleton (SP at 12). We have the same concerns as are noted in Brace's Measurement. Many of the measurements and observations for this study can be provided by a consistent set of comprehensive measurements and observations made by a smaller expert team that would avoid unnecessary duplicative and destructive handling.

Owsley's Paleopathology and Lifestyles Examination (SP at 13). We have the same concerns as were noted in Taphonomic Analysis. It would be preferable to build upon previous work and coordinate this study with the other paleopathology study proposed.

Steele and Wright's Postcranial Element study (SP at 14). We have the same concerns as were noted in Taphonomic Analysis and Brace's Measurements. We feel that many of the measurements and observations can be provided by a consistent set of comprehensive measurements and observations made by a smaller team that would avoid unnecessary duplicative and destructive handling.

Turner's Dental Measurements and Observations (SP at 15). We have the same concerns as are noted in Brace's Measurements. Many of the measurements and observations for this study can be provided by a consistent set of comprehensive measurements and observations made by a smaller expert team that would avoid unnecessary duplicative and destructive handling.

Microsampling (SP at 17). This study should not be allowed at this time. The condition of the bones varies considerably in this collection and making use of particular tools such as the Dremel may be unsuitable for use on certain bone due to collateral damage from pressure and vibrations. A large number of bones are proposed to be tested and the amount of irreversible damage is significant. The amount of damage will vary from bone to bone and increase with the duration of the stress applied.

Microsampling of Archived Test Remnants (SP at 19). We are willing to recommend approval of this study, although we will need to discuss which archived samples will be used in the study.

Stable Isotope Analysis (SP at 21). This study should not be allowed at this time. Many of our concerns for this study parallel our concerns with Microsampling above. To be considered in the future, such a study would have to take into account the stable isotope analysis conducted by Dr. Taylor and reported as part of his analysis (Taylor 2000).

Calcium Carbonate Radiocarbon (SP at 21). This study should not be allowed at this time. Many of our concerns for this study parallel our concerns with Microsampling. In addition, the assessment of calcium carbonate nodules by Huckleberry and Stein (1999) and Walker et al. (2000) should be considered for any future study such as this one.

Sediment Sampling and Analysis (SP at 22). This study should not be allowed at this time. Many of our concerns for this study parallel our concerns with Microsampling. In addition, the assessment of the sediments by Huckleberry and Stein (1999) and Walker et al. (2000) should be considered for any future study such as this one.

Scientific Photography (SP at 23). The additional information you provided on this study was appreciated. We would like to see more coordination between this study and other studies where photographs are proposed. Our suggestion would be to have Mr. Clark handle all the photography needed by individual scientists. He can coordinate their specific needs into his photography session. Copies of all photographs shall be provided to the government.

Mandible and Maxilla X-Rays (SP at 24). We are not opposed to further x-rays or CT scans of the collections, but we would like to understand what is lacking in the images already taken of the remains. Logistics, including security, transportation, and cost, will be discussed prior to the study.

Skull X-rays (SP at 25). We have the same concerns as are noted in Mandible and Maxilla X-Rays above.

Long Bone and Pathological Bone X-rays (SP at 25). We have the same concerns as are noted in Mandible and Maxilla X-Rays.

CT Imaging of Skull and Other Bones (SP at 26). We have the same concerns as are noted in Mandible and Maxilla X-Rays.

Laser Scan of Skull and Other Elements (SP at 27). We think that a laser scan may be very useful, and we look forward to further discussions to better understand what is involved in the preparation and actual performance of the scan.

SEM Bone Analysis (SP at 28). Further discussion of this study needs to take place because the proposal does not indicate the procedures to be used. What coatings will be applied to the bones, if any? How many and which elements are anticipated to be processed? How are the elements to be prepared? Will any bone be cut for the analysis? From the information provided, we are not able to adequately assess the effect of this study on the remains.

Dental Peels of Occlusal Surfaces (SP at 29). This study should not be allowed at this time. There are differences in the condition of the bone adjacent to the dentition that may affect the mold process. Variations in bone condition and surface stability will create irreversible harm to the collection.

REFERENCES CITED

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Huckleberry, Gary, and Julie K. Stein

1999 Analysis of Sediments Associated with Human Remains Found at Columbia Park, Kennewick, WA. In *Report on the Non-Destructive Examination, Description, and Analysis of the Human Remains from Columbia Park, Kennewick, Washington,* Chapter 3. National Park Service Archeology and Ethnology Program website, http://www.cr.nps.gov/aad/kennewick/huck_stein.htm.

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2000 Amino Acid Composition and Stable Carbon Isotope Values on Kennewick Skeleton Bone. In *Report on the DNA Testing Results of the Kennewick Human Remains from Columbia Park, Kennewick, Washington,* Attachment B. National Park Service Archeology and Ethnology Program web site, http://www.cr.nps.gov/aad/kennewick/taylor2.htm.

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2000 Final Report on the Physical Examination and Taphonomic Assessment of the Kennewick Human Remains (CENWW.97.Kennewick). In *Report on the DNA Testing Results of the Kennewick Human Remains from Columbia Park, Kennewick, Washington,* Chapter 5. National Park Service Archeology and Ethnology Program website, http://www.cr.nps.gov/aad/kennewick/walker.htm.