

**United States Department of the Interior
Bureau of Land Management**

Decision Record

**Determination of NEPA Adequacy
DOI-BLM-UT-0300-2015-0029-DNA**

June 8th, 2015

2015 Dinosaur Excavations

Location:

Kaiparowits Plateau, Kane and Garfield Counties, Utah

Grand Staircase-Escalante National Monument
669 South Highway 89A
Kanab, Utah 84741
Phone: (435) 644-1200
Fax: (435) 644-1250



DECISION RECORD
Determination of NEPA Adequacy

DOI-BLM-UT-0300-2015-0029-DNA
2015 Dinosaur Excavations

Decision

I have decided to authorize collection at four vertebrate fossil sites (three dinosaur, one marine reptile) in non-to-sparsely vegetated badlands on Grand Staircase-Escalante National Monument (GSENM). These activities are described in the Determination of NEPA Adequacy worksheet (see DOI-BLM-UT-0300-2015-0029-DNA). This authorization will allow for the scientific collection, using standard techniques, of the remains of rare vertebrate fossils from the Tropic, Wahweap and Kaiparowits Formations in the Kaiparowits Plateau region of GSENM.

Decision Rationale

After reviewing the attached Determination of NEPA Adequacy worksheet, I have determined that existing programmatic environmental assessment (UT-030-06-16-EA) adequately analyzes the environmental effects of these fossil collections. I have also determined there is no need to prepare new or supplemental analysis.

Administrative Remedies

My decision shall take effect immediately and shall remain in effect while any appeal is pending unless the Interior Board of Land Appeals issues a stay (43 CFR 2920.2-2(b)).

My decision may be appealed to the Interior Board of Land Appeals (IBLA), Office of the Secretary, in accordance with the regulations contained in 43 CFR Part 4. Any appeal must be filed within 30 days of this decision. Any notice of appeal must be filed with the Monument Manager, at 669 South Highway 89A, Kanab, Utah 84741. The appellant shall serve a copy of the notice of appeal and any statement of reasons, written arguments, or briefs on each adverse party named in the decision, not later than 15 days after filing such document (see 43 CFR 4.413(a)). Failure to serve within the time required will subject the appeal to summary dismissal (see 43 CFR 4.413(b)). If a statement of reasons for the appeal is not included with the notice, it must be filed with the IBLA, Office of Hearings and Appeals, U.S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, VA 22203 within 30 days after the notice of appeal is filed with the Monument Manager.

Notwithstanding the provisions of 43 CFR 4.21(a)(1), filing a notice of appeal under 43 CFR Part 4 does not automatically suspend the effect of the decision. If you wish to file a petition for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal.

A petition for a stay is required to show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied,
- (2) The likelihood of the appellant's success on the merits,
- (3) The likelihood of immediate and irreparable harm if the stay is not granted, and
- (4) Whether the public interest favors granting the stay.

In the event a request for stay or an appeal is filed, the person/party requesting the stay or filing the appeal must serve a copy of the appeal on the Regional Solicitor's Office, Wallace F. Bennett Federal Building, 125 South State Street Mailstop 201, Salt Lake City, UT 84138.

Authorizing Official



Cynthia Staszak
Monument Manager



Date

**United States Department of the Interior
Bureau of Land Management**

**Determination of NEPA Adequacy
DOI-BLM-UT-0300-2015-0029-DNA**

May, 2015

2015 Dinosaur Excavations

Location:

Kaiparowits Plateau, Kane and Garfield Counties, Utah

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Worksheet

2015 Dinosaur Excavations Determination of NEPA Adequacy

U.S. Department of the Interior
Bureau of Land Management

OFFICE: Grand Staircase-Escalante National Monument (GSENM)

TRACKING NUMBER: DOI-BLM-UT-0300-2015-0029-DNA

PROPOSED ACTION TITLE/TITLE: 2015 Dinosaur Excavations

LOCATION/LEGAL DESCRIPTION: Kaiparowits Plateau Region, Kane and Garfield Counties, UT

A. Description of the Proposed Action and Any Applicable Mitigation Measures

BLM is proposing to authorize scientific collection of four vertebrate fossil sites (three dinosaur and one marine reptile) in non-to-sparsely vegetated badlands. Scientific collection activities would follow standard techniques. One of the sites is being proposed by the Denver Museum of Nature and Science (Dr. Joseph Sertich), two by GSENM's Paleontology Program (Dr. Alan Titus), and one by the Natural History Museum of Utah (Dr. Randall Irmis). No off-road vehicular access would be required and no heavy equipment would be used. All excavation would be conducted by hand tools only, but might include small hand held power tools such as a portable jackhammer and/or a rock saw. Crews would hike all supplies in to the sites in packs. Typical area of a site would be about 20 meters square but a couple of the site might approach 30 meters square. Specimens would be exposed, mapped, and photographed, and then capped and wrapped in protective plaster jackets for transport. Transport would be via manual carry by crews or for very large specimens, transport out by helicopter airlift. All group size limits for the Management Zone Prescriptions would be followed. Crews would, with one exception be camping at off-site established camps and hiking in each day. All specimens remain public property, with the Denver Museum specimens being repositied there and the BLM and NHMU specimens going to the Natural History Museum of Utah.

Work is expected to commence immediately as schedules of the various crews allow. Some of the sites might involve multi-year efforts, depending on how extensive the bone deposits are. Work may continue until the end of the 2017 calendar year. The details of each individual site are given below.

B. Land Use Plan (LUP) Conformance

LUP Name: GSENM Management Plan

Date Signed: November 1999

The proposed action is in conformance with the Management Plan because it is specifically provided for in the following decisions: SCI-2, SCI-4, PAL-1, PAL-2, and PAL-3.

SCI-2 and SCI-4 allow for the study, collection, or recording of scientific information and disseminating the results of scientific research, especially on resources threatened with loss over time.

PAL-1 and PAL-2 identify the importance of inventorying paleontological resources and when necessary, excavating and curating those resources. PAL-3 emphasizes preventing damage to paleontological resources and developing partnerships with universities to protect paleontological resources.

As described for each site below, the proposed action would aid in the preservation and protection of paleontological resources.

C. Identify the applicable National Environmental Policy Act (NEPA) documents and other related documents that cover the proposed action.

The Programmatic EA for small-scale dinosaur excavations in poorly vegetated badlands settings (UT-030-06-016-EA) that was completed in 2007.

The Decision for the Programmatic EA for small-scale dinosaur excavations in poorly vegetated badlands settings signed on June 8, 2007.

D. NEPA Adequacy Criteria

1. Is the new proposed action a feature of, or essentially similar to, an alternative analyzed in the existing NEPA document(s)? Is the project within the same analysis area, or if the project location is different, are the geographic and resource conditions sufficiently similar to those analyzed in the existing NEPA document(s)? If there are differences, can you explain why they are not substantial?

Yes, the Proposed Action is a feature of the selected alternative in the Programmatic EA signed in June 2007. The size of the sites, the scope of work, the methods used, and the physical and biological setting (sparsely vegetated badlands) are identical to those in the programmatic analysis.

2. Is the range of alternatives analyzed in the existing NEPA document(s) appropriate with respect to the new proposed action (or existing proposed action), given current environmental concerns, interests, and resource values?

Yes, the existing range of alternatives is adequate. For such actions, there are only two alternatives, either collect the resource or do not collect it (no action). No new information that would reshape the alternatives analyzed in the programmatic EA has come to light.

3. Is existing analysis adequate in light of any new information or circumstances (such as, rangeland health standards assessment; recent endangered species listings, updated list of BLM sensitive species)? Can you reasonably conclude that new information and new circumstances would not substantially change the analysis of the new proposed action?

Yes, the existing analysis is adequate. No new information regarding the impacts of this type of activity has come to light since the programmatic analysis was completed in 2007. The setting and type of activity included in the Proposed Action make the effects of these fossil excavations on other environmental concerns almost imperceptible.

4. Are the direct, indirect, and cumulative effects that would result from implementation of the new proposed action similar (both quantitatively and qualitatively) to those analyzed in the existing NEPA document?

Yes, the direct, indirect, and cumulative effects are the same as those analyzed in the existing NEPA document. The analysis of the type of action proposed here was based on a target of 10-20 excavations per year. The annual total for 2015 will be ten (excavations proposed here and the projects approved in previous years such as the Uncle Charlies bonebed and Unicorns and Rainbows projects); therefore the impacts are within the scope of existing NEPA analysis (physical setting, rate, methodology, etc.)

5. Are the public involvement and interagency review associated with existing NEPA document(s) adequate for the current proposed action?

Yes. The programmatic environmental assessment was sent out for public comment (30 days) and was posted on the ENBB (Environmental Notification Bulletin Board) for more than 3 months before the decision was signed. Less than five comments were received and none of these were negative. This meets requirements for public involvement.

E. Persons/Agencies/BLM Staff Consulted:

See Interdisciplinary Team Checklist for this proposal.

CONCLUSION (If you found that one or more of these criteria is not met, then you cannot conclude that the NEPA documentation fully covers the proposed action.)

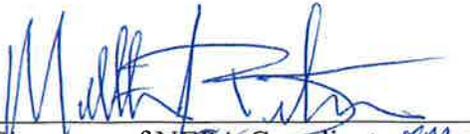
Based on the review documented above, I conclude this proposal conforms to the applicable land use plan. I also conclude the NEPA documentation adequately considered the impacts of the proposed action and constitutes BLM's compliance with the requirements of the NEPA.

/s/ Alan Titus

4/29/2015

Signature of Project Lead

Date



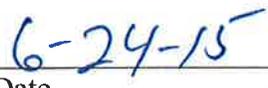
Signature of NEPA Coordinator



Date



Signature of the Authorized Officer



Date

Note: The signed CONCLUSION at the end of this worksheet is part of an interim step in the BLM's internal analysis process and does not constitute an appealable decision; however, it constitutes an administrative record to be provided as evidence in protest, appeals, and legal procedures.

ATTACHMENTS:

- Interdisciplinary Team Checklist
- GSENM 2015 Fossil Collections Project Proposal Site Descriptions

**Paleontological Resource Collection Proposal
(PAL2015-1)**

Date: 3/27/2015

Applicants: Dr. Alan Titus (BLM-Grand Staircase-Escalante National Monument-GSENM), Dr. Joseph Sertich (Denver Museum of Nature and Science-DMNS), and Dr. Randy Irmis (Natural History Museum of Utah-NHMU).

Summary of Proposed Action: Drs. Titus, Sertich, and Irmis, are proposing to scientifically collect the fossil remains of dinosaurs and other Cretaceous fossils from the following four sites:

BLM-GSENM

14UTKA-18 (East of Unicorns Hadrosaur I)

This site was found near the end of the FY2104 field season. It is located in Kane County, in the Outback Management Zone and a unit identified as having Wilderness Character (but not a WSA). Preserved are the disarticulated, but well-preserved remains of a large adult hadrosaur dinosaur. Several elements are currently exposed on the surface at this site and there appears to be potential for more. Bone quality is very high. Shapes on the neural spines suggest that this may be a lambeosaur. If confirmed, this would be one of the lower occurrences of a lambeosaur in the Kaiparowits Formation and the specimen has high potential scientific significance. The bones are coming from a mudstone on the east side, and near the top of a low, sparsely-vegetated, north-south trending narrow bench. Overburden is less than one meter over the area proposed for excavation and it would be relatively easy and straightforward to excavate. Area of bone scatter is estimated to be about 7 meters x 4 meters, but that is only an estimate. Standard collection techniques that would be used at the site are detailed at the end of the locality list. Power tools would probably not be required but use of a small portable jackhammer or rock saw might be necessary if very hard rock is encountered in the subsurface. Excavation would probably last two field seasons (2015-2016) and by 2017 the site would be backfilled and start the monitoring process.



Figure 1. Site 14UTKA-18 during initial testing. View is to the southwest.

DOR 14-15 (Rankin's Cottonwood Plesiosaur)

DOR 14-15 was found by David Rankin in October 2014 while conducting an inventory as a BLM volunteer in South Cottonwood Canyon, Kane County. It is not in a WSA and is in the Monument's Passage Zone. The site is located on a west facing slope in badland outcrops of Tropic Shale (Figures 2 and 3). Found at the surface was a partial humerus, ribs, a string of 7 articulated vertebrae, and a number of smaller fragments. Also found were scores of gastroliths, or stomach stones that indicated the entire torso was complete and covered in soft tissue when the carcass hit the sea floor. This suggests a skull and other important elements could be preserved at the site. The overburden is soft shale and power tools would not be needed. The area of the site would be about 3x8 meters. The site would be backfilled and would be totally recovered by the end of the field season.



Figure 2. Overview of DOR-14-15, which is located on the left side of the diagram and labeled “Rankin Plesiosaur.”



Figure 3. Bones exposed during initial test of DOR-14-15.

NHMU

UMNH VP locality 1263 (Nipple Hadrosaur II)

This site was discovered in early 2009 by Alan Titus, who found several vertebrae eroding out of an east facing slope near Nipple Spring, Kane County. It is located in the Monument’s Primitive

Zone and the Wahweap WSA. A joint BLM-NHMU crew surficially tested the site in March 2009 and noted its potential to preserve an associated dinosaur skeleton, but did not record the site or proceed further because of other field priorities (notably the excavation of the tyrannosaurid *Lythronax argestes*). In May 2014, an NHMU crew returned to re-evaluate the site for further work at which point the site was recorded and given a number. They discovered a dense concentration of associated bones in situ, indicating that the majority of a hadrosaurid dinosaur skeleton was likely present in the rock. The preservation quality of the fossil bone is exceptional – in the top 1% for vertebrate sites in the Wahweap Formation. Furthermore, associated dinosaur skeletons from this formation are very rare, with less than a dozen known.

We propose to completely excavate this skeleton via standard techniques outlined at the end of the site list as it is at risk from erosion; the fossils are preserved in soft mudstone that erodes quickly during rainstorms. Removal of the specimens would be done by hand unless they exceed 45 kilograms in weight or the terrain is too steep and difficult that hand carry would be unsafe. Such specimens would be airlifted by a helicopter, which is authorized under the FONSI/DR signed for UT-030-06-16-EA.

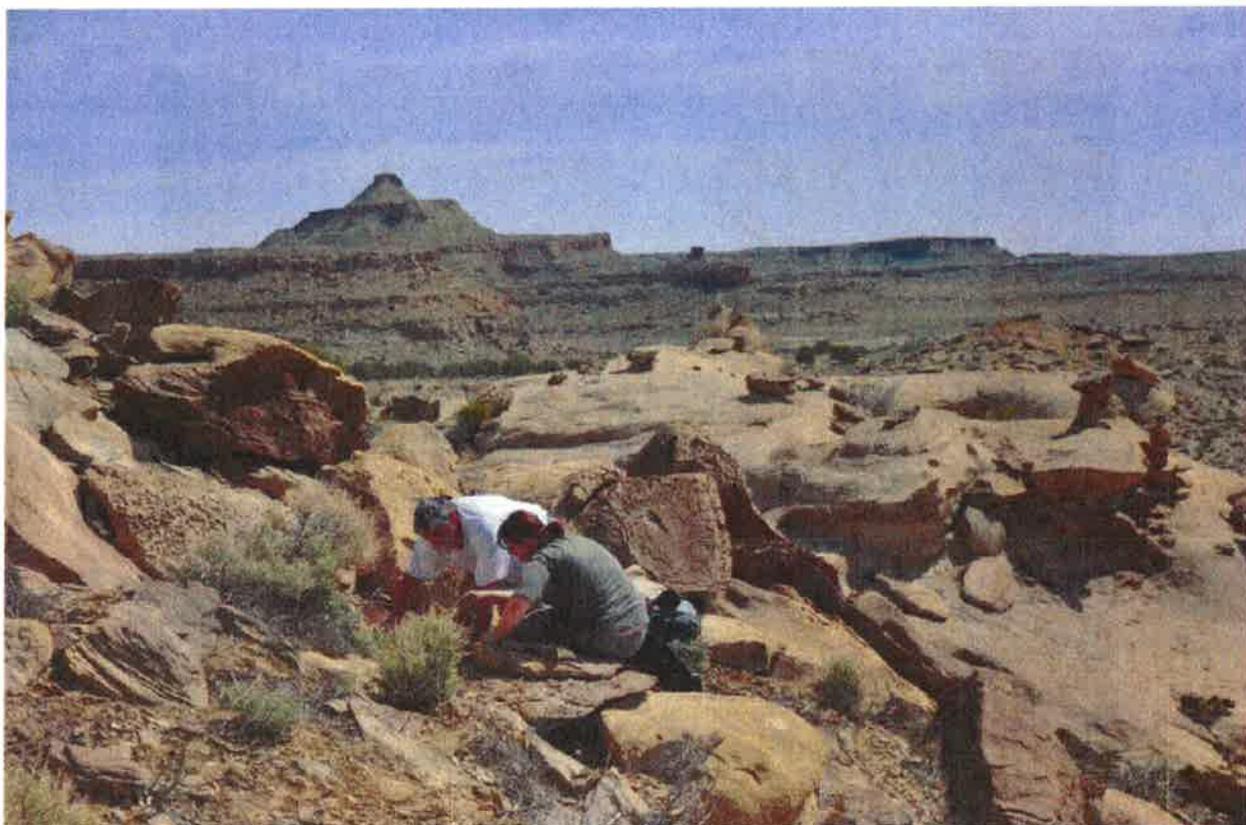


Figure 4. NHMU Site Nipple Spring Hadrosaur II during initial testing in 2009.

DMNS

DMNH loc. 5333 (Long Horn Ceratopsian)

A well preserved and remarkably intact chasmosaurine ceratopsid was found in channel sandstone immediately below a sparsely vegetated soil surface in 2014 by DMNS crews surveying areas south of Canaan Peak in Garfield County. It is located in the Monument's Primitive Zone and the Mud Springs Canyon WSA. Portions of the skeleton exposed include the skull roof with articulated braincase, the rostrum and premaxilla, both humeri, both femora, a complete tibia, a complete radius, a sacrum with articulated ilium, and several ribs and vertebrae. At-risk elements were collected in 2014 and the site was stabilized. We propose to excavate this site thoroughly in 2015 to prevent loss to erosion given its exposure immediately at the soil-rock interface.

Proposed excavation extent: An area of 3 meters by 3 meters will be excavated using hand tools (pickax, shovels, chisels, and hammers) and rock saw. Little overburden persists above the specimen and pedestaling around each element will involve only limited surface disturbance. **Site remediation:** All quarry waste including traces of plaster, burlap, and paper will be removed from the site. Quarry talus and spoils will be returned to the hole, obscuring any excavation scars. It is anticipated that all evidence of excavation at the site will be erased by erosion within two years of completion of quarry work, with little observable evidence afterward.



Figure 5. DMNH loc. 5333 (Long Horn Ceratopsian) site during initial testing and salvage collection.

Additional Information: All work above is proposed for the summer and fall of 2015 through 2018. The excavation process for each site would be the same and would first involve the initial removal of overburden down to the bone layer (about 0-2 meters) of an area up to a 30 m². Following this, each bone would be collected by first wrapping it in a protective plaster jacket, and then removing it from the rock by digging a small trench around each element. All bones

would be mapped and scientific documentation would be made of the whole process via notes, photographs, etc. Upon completion of the excavation, stockpiled overburden would be put back into place as much as practical and the site would be raked out and given a completely natural appearance. A 3-year follow up monitoring program would be undertaken to insure that no non-native/invasive weed species take hold. Materials collected by the BLM would be repositied at the Natural History Museum of Utah in Salt Lake City and specimens collected by the Denver Museum of Nature and Science would be repositied there. All specimens would be curated at no cost to the BLM, and would remain, as mandated by law, public property.

INTERDISCIPLINARY TEAM CHECKLIST

Project Title: 2015 Fossil Collections

NEPA Log Number: DOI-BLM-UT-0300-2015-0029-DNA

Project Leader: Alan Titus, Paleontologist

DETERMINATION OF STAFF: *(Choose one of the following abbreviated options for the left column)*

NP = not present in the area impacted by the proposed or alternative actions.

NI = present, but not affected to a degree that detailed analysis is required.

PI = present with potential for relevant impact that need to be analyzed in detail.

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The rationale column may include NI and NP discussions.

RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)

Determination	Resource	Rationale for Determination*	Signature	Date
NC	Air Quality (Miller)	The proposed project is within the scope of the existing fossil collection programmatic EA (UT-030-06-16-EA) and will have a minimal impact on air quality. Minimal particulate matter emissions will disperse quickly and be immeasurable beyond the immediate area. Other air pollutants released during excavations should be minimal and immeasurable.	/s/ khmiller	05/19/2015
NP	Areas of Critical Environmental Concern (Beal/Gale)	There are no ACEC designated in the Monument.	/s/ J. Beal	20150519
NI	Biological Soil Crusts (Brinkerhoff)	The proposed action will not impact the overall health of the existing Biological Soil Crusts.	/s/R. Brinkerhoff	05/26/2015
NI	BLM Natural Areas (Beal)	The proposed activities will not occur within BLM Natural Areas.	/s/ J. Beal	20150519
NP	Cultural Resources (Zweifel)	Only one location was considered to have potential for cultural resources, and field inspection of that location found no such sites. This project will not have an impact on cultural resources.	/s/ M. Zweifel	6/2/2015
NI	Greenhouse Gas Emissions (Miller)	The proposed project should result in minimal greenhouse gas emissions from small power tools (jack hammers and rock saws). The emissions should disperse quickly and be immeasurable. The proposed project will have a minimal impact on greenhouse gas emissions.	/s/ khmiller	05/19/2015
NI	Environmental Justice (Farrell)	The proposal would not have disproportionate effects on low income or minority communities. According to the EPA EJView Mapper, Garfield and Kane Counties have been categorized as having a minority population of 0-10% and a below poverty population of 0-10%. (Accessed at: http://epamap14.epa.gov/ejmap/ejmap.aspx?wherestr=Garfield%20County%2C%20UT on 2/5/2015.)	/s/ K. Farrell	4/30/15
NP	Farmlands (Prime or Unique) (Farrell)	Prime farmland is described as farmland with resources available to sustain high levels of production. In general, prime farmland has a dependable water supply, a favorable temperature and growing season, acceptable levels of acidity or alkalinity, an acceptable content of salt and sodium, and few or no rocks. Unique farmland in Utah is primarily in the form of orchards. Based on these definitions, no prime or unique farmlands exist within the Monument. (See NRCS 1997 Results - Cropland Utah accessed at: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/ut/technical/dma/nri/?cid=nrcs141p2_034092 on 2/5/2015.)	/s/ K. Farrell	4/30/15
NI	Fish and Wildlife Excluding USFW Designated Species (Tolbert/McQuivey)	The dig sites are small in size and are either sparsely or non-vegetated. The potential to impact wildlife species would be very low and any impact to animal populations would be negligible.	/s/ C. McQuivey	5/21/15

Determination	Resource	Rationale for Determination*	Signature	Date
NP	Floodplains (Miller)	No floodplains are associated with the proposed project.	/s/ khmiller	05/19/2015
NI	Fuels/Fire Management (Bate)	The proposal would neither increase or decrease fuels or increase fire dangers on the proposed use area.	/s/A. Bate	06/01/2015
NC/NI	Geology / Mineral Resources/Energy Production (Titus)	Geological resources and energy production would not be affected because of the small scale and temporary nature of this proposed action. No valid existing claims or leases, or energy corridors exist at or near any of the sites.	/s/ Alan Titus	4/29/2015
NI	Hydrologic Conditions (Miller)	The proposed project is expected to have no measurable effect on hydrologic conditions because of the small areas of disturbance and the terrain in which the excavation sites are located.	/s/ khmiller	05/19/2015
NP	Invasive Species/Noxious Weeds (EO 13112) (Brinkerhoff)	The proposed action will not increase the spread or threat of invasive/noxious weeds.	/s/R. Brinkerhoff	05/26/2015
NI	Lands/Access (Beal)	The proposed sites is not expected to impact or impede lands and realty actions.	/s/ J. Beal	20150519
NI	Livestock Grazing (Stewart)	The proposed activity and relatively small size and locations of the dig sites will have a negligible impact to livestock grazing.	/s/ S. Stewart	5/26/15
NP	Native American Religious Concerns (Zweifel)	No Native American (or other) cultural resources are found at these locations.	/s/ M. Zweifel	6/2/2015
NC	Paleontology (Titus)	The character of all of the proposed sites is within the guidelines for the 2006 programmatic analysis (small scale, temporary, sparsely vegetated badlands) and thus there is no change. The existing NEPA is adequate.	/s/Alan Titus	4/29/2015
NI	Rangeland Health Standards (Stewart)	The small size of the proposed dig sites and related activity will have no measurable effect to overall Rangeland Health Standards.	/s/ S. Stewart	5/26/15
NI	Recreation (Beal/Gale)	The proposed sites are in areas with very low visitation within the Monument. It is not expected that the site digs will impact recreational values or activities.	/s/ J. Beal	20150519
NI	Socio-Economics (Farrell)	The proposed action is not likely to provide any noticeable impact to the local economy. The amount of use and activity generated by conducting excavations is negligible.	/s/ K. Farrell	4/30/15
NC	Soils (Miller)	The proposed project is within the scope of the existing fossil collection programmatic EA (UT-030-06-16-EA). No known sensitive soil resources are present in the project areas. Replacing overburden and raking out the excavation sites as proposed should provide stability until the surface crust and drainage patterns reform.	/s/ khmiller	05/19/2015
NP	Threatened, Endangered or Candidate Plant Species (Brinkerhoff)	There are no known populations of Threatened, Endangered or Candidate plant species within project sites.	/s/R. Brinkerhoff	05/26/2015
NP	Threatened, Endangered or Candidate Animal Species (Tolbert/McQuivey)	There are no known Threatened, Endangered or Candidate animal species or their habitats within the vicinity of any of the proposed digs.	/s/ C. McQuivey	5/21/15
NP	Wastes (hazardous or solid) (Pierson)	There will be no industrial wastes or toxic substances used or generated.	/s/B. Pierson	5/19/15

Determination	Resource	Rationale for Determination*	Signature	Date
NC	Water Resources/Quality (drinking/surface/ground) (Miller)	The proposed project is within the scope of the existing fossil collection programmatic EA (UT-030-06-16-EA). The proposed project is expected to have no measurable effect on water resources or water quality because of the small areas of disturbance and the terrain in which the excavation sites are located.	/s/ khmiller	05/19/2015
NP	Wetlands/Riparian Zones (Brinkerhoff)	Sites are not located in or near wetlands or riparian zones.	/s/ R. Brinkerhoff	05/26/2015
NP	Wild and Scenic Rivers (Beal/Gale)	Sites and subsequent excavation are not known to occur on WSR eligible segments.	/s/LGale	06/02/15
NI	Wilderness/WSA (Beal/Gale)	Increased knowledge from research and excavations of paleo resources are a supplemental value of the WSA. As such, these excavations where they occur in the two WSA's meet the exception to the non-impairment standard (BLM Manual 6330 C.2.f) for enhancing wilderness values. Mitigations will include site recovery methods to restore wilderness characteristic of naturalness of the WSA. Proposed excavations will create surface disturbance. The use of mechanized equipment for recovery and use of helicopters at project site will create short-term impacts to visitor experience and the soundscape in this area. Assuming compliance with clean-up stipulations addressed in programmatic EA, there are no long-term threats to eligibility of the WSA created by these excavations.	/s/LGale	06/02/15
NI	Woodland/Forestry (Bate)	No forestry /woodland species would be cut or remove as result of the proposed action.	/s/A. Bate	06/01/2015
NI	Vegetation Excluding USFWS Designated Species (Brinkerhoff)	The proposed action will not impact the overall health of the existing vegetation.	/s/ R. Brinkerhoff	05/26/2015
NC	Visual Resources (Angus)	Project actions and impacts associated with visual resources have not changed from those disclosed in the Programmatic EA for small dinosaur excavations. Site #1 is located in VRM Class 3; Site #2 is located in VRM Class 1; Site #3 is located in VRM Class 2; and Site #4 is in VRM Class 1. Proposed Action would meet VRM objectives for all locations.	/s/ A. Angus	5/1/2015
NP	Wild Horses and Burros (Stewart)	No wild horses or burros are present at these sites.	/s/ S. Stewart	5/26/15
NI	Lands with Wilderness Characteristics (Beal/Gale)	Proposed research will occur on one site on LWC lands and will not create any long-term threat to LWC. Increased knowledge from research on paleo resources would be a supplemental value of the inventoried LWC. Mitigations will include site recovery methods to protect wilderness characteristic of naturalness within the inventoried LWC. The use of mechanized equipment for recovery and use of helicopters at project site will create short-term impacts to visitor experience and the soundscape in this area. Assuming compliance with clean-up stipulations addressed in programmatic EA, there are no long-term threats to wilderness characteristics created by these excavations.	/s/LGale	06/02/15

FINAL REVIEW

Reviewer Title	Signature	Date	Comments
Environmental Coordinator		6/19/15	For PEL
Authorized Officer		6-24-15	