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9 January 2009

Mr. Dan Cain
Copper Mountain College
6162 Rotary Way
Joshua Tree, California 92252

RE: Post-monitoring reports for Copper Mountain College Expansion Project

Dear Mr. Cain,

This cover letter lists the materials included in this packet reporting the successful completion of minimization and mitigation measures for the above-referenced project. I've enclosed hard copies and electronic versions of the following four monitoring documents, which report all of CMBC's activities between 15 September and 24 November 2008:

"TortoiseProfiles.2008" – Listing all pertinent observations for tortoises
"CopperFederalRequirements.1-9-2009" – Summarizing implementation of federal measures
"Copper2081.1-9-2009" – Summarizing implementation of State measures
"Construction Monitoring 15 Sept to 24 Nov 2008" – General summary of monitoring activities

There have also been a series of photographs included electronically on the enclosed disc:

"CMC Blading Dec 2008" – 10 photographs of bladed areas as of 11 Dec 2008
"DTs from 15 to 19 September 2008" – 48 photographs of tortoises & monitoring in mid-Sept
"DTs from 22 Sept to 9 Oct 2008" – 77 photographs of tortoises & monitoring in Sept and Oct
"November 2008 Monitoring" – Including the following two folders:
    "19 November 2008" – 23 photographs and documents from Pat Seamount
    "24 November 2008" – 9 photographs and documents from Pat Seamount
"Seamount Exhibits Sept-Oct 2008" – 45 photographs provided by Pat Seamount
"Tortoise Photographs" – 4 photographs from Dan Cain on 11-12 Sept 2008

I have miscellaneous other reports and email transmissions should you ever need them. In the meantime, the four reports and multitude of photographic folders listed above include all of the available information for our monitoring data. An invoice covering all activities through 11 Jan 09 is also enclosed.

Regards,

Circle Mountain Biological Consultants, Inc.
Edward L. LaRue, Jr.
Authorized Biologist

C:Jobs/Copper Mtn College/Cain Coverletter.1-9-2009

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9 January 2009

Dr. Paul Delaney, Mr. Dan Cain
Copper Mountain College
6162 Rotary Way
Joshua Tree, California 92252

RE: Construction monitoring of Copper Mountain College expansion activities from 15 September through 24 November 2008

Dear Mr. Cain, Dr. Delaney,

Circle Mountain Biological Consultants, Inc. (CMBC) has been contracted to implement desert tortoise protective measures during construction of various facilities at the Copper Mountain College campus located in Joshua Tree, California. These activities have been authorized by both federal and State incidental take permits. Herein, we provide summaries of construction monitoring and tortoise observations in the context of various federal and State documents.

Summary of Construction Monitoring

15 Sept 08: Campus expansion activities effectively began on 15 Sept 08 with the blading of the fenceline right-of-ways for the Translocation Area (TA) and Impact Area (IA). Ed LaRue, Patricia Seamount, and Michael Gallagher arrived on 15 Sept 08 to survey the fenceline right-of-way for tortoise occurrence. Since hatchling tortoises were known to occur in the area, LaRue felt it prudent to excavate all potentially-occupied burrows, including rodent burrows that would be lost to construction. Local rodents known to create suitably-sized burrows for tortoise use include kangaroo rats, antelope ground squirrels, California ground squirrels, and round-tailed ground squirrels.

Valley Fence was scheduled to arrive at the site at about 10:00 a.m. on 16 Sept 08 to begin clearing the right-of-way for both the 85-acre± TA and the 50-acre± IA (Exhibits 1 and 2). On 15 Sept 08, the three surveyors excavated 156 rodent burrows along the south, east, and north sides of the "panhandle" (i.e., the eastward extension of the TA located between Copper Mountain Road and Rotary Way) (Exhibit 3). It became readily obvious that we could not excavate burrows fast enough to be ready for Valley Fence, which intended to blade the right-of-way (ROW) of the TA the next morning. As such, two additional surveyors, Michael Radakovich and Shawn Gonzales, were called to the site on the evening of 15 Sept 08.

16 - 19 Sept 08: Five surveyors began surveying for and excavating rodent burrows on 16 Sept 08 from the fenceline right-of-way (ROW), beginning with the TA and ending with the IA. Awareness programs were administered to Premiere Construction by LaRue and to Valley Fence by Dan Cain on the morning of the 16th while surveyors continued their excavations. Including the 156 burrows excavated on 15 Sept 2008, the five surveyors eventually excavated a total of 716 tortoise burrows from within the two fenceline ROWs surrounding the TA and IA.

On 16 Sept 08, Premiere Construction began blading the ROW around the TA, working closely with the biological monitors to avoid tortoise burrows (Exhibits 4, 5, and 6). By 17 Sept 08, both ROWs had been bladed and Valley Fence began pounding fence poles (Exhibit 7), cutting trenches (Exhibit 8), stringing barbed wire (Exhibit 9), and laying out the tortoise mesh.

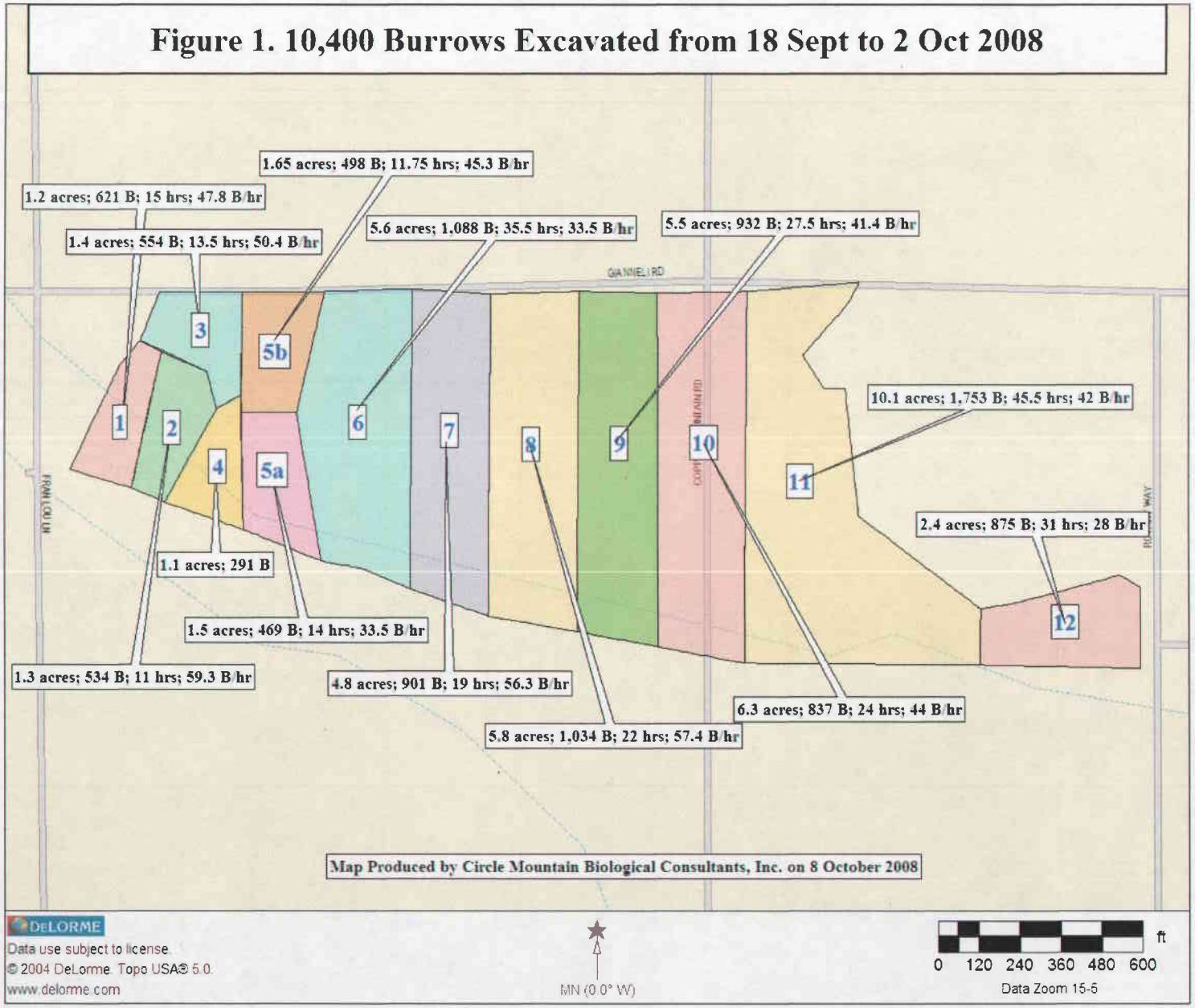
22 - 26 Sept 08: Valley Fence continued to cut trenches and string wire throughout the week. One or two monitors worked with them while the remaining surveyors continued to survey for and excavate burrows. Finally, on 25 Sept 08, LaRue accompanied foreman/supervisor (Jesse) of Valley Fence to inspect the IA fence. LaRue noted several places where steep berms had been created alongside the outside of the fence that may serve to entrap tortoises (Exhibit 10). Valley Fence flattened these berms before leaving the site on 25 Sept 08 (Exhibit 11). Although Valley Fence returned on 26 Sept 08 to install a few gates into the IA at the interface with the campus, there was no need to monitor this, so biological monitoring effectively ended on 25 Sept 08.

28 Sept - 2 Oct 08: Since Valley Fence had completed fencing the previous week, surveyors were allowed to focus completely on finding and excavating rodent burrows. On 18 Sept 08, a hatchling tortoise (DT10, later CMC7) was observed entering a rodent burrow very near Rotary Way, which was clear evidence that most rodent burrows could have been occupied by young tortoises. Although construction impact areas are typically surveyed twice along linear transects, LaRue discovered a more efficient means of finding rodent burrows. Succinct blocks of the IA were delineated, surveyors then pin-flagged all rodent burrows (Exhibit 12), and finally excavated all rodent burrows by hand (Exhibits 13, 14, and 15).

This approach allowed biologists to focus on finding potentially-occupied burrows without being distracted by excavation and other miscellaneous activities. Importantly, the approach also allowed the surveyors to spend sufficient time in the IA to look for tortoises, five of which were found and moved into the TA, including four subadults and one adult. As surveyors excavated rodent burrows throughout the IA, they tallied the number of burrows excavated and also listed the numbers and types of vertebrates unearthed.

As shown in Figure 1 on the next page, the IA was divided into 12 separate blocks of between 1.1 acre (Area 4) and 10.0 acres (Area 11). Between 18 Sept and 2 Oct 2008, the five surveyors excavated approximately 10,400 rodent burrows. When this is combined with the approximately 700 burrows excavated along the two fence lines, a total of about 11,100 rodent burrows were excavated by the five surveyors. It took the surveyors approximately 280 hours to find the burrows and excavate them, or approximately 37 burrows/hour to excavate 10,400 burrows. During this effort, one adult female was found in a burrow and excavated and four subadult tortoises were found aboveground in the IA and translocated into the TA. On several occasions while it rained, biologists stopped excavating burrows and surveyed meandering transects throughout the IA looking for aboveground tortoises.

Figure 1. 10,400 Burrows Excavated from 18 Sept to 2 Oct 2008



Although only one tortoise was found in burrows as they were excavated, biologists did rescue other species, which were placed into the TA out of harm's way (Exhibit 16). As such, the overall impact to biological resources was somewhat alleviated. Table 1 lists the species that were found during burrow excavation (in descending order of occurrence) and translocated into the TA:

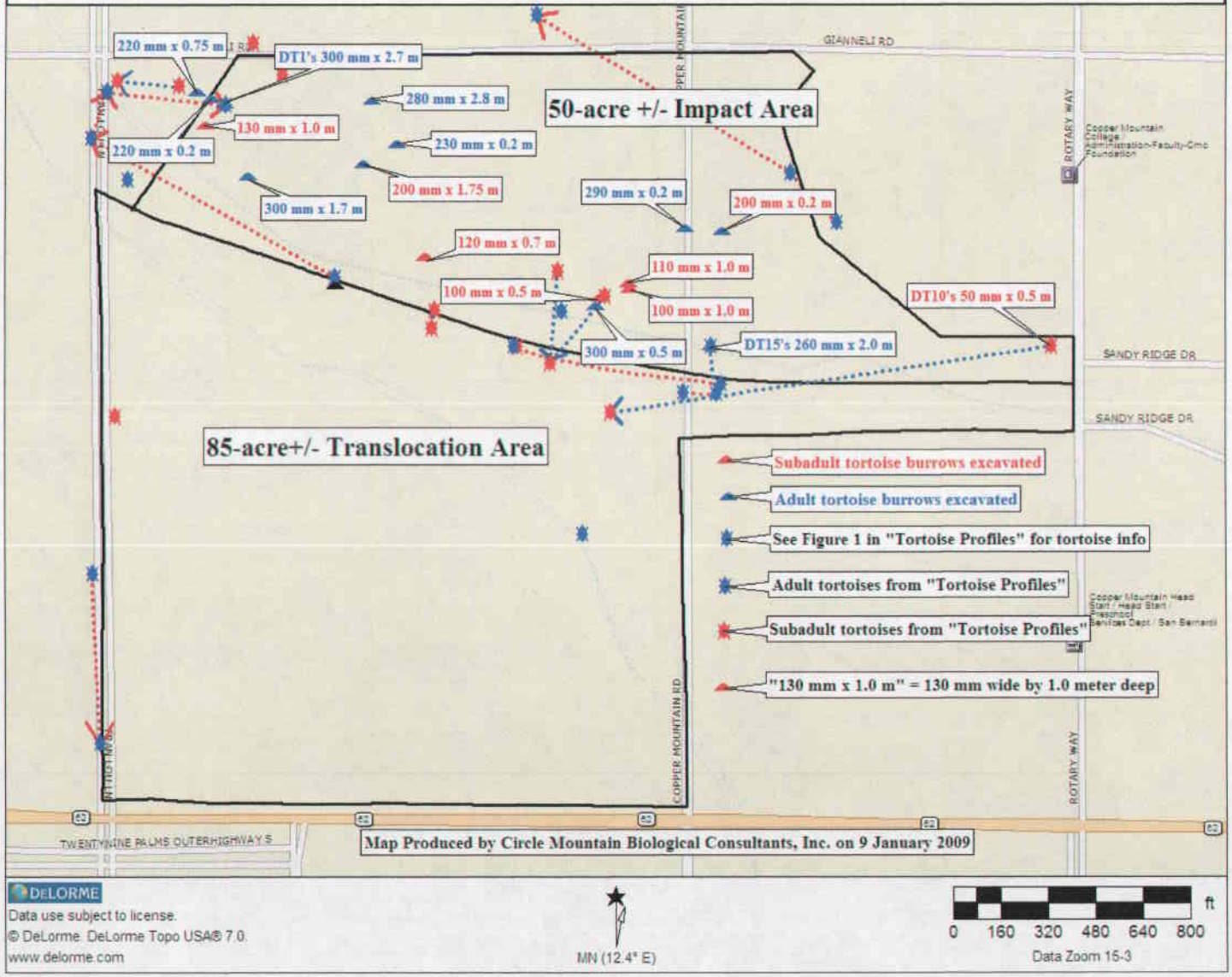
TABLE 1. ANIMAL SPECIES RESCUED FROM IMPACT AREA		
SPECIES		
COMMON NAME	SCIENTIFIC NAME	NUMBER RESCUED
REPTILES		
Desert tortoise	*Gopherus agassizii*	1 adult, 4 subadults
Side-blotch lizard	*Uta stansburiana*	31
Desert horned lizard	*Phrynosoma platyrhinos*	6
Mojave rattlesnake	*Crotalus scutulatus*	5
Western banded gecko	*Coleonyx variegatus*	3
Glossy snake	*Arizona elegans*	2
Western whiptail	*Cnemidophorus tigris*	1
MAMMALS		
Antelope ground squirrel	*Ammospermophilus leucurus*	4
Kangaroo rat	*Dipodomys* sp.	2

9 Oct 08: Given the above activities, CMBC assumed that all tortoises had been found on-site between 15 Sept and 2 Oct 2008. Biologists had moved five tortoises out of the IA into the TA and excavated more than 11,000 rodent burrows looking for any tortoises that might have been missed.

Although seven inactive tortoise pallet burrows (i.e., between 0.2 and 1.0 m deep) that were not harboring tortoises were excavated in September, LaRue opted to leave other definite tortoise burrows intact for several reasons. Several of these were sufficiently deep that a tortoise could have been inside. Others had not been used but were sufficiently intact that they could still be used. The burrows were intentionally left in place until after the typical hibernation period, which was expected in early October, so that any tortoises not already found would have a place to go.

CMBC was called back to the site on 9 Oct 08 to realign the eastern side of the TA fence, which had originally been aligned to the east (Exhibits 4, 5, and 17) to avoid four adult tortoise pallet burrows along that boundary. Two of the four burrows were eliminated when the bulging fenceline was straightened out on 9 Oct 08 (Exhibit 18). While Radakovich monitored this activity, LaRue and Gonzales excavated nine definite tortoise burrows (Exhibits 19 and 20). Locations and pertinent data associated with the 17 burrows excavated in September and October are given below in Figure 2. One can see that nine burrows belonging to adult tortoises were excavated compared to eight burrows belonging to subadult tortoises. Again, the diligence of finding and excavating rodent burrows was responsible for locating these 17 definite tortoise burrows.

Figure 2. Locations of 17 Tortoise Burrows Excavated between 22 September and 16 October 2008



14-16 Oct 08: The extensive burrow surveys and subsequent excavations occurring in September and early October were collectively considered the *first* of two surveys typically completed within an impact area. The *second* and final survey was conducted on 14 Oct 08, when LaRue, Radakovich, and Gonzales spent approximately 25.5 hours surveying the entire IA along transects spaced at 15-foot intervals. All new rodent burrows were pin-flagged. Such burrows mostly consisted of those that had been newly created since the 2 Oct 08 excavations although a few burrows missed during the previous effort were likely found during this new effort.

The three surveyors revisited the site on 15 and 16 Oct 08 and excavated the 810 rodent burrows found on 14 Oct 08. No tortoises were observed in these newly created burrows. Given the burrows excavated during this and previous efforts, surveyors excavated a total of approximately 12,000 rodent burrows looking for desert tortoise hatchlings.

The last rodent burrow to be excavated had been occupied by hatchling DT10/CMC7 between 18 Sept and 2 Oct 08. The burrow was 50 mm wide and 0.75 mm long. It resembled thousands of rodent burrows excavated throughout the IA. Except for observing the hatchling in the burrow, there was no clear way to determine that it had been occupied continuously by a tortoise for at least 15 days.

19-21 and 24 Nov 08: The final days of monitoring were conducted during four days in late November when the IA was brushed and grubbed in anticipation of constructing the Multi-Sports Complex, athletic fields, roadways, and associated structures. LaRue was on the East Coast during these four days, so construction was overseen by Authorized Biologists Seamount and Gallagher and assisted by Environmental Monitors Radakovich and Gonzales.

At LaRue's direction, each piece of heavy machinery was accompanied by two biologists/monitors. As such, one person walked ahead of the equipment to locate any aboveground animals and a second person walked behind the equipment to look for any dead or injured animals. In effect, this was the final test to see if any tortoises had been missed during burrow surveys and subsequent excavations. Fortunately, no desert tortoises were found during these final four days, which CMBC judges as successful completion of all ground-disturbing activities with no known tortoise casualties.

Additional animal species that were rescued as the IA was being bladed and grubbed in November included a dozen or more side-blotched lizards, half-dozen desert horned lizards, western banded gecko, western whiptail, glossy snake, desert iguana (*Dipsosaurus dorsalis*), western shovel-nosed snake (*Chionactis occipitalis*), desert king snake (*Lampropeltis getulus*), and several kangaroo rats.

11 Dec 08: Field Contact Representative, Dan Cain indicated that although there are future phases that will affect more scrub within the IA, all areas have been brushed and grubbed in the presence of biologists/monitors to accommodate initial phases. On 11 Dec 08, LaRue visited the site and recorded 46 UTM coordinates (NAD 27) to determine a relatively accurate footprint of areas thus far directly impacted by blading and grubbing within the designated IA. During the mid-Oct 08 compliance visit, LaRue reported two places where the IA fence had been crushed by a motorcyclist (Exhibits 21 and 22), which Dan Cain immediately repaired. As shown on the next page in Figure 3, the overall IA is estimated at 49.3 acres (black line) and the area brushed/grubbed thus far is 42.85 acres (red line). The red line depicted outside the black line signifies the brushed fenceline right-of-way that is slightly larger than the actual fenced IA to the north and west.

Figure 3. Fenced Impact Area in Sept 2008 and Bladed Impact Area in Dec 2008