Attachment 41 to

GNRO-2012/00039

Black Bear Habitat Assessment
(provided as Attachment B on the Terrestrial Ecology response CD)

Attachment B

Black Bear Habitat Assessment

Memorandum

To: GGNS COL Application File

From: Bill Wenstrom

Date: 01/02/07

Subject: 12/10/06-12/14/06 Visit to GGNS

Jenny Pluhar, Kurt Seeger and I traveled to Vicksburg on 12/10. We met with Jim Keggereis in the Cafeteria Building on the morning of 12/11 where he briefed us on safety issues and issued Jenny a camera pass.

The purposes of this visit were:

- to assess the habitat value of forested stands in both the upland and bottomland portions of the site for potential use by Louisiana black bear;
- to assess potential use of the Mississippi River at the site by over-wintering and/or nesting Bald eagles; and
- to review the result of the wetland delineation done in support of the ESP application with respect to its applicability to the COLA DER.

After meeting with Jim, we spent the rest of the morning on 12/11 inspecting several areas on the site to inventory later and in greater detail as bear habitat.

Eagle Survey. Since the local weather forecast was for heavy rain on the morning of 12/12, we decided to do the eagle survey on the afternoon of 12/11. Rusty Shaw of the GGNS staff provided an outboard powered boat that we launched at the Port of Claiborne, immediately downstream and on the same side of the river as the GGNS site.

After launch and with Rusty operating the boat, we cruised at slow speed northbound and along the western shore of the river to inspect riverbank trees on the site with binoculars and a spotting scope. We went upriver as far as the Grand Gulf Military Park then crossed to the Mississippi side of the river to continue the cruise at slow speed downstream back toward the Port.

Observation of potential nests and or perched eagles was facilitated by deciduous leaf-fall that allowed excellent visibility of the tops of trees silhouetted along the river and of branches that might be used as perches by foraging eagles. Eagles typically construct large diameter nests near the top of sturdy deciduous and evergreen trees. Nests are typically reused and enlarged by the same pair of eagles from year to year. Thus, they are usually very obvious after leaf-fall as are eagles that might perch on or near them while scanning the river for fish and other food.

We observed a Great blue heron, a pair of Louisiana herons, a small flock of Pied-bill grebes, five White Pelicans, and a pair of Double-crested cormorants foraging along the shore or in the main channel of the river. We observed no eagles scavenging there or perched in trees along the river bank. Generally, trees on the natural levee of the river and visible from the river further inland appear too small and under-developed to support large eagle nests. We observed

no nests of a sufficiently large size to be used by eagles in any of the habitat observed on either side of the river.

However, three stands appeared from the river to support groups of smaller nests. The latter potentially represent colonial bird nesting sites and were individually examined later in the afternoon from the land side. None proved to be colonial nesting sites. Rather, they were clumps of mistletoe, Spanish moss, squirrel nests, or other clumps of leaves, none of which were nests of the type constructed by herons, bitterns, egrets and other colonial nesters.

Bear Habitat Survey. We initiated the bear survey on the morning of 12/13, examining both sides of the Heavy Haul Road and the area to the west and southwest of the existing cooling towers in the upland (also called the "South Woods"). We completed the survey on the morning of 12/14 after which we left the site and returned home.

These areas were visually canvassed at approximately 100-foot intervals on foot to identify potentially suitable den trees of large diameter. Each large tree was closely examined for cavities and claw marks suggesting possible or potential use by the black bear. We measured DBH (Diameter at Breast Height or about 4.5 feet above the ground) and recorded the location of each tree ≥36" DBH with a hand-held GPS and identified the species or genera of each. Species included Water oak, Chinquapin oak, and other oaks, pecans, and elms.

We found 30 trees ≥36" DBH within the area surveyed. These trees meet the criteria established by the USFWS as "candidate trees" important for black bear dening habitat. Only one tree, a 50" DBH oak, had an actual cavity. The cavity was open and exposed.

We found no trees with enclosed cavities, claw marks, or any evidence suggesting actual use as a den tree. We similarly found no potential ground dens or sites used as ground dens.

We also noted possible foraging areas consisting of blackberry (*Rubus trivialis*) thickets. They were scattered but relatively common throughout the entire area. Areas holding shallow water in the bottomland are also possible foraging areas. They were also numerous throughout the area surveyed. Thus, although the site appears to contain suitable black bear foraging and dening habitat in both uplands and bottomlands, there is no actual evidence of the current use of the site by bears.

Wetlands. The proposed centerline and width of the new pipeline ROW paralleling the Heavy Haul Road has not been specified. However, the northern edge of the road has been significantly disturbed in the past presumably in connection with original construction of the road and construction and maintenance of an electrical transmission line also located there. Vegetation is now dominated by thickets of invader species such as Pepper vine (*Ampelopsis arborea)* and Smartweed (*Polygpnum lapathifolium*), typical wetland species such as Swamp privet (*Forestiera acuminate*), Box elder (*Acer negundo),* and Black willow (*Salix nigra),* and young sycamore (*Platanus spp.*).

Identifying the extent to which the expanded ROW might encroach into the wetland and actually calculating the acres of encroachment, including the scrub-shrub wetland bordering the south end of Gin Lake at the point where Stream A crosses the road, requires knowing its centerline and width, both for the construction period and long-term maintenance. While walking this area in connection with the bear habitat survey, we noted that the edge of the wetland now follows the edge of the fill placed there in order to construct the road. The total width of the fill varies from relatively wide at the base of the bluff to relatively narrow at locations closer to the river. Accordingly, the actual acres of wetland encroachment depend on the relationship of the new ROW centerline to the edge of the fill.

We also observed a 4-5' American alligator in the bottomland borrow pit and a Feral hog crossing the road.

Future Work. I need to prepare a 2nd draft of DER 2.4 incorporating information from our September visit, Fred's mussel survey, and this trip.

Black Bear Habitat Survey, Grand Gulf Nuclear Station

Conducted 13 and 14 Dec 06

Methodology

The habitat survey was complete, examining all areas. Criteria for trees meeting standards as "candidate trees" and survey methodology are the same as those used in Pointe Coupee Parish and St. Mary Parishes, Louisiana under the guidance of Dave Soileau, USFWS biologist.

Areas were visually canvassed at approximately 100-foot intervals on foot. Questionable trees were closely examined for cavities and claw marks suggesting possible or potential use by the black bear. Diameter at Breast Height (DBH) of the trees were measured. Any tree with 36" DBH or greater was marked with GPS, species noted. All trees meeting these qualifications in the areas of proposed or possible construction were noted.

Results

Thirty trees meeting the criteria of at least 36" DBH were noted within the area surveyed. Only one tree, a 50" DBH Oak stag, had a cavity. This cavity was open and exposed. These trees meet the criteria established by the USFWS (Soileau, personal communication) as "candidate trees" important for black bear denning habitat. Results and locations of the trees are reported in the attached table.

No trees were found with enclosed cavities, claw marks, or any evidence suggesting use as a den tree. Only one tree, a 50" DBH Oak stag, had a cavity. This cavity was open and exposed. No potential ground dens or sites used as ground dens were located.

Also noted were possible foraging areas consisting of blackberry (*Rubus trivialis*) thickets. These were interspersed throughout the entire area. Areas holding shallow water in the bottomlands are also possible foraging areas. These were numerous throughout the area surveyed.

Grand Gulf Nuclear Station – Bear Habitat Survey		
Tree	**Latitude**	**Longitude**
44" DBH Water Oak	N 32° 00.45'	W 091° 03.12'
36" DBH dead stag (8 ' N of previous tree)	N 32° 00.45'	W 91° 03.12'
37" DBH Water Oak	N 32° 00.29'	W 091° 03.11'
44"DBH Chinquapin Oak	N 32° 00.38'	W 091° 03.18'
36" DBH Water Oak	N 32° 00.38'	W 091° 03.32'
47" DBH Elm	N 32° 00.43'	W 091° 03.21'
36" DBH Oak	N 32° 00.30'	W 091° 03.42'
36" DBH dead stag	N 32° 00.29'	W 091° 03.37'
37" DBH Oak	N 32° 00.09'	W 091° 03.18'
39" DBH Oak	N 32° 59.94'	W 091° 03.11'
39" DBH Oak	N 32° 00' 34.9"	W 091° 03' 24.3"
40" DBH Pecan	N 32° 00' 34.9"	W 091° 03' 24.3"
47" DBH Pecan	N 32° 00' 34.5"	W 091° 03' 24.4"
38" DBH Pecan	N 32° 00' 35.5"	W 091° 03' 29.4"
41" DBH Pecan	N 32° 00' 40.2"	W 091° 03' 29.4"
67" DBH Oak	N 32° 00' 40.7"	W 091° 03' 32.0"
37" DBH Pecan	N 32° 00' 43.5"	W 091° 03' 34.6"
39" DBH Oak	N 32° 00' 34.9"	W 091° 03' 24.3"
36" DBH Pecan	N 32° 00' 58.8"	W 091° 03' 44.1"
36" DBH Oak	N 32° 01' 01.0	W 091° 03' 47.7"
50" DBH Oak stag	N 32° 01' 03.5"	W 091° 03' 53.2"
40" DBH Oak	N 32° 01' 04.5"	W 091° 03' 56.4"
47" DBH Oak	N 32° 01' 04.0"	W 091° 03' 55.8"
37" DBH Pecan	N 32° 01' 7.9"	W 091° 03' 43.7"
39" DBH Oak	N 32° 01' 03.0"	W 091° 03' 44.0"
41" DBH Oak	N 32° 00' 51.3"	W 091° 03' 27.3"
40" DBH Oak	N 32° 00' 52.3"	W 091° 03' 27.2"
42" DBH Pecan	N 32° 00' 52.1"	W 091° 03' 26.1"
58" DBH Pecan (split 8' from ground)	N 32° 00' 51.8"	W 091° 03' 22.9"
44" DBH Pecan	N 32° 00 ' 51.6"	W 091° 03' 24.6"

Dark Gray = Trees in uplands
Light Gray = Tree behind hunting camp
Yellow = Trees South of Heavy Haul Road
Light Blue = Trees North of Heavy Haul Road

Trees were marked with two different GPS units, one using decimal degrees, the other using dd, mm, ss units.