

Marathon Pipe Line LLC

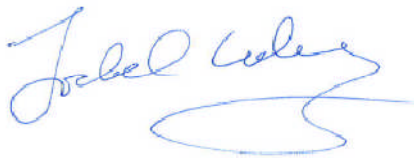
**Biological Assessment Report
Endangered Species - Indiana Bat**

IEPA Incident: 20081223

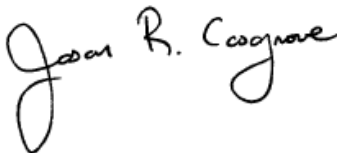
MT. ERIE PIPE LINE RELEASE NEAR ALBION,
WAYNE COUNTY, ILLINOIS

December 2009

ARCADIS



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Marathon Pipe Line LLC
Mt. Erie Pipe Line Release
Near Albion, Wayne County, Illinois

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1. Project Description

The overall project area is located in a rural, unincorporated area of Wayne County, Illinois, where agricultural use is predominant. The immediate project site, or identified release area, generally includes approximately 7.38 acres south of County Road 5 and west of County Road 3 in an unincorporated area of Wayne County. There are two private parcels totaling 157 acres, known to be affected by the release. The total acreage of the area where sampling occurred totals 233.3 acres and includes part of the wooded wetland area south of the two private parcels and the release site (Figure 1).

Corn and soybeans are the two crops commonly grown in the area. There is an extensive wooded area of which is mostly forested floodplain wetland, extending southward from the release area. Agricultural fields surround the woodlands. This woodland area is part of the Elm Creek and Little Wabash River floodplain. The woodland is comprised of a mixture of deciduous hardwoods that are primarily floodplain species. In addition, there are backwater areas with standing water that serve as habitat for a variety of wildlife species. The Elm River has previously been redirected to flow southward within a channelized drainage ditch located west of the identified release area. The Little Wabash River flows in a southerly direction, south of the immediate project site (Figure 2).

The project involves ongoing response activities as a result of a release of approximately 5,000 barrels of crude oil from an existing pipeline. The release occurred in early August 2008. Immediately after the release was identified, emergency cleanup operations occurred to contain and remove surficial crude oil and some oil contaminated soil to reduce immediate environmental impacts. Temporary impacts resulting from emergency cleanup operations included the placement of fill and rock, temporary recovery structure construction such as siphon dams, and shallow bridge placement in wetlands. Interception trenches were also constructed to recover impacted viscous materials. Temporary access roads were constructed by removing trees. Some existing all-terrain vehicle (ATV) trails were widened to accommodate equipment needed for cleanup (Figure 3). As a result of the emergency and ongoing cleanup, some trees were cut and removed to provide sufficient space to allow cleanup equipment and vehicles to access the area of the spill. Tree removal was selective and trees were only removed where necessary to provide vehicle access. Trees were cut with chain saws and a bulldozer was used to clear the trees (after they were cut). Further investigation and remedial activities will continue in an effort to identify the extent of impact and manage any additionally impacted materials. There may be

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additional impacts to floodplain forest as a result of site investigation and future surface/subsurface investigation and remedial activities. These additional impacts may involve soil removal or some fill placement as needed.

Emergency response activities were implemented to minimize further damage to the environment, and to comply with state and federal oil spill contingency plans, regulations, and recovery plans. Selected tree removal and temporary impacts to the forested floodplain wetlands are a result of these activities and may also result from future site investigation and remedial activities. A Nationwide 20 Permit for temporary impacts to wetlands has been submitted to the Louisville District of the US Army Corps of Engineers. Wetlands will be restored according to the enclosed wetland restoration plan (Appendix A).

2. General Area Description

The physiographic location of the project site lies within the Central Lowland Province, Till Plains Section, Mount Vernon Hill County. The Quaternary geology is composed of silt and clay deposited in glacial lakes. Soils are primarily silts and clays. The local elevation generally ranges from 0-150+ feet. The majority of the site is a low lying floodplain. Flooding is frequent in the winter and spring and floodwater elevations can be as high as 8-10 feet and are often 3 feet or more.

The general project area lies within a broad area of what the United States Forest Service describes as the Central Interior Broadleaf Forest, Ecological Subregion of the United States (<http://www.na.fs.fed.us/sustainability/ecomap/provinces/index.shtml>). This ecoregion has continental climate with hot summers. Summer soil moisture deficits are common. Vegetation is broadleaf deciduous forests with somewhat open canopy and greater density of species tolerance of drought. Rainfall occurs throughout the year, with drier periods in summer and autumn. This region supports oak-hickory forest. The primary overstory species are red oak, white oak, and hickory.

3. Critical Habitat and Species of Concern

The species of concern within the project area is the federally endangered Indiana Bat (*Myotis sodalis*). The Indiana Bat migrate from their winter hibernation sites to summer habitat. In wooded areas they roost under the loose tree bark on dead or dying trees. Males tend to roost singly or in small groups, while females roost in groups commonly of 100 or more. Primary roosts generally receive direct sunlight for more than half the day. Roost trees typically are within canopy gaps or along wooded edges. Habitats in

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which maternity roosts occur include riparian zones, bottomland and floodplain habitats, wooded wetlands, and upland communities. Indiana bats tend to forage in semi-open to closed forested habitats with an open understory, forest edges, and riparian areas. Indiana bats are found throughout most of the eastern half of the United States. Approximately half of the known population of all Indiana bats hibernate in the southern half of Indiana. Illinois has an estimated population of 43,000. The Indiana bat is endangered due to several factors including human disturbance of hibernation locations (caves and mines), fragmentation and loss of summer woodland habitat, and pesticide and contaminants in their food supply. Additionally, a recently identified disease known as white nose syndrome has been causing Indiana and other bat species mortality. The cause of the disease is currently unknown.

The site location is within a floodplain forest habitat that is comprised of a variety of flood tolerant broadleaf tree species. Photos of the wooded wetland area can be found in Appendix B. Common tree species include green ash (*Fraxinus pennsylvanica*), silver maple (*Acer saccharinum*), shagbark hickory (*Carya ovata*) and scattered red and white oak. A number of other tree species are present but are not dominant and can be found in Appendix C. Tree diameters range from saplings of the various species to 28 inches (Appendix C). A record of trees removed was kept including tree species and diameter for Road A (Table 1 in Appendix C), Primary Spill Area (Table 2 in Appendix C), and Roads B, C, and D (Table 3 in Appendix C). Suitable habitat exists within and near the project area as preferred tree species occur within the wooded wetland, the wooded wetland understory is open, and stream and open wetland areas occur adjacent to the wooded wetland.

The Missouri Department of Conservation (MDC, Best Management Practices, June 2000) identifies that Indiana bats prefer live shagbark hickory and large white oaks for maternal roost sites because of the loose bark. White oaks should have a diameter breast high (dbh) of at least 9 inches with trees greater than 21 inches being optimal. Specific recommendations by the MDC included retaining dead trees with a diameter of more than 12 inches and retain live shagbark hickories.

4. Effects of the Remedial Activities

The emergency and subsequent cleanup activities have involved a variety of operations that included construction of structures, removal of spilled oil and oil contaminated soil, and recovery trenches. In order to access areas within the 7.38 acre release site, trees were cut with chain saws or bulldozed and removed. A limited number of trees within the wetland area were removed. Tree removal was minimized

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by only removing those trees where equipment access was required. Tree removal also occurred in upland areas within the release site. Some of these trees were killed as a result of the release and were removed. Additional trees were cut and removed for equipment access similar to the wetland area. A tally of the trees removed including the location (wetland or upland), tree species, and diameter was recorded.

Tree species removed within the wetland area were one of three species; silver maple, slippery elm (*Ulmus fulva*), and river birch (*Betula nigra*). A total of 19 trees were removed within the wetland area. The largest tree removed was an 18 inch diameter river birch. The remaining trees were less than 12 inches in diameter. Although these are not the preferred tree species used by the Indiana bat, silver maples can often exhibit loose bark. Approximately 410 trees were removed within the upland area. The majority of these trees were silver maple, slippery elm, bitternut hickory (*Carya cordiformis*) and swamp privet (*Forestiera acuminata*). Bitternut hickory has smoother bark than shagbark hickory and swamp privet is a shrub with smooth bark. Neither species would be used by the Indiana bat. There were approximately 10 shagbark hickories with the largest being 20 inches in diameter (one removed). Three of the shagbark hickories were smaller than 8 inches in diameter. Nine white oaks were also removed. The largest white oak removed was 24 inches in diameter (one removed). Five of the oaks removed were less than 10 inches in diameter. The Indiana bat has a preference for the shagbark hickory and white oak but only 19 trees of these species were removed and these were all in upland areas. It is not likely that the small number of preferred tree species of the Indiana bat that were removed would affect suitable habitat since these trees were within the upland area. It is not to discount that these trees may not be used by the Indiana bat, however, trees larger than 9 inches dbh and that exhibit a greater number of both of these tree species, along with other loose bark species particularly silver maple, occur within the wooded wetland where preference for these trees would likely be favored as foraging opportunities are greater.

The total size of the wooded wetland is approximately 233 acres and the size of the actual oil release area is estimated at 7.3 acres. Given the significant size and habitat that has both Indiana bat foraging opportunities and greater numbers of preferred tree species (and larger trees), the small size of the release area relative to the overall wooded wetland, activities taking place at the Site (as a result of the August 2008 pipe line release) would not be expected to impact the Indiana bat. Although actual surveys for the endangered Indiana bat were not performed, the Indiana bat may be present since suitable habitat occurs.

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Continuing cleanup operations will occur periodically into the future but will be concentrated within the release area. Emergency and follow-up cleanup operations did not likely affect the Indiana bat (if present) for the reasons outlined above. It is not anticipated that continued cleanup operations would result in impacts to the Indiana bat since at worst, only a very limited number of trees (if any) would be removed. The tree species can be identified prior to removal to avoid disturbance of preferred tree species (shagbark hickory and white oak) and to avoid disturbance based on size.

In addition, bat houses will be installed to allow groups of bats to inhabit near surface waters and wetlands within the wooded wetland. As part of the US Army Corps of Engineers Nationwide 20 Permit application, a restoration plan was included that incorporates the planting of tree species that will provide suitable Indiana bat habitat (when mature). Both of these activities will provide beneficial opportunities for Indiana bat use.